Dear Colleagues,

I invite you to attend the 47th Annual Meeting of the Society of Toxicology in Seattle, Washington. The meeting will highlight advancements in science related to the numerous areas of toxicology and will continue a familiar structure with many and diverse Symposia, Workshops, Roundtables, and Historical Highlight Sessions. Presentations will also include detailed results from primary studies in the form of over 2,300 posters and platform sessions. The Continuing Education program will provide the opportunity for you to learn new areas of toxicology. Despite the familiarity of meeting structure, the Science of Toxicology continues to change, as will be evident from the numerous presentations.

The Annual Meeting will again provide an important networking forum for the exchange of ideas and identification of solutions to the problems that you are dealing with in your daily employment. ToxExpo™ will provide the opportunity to investigate the latest in goods and services that are important to your career activities.

I look forward to seeing you in Seattle at another successful Annual Meeting of the Society of Toxicology.

George B. Corcoran, Ph.D., ATS
2007–2008 SOT President
Paracelsus

Oxidative Signaling and Redox Biology
—the importance of
sessions will explore the potential implication(s) of their use.
potential health impacts of these new products, these highlighted
commercialized. Because little is known about their biology or the
blocks for this promising new technology. Currently being utilized
— the use of nanomaterials as the building
Nanotechnology

Developmental Basis of Disease
— understanding birth defects and
how lifelong changes in health and disease may follow the exposure
to hazardous chemicals during prenatal, infantile, or early childhood
stages. Recent epidemiological data suggest that chronic diseases such as
diabetes and hypertension may follow a particular event early in
life. The cross-cutting goal is to advance scientific understanding of
the source-disease outcome from intrauterine or childhood exposure
to hazardous chemicals.

Stem Cell Biology and Toxicology
— understanding stem cell
cycling.
3) increased generation of ROS, 4) ionizing radiation, and 5) redox
reactive forms, 2) depletion of non-enzymatic antioxidant defenses,
stress, which include: 1) increased levels of transition metals or their
recognized by toxicologists. In addition to the uncontrolled generation
reactive oxygen species (ROS) in health and disease has been long
recognized by toxicologists as a key driver of toxicological endpoints.

Thematic Approach
Session titles related to each theme are color coded in the Program overview.

Developmental Basis of Disease—understanding birth defects and
how lifelong changes in health and disease may follow the exposure
to hazardous chemicals during prenatal, infantile, or early childhood
stages. Recent epidemiological data suggest that chronic diseases such as
diabetes and hypertension may follow a particular event early in
life. The cross-cutting goal is to advance scientific understanding of
the source-disease outcome from intrauterine or childhood exposure
to hazardous chemicals.

Nanotechnology—the use of nanomaterials as the building
blocks for this promising new technology. Currently being utilized
in many diverse areas such as engineering, information technology,
and diagnostics, nanomaterials are now routinely produced and
commercialized. Because little is known about their biology or the
potential health impacts of these new products, these highlighted
sessions will explore the potential implication(s) of their use.

Oxidative Signaling and Redox Biology—the importance of
reactive oxygen species (ROS) in health and disease has been long
recognized by toxicologists. In addition to the uncontrolled generation
of ROS associated with chemical, physical, and biological toxicities,
the abnormal activation of inflammatory cells is known to play an
important etiologic role in many degenerative diseases. These sessions
will explore how altered conditions in the cell can lead to oxidative
stress, which include: 1) increased levels of transition metals or their
reactive forms, 2) depletion of non-enzymatic antioxidant defenses,
3) increased generation of ROS, 4) ionizing radiation, and 5) redox
cycling.

Stem Cell Biology and Toxicology—understanding stem cell
biology and its applications and the intense debates ignited in
scientific, political, and ethical spheres. The degree to which stem
cells can be used in toxicological testing to replace other experimental
models is still in its infancy. Given these facts, this area of research
has the potential to revolutionize toxicity testing in the academic,
private, and government setting. The sessions in this theme will
explore some of the major challenges that must be overcome and
address new issues as they arise.

Career Development—providing the tools and resources to
toxicologists that will enhance their professional and scientific
development.
Tuesday, March 18

9:00 AM–11:45 AM
SYMPOSIAS SESSIONS
- Drug-Induced Mitochondrial Toxicity: Novel Insights - Novel Tools (p133)
- Environmental Influence on Female Puberty and Breast Tumorigenesis (p133)
- Oxidant Air Pollution and Childhood Asthma (IAT) (134)
- Stem Cells: New Tools for Neurotoxicologists (IAT) (p134)

WORKSHOP SESSIONS
- Getting the Most Out of Model Organism Databases: From the Basic to the Complex (p135)
- mixture Exposures to Metals/Metalloids and Related Health Effects (p136)
- Where the Rubber Meets the Road: Current Application of Genomic Tools in Product Development and Decision Making (p136)

INFORMATIONAL SESSION
Future Paths for Puget Sound: Contaminants, Cultures, and Ecosystem Risk Characterization – A Special Regional Interest Session (p137)

PLATFORM SESSIONS
- APC’s, B Cells and Haematopoiesis (p137)
- Disposition/Pharmacokinetics (p138)
- Frontiers in Liver Toxicology Research (p138)

12:00 Noon–1:20 PM
TOWN HALL MEETING

SOT Strategic Plan—Defining the Future of SOT (p171)

1:00 PM–4:30 PM
POSTER SESSIONS
- Applications of Biological Modeling (p175)
- Assessment of Ecological Toxicology (p193)
- Liver I: In Vivo (p161)
- Liver II: In Vitro (p160)
- Nanoparticles: Target Organs (p177)
- Pharmacokinetics and Disposition (p172)
- Reproductive System (p186)
- Regulatory Risk Assessment (p167)
- Xenobiotic Biotransformation I (p156)

9:00 AM–12:30 PM
PLATFORM SESSIONS
- Accelerating Discoveries in Toxicology Through ‘Omics Research (p149)
- Chemical and Biological Weapons: Molecular Basis for Detection and Therapeutic Potential (p150)
- Developmental Basis of Disease (p150)
- Health Risks and Food Safety (p151)
- Manganese Neurotoxicity: From Worms to Primates (p152)

1:30 PM–4:30 PM
POSTER SESSIONS
- Adverse Effects of Natural Products (p152)
- Alternatives to Mammalian Models (p165)
- Liver I: In Vivo (p161)
- Mechanisms and Chemoprevention of PAH and Tobacco-Related Carcinogenesis (p164)
- Particulate Matter and the Cardiovascular System (p153)
- Persistent Organic Pollutants (POPs) (p158)
- Risk Assessment Research (p188)
- Signal Transduction and Gene Regulation (p183)

1:00 PM–4:30 PM
SYMPOSIAS SESSIONS
- Mechanisms of Pesticide Toxicity (p201)
- Mechanisms of Hypersensitivity (p201)
- Arsenic Toxicity (p200)
- Strategies for Assessing Developmental and Reproductive Toxicology of Bio-Pharmaceuticals (p199)
- Oxidant Air Pollution and Childhood Asthma (IAT) (134)
- Stem Cells: New Tools for Neurotoxicologists (IAT) (p134)

HOSTORICAL HIGHLIGHT SESSION
Ozone Toxicology: Historical Perspectives of the Science that Shaped the Regulatory Standards (p140)

INFORMATIONAL SESSION
- PUTTING YOUR BEST FOOT FORWARD: JOB INTERVIEWING WORKSHOP FOR EARLY-CAREER SCIENTISTS (p141)

9:00 AM–11:45 AM
SYMPOSIAS SESSIONS
- Frontiers in Liver Toxicology Research (p138)
- Disposition/Pharmacokinetics (p172)
- APC’s, B Cells and Haematopoiesis (p137)
- Regulatory Risk Assessment Research (p174)
- Reproductive System (p186)
- Risk Assessment Research (p188)
- Xenobiotic Biotransformation I (p156)

10:00 AM–11:45 AM
POSTER SESSIONS
- Applications of Biological Modeling (p175)
- Assessment of Ecological Toxicology (p193)
- Liver I: In Vivo (p161)
- Liver II: In Vitro (p160)
- Nanoparticles: Target Organs (p177)
- Pharmacokinetics and Disposition (p172)
- Reproductive System (p186)
- Regulatory Risk Assessment (p167)
- Xenobiotic Biotransformation I (p156)

12:00 Noon–1:20 PM
TOWN HALL MEETING

SOT Strategic Plan—Defining the Future of SOT (p171)

11:00 AM–1:20 PM
SYMPOSIAS SESSIONS
- Molecular and Genomic Insights into the Nrf2-Regulated Oxidative Stress Response: Impact on Carcinogenesis (p146)
- New Concepts in the Etiology of Breast Cancer: From Genes to Environment and Back Again (p146)

11:00 AM–1:20 PM
POSTER SESSIONS
- Applications of Biological Modeling (p175)
- Assessment of Ecological Toxicology (p193)
- Liver I: In Vivo (p161)
- Liver II: In Vitro (p160)
- Nanoparticles: Target Organs (p177)
- Pharmacokinetics and Disposition (p172)
- Reproductive System (p186)
- Regulatory Risk Assessment (p167)
- Xenobiotic Biotransformation I (p156)

1:30 PM–4:15 PM
SYMPOSIAS SESSIONS
- Accelerating Discoveries in Toxicology Through ‘Omics Research (p149)
- Chemical and Biological Weapons: Molecular Basis for Detection and Therapeutic Potential (p150)
- Developmental Basis of Disease (p150)
- Health Risks and Food Safety (p151)
- Manganese Neurotoxicity: From Worms to Primates (p152)

12:00 Noon–1:20 PM
TOWN HALL MEETING

SOT Strategic Plan—Defining the Future of SOT (p171)

1:00 PM–4:30 PM
POSTER SESSIONS
- Applications of Biological Modeling (p175)
- Assessment of Ecological Toxicology (p193)
- Liver I: In Vivo (p161)
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POSTER SESSIONS
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- Nanoparticles: Target Organs (p177)
- Pharmacokinetics and Disposition (p172)
- Reproductive System (p186)
- Regulatory Risk Assessment (p167)
- Xenobiotic Biotransformation I (p156)
**Wednesday, March 19**

**7:30 AM–8:50 AM**

**ROUNDTABLE SESSIONS**
- Hazard vs. Risk for Chemical Regulation (p203)
- Reconciling Scientific and Ethical Concerns in the Use of Animals for Toxicological Research (p204)

**INFORMATIONAL SESSIONS**
- Cross-Cultural Understanding of Asian and Western Cultural Values in the Workplace (p205)
- Toxicological and Public Health Challenges in Africa (p205)

**8:00 AM–8:50 AM**

**KEYNOTE MRC LECTURE**

Biological Energy Conversion and its Toxic Consequences
Lecturer: Nobel Laureate Professor Sir John E. Walker (p206)

**9:00 AM–11:45 AM**

**SYMPOSIAS SESSIONS**
- Developmental Basis of Health and Disease: Persistent Effects of Tobacco Smoke Exposure (IAT) (p206)
- Unusual Manifestations of On-Target and Off-Target Toxicity: Toxicity of Kinase Inhibitors (p207)

**WORKSHOP SESSIONS**
- Natural Killer Cells as Targets of Drugs, Toxicants, and Biologicals (p207)
- Safe Approaches to Topical Product Development (p208)
- Threshold of Toxicologic Concern: Historical Perspectives and Future Approaches (p208)
- Use of Behavioral and Non-Routine Neurological Approaches in Drug Discovery Toxicology (p209)

**INFORMATIONAL SESSION**

Globally Harmonized System of Classification and Labelling of Chemicals (GHS): A New Language for Toxicologists (p209)

**PLATFORM SESSIONS**
- Advances in Biological Modeling (p210)
- Mechanisms of Reproductive Toxicity (p210)
- Modulating Apoptosis for Beneficial Outcomes (p211)
- Nanoparticles: Cellular and Organ Disposition (p212)

**9:00 AM–12:30 PM**

**POSTER SESSIONS**
- Application of 'Omics Research Tools in Toxicology (p225)
- Cardiovascular System: Cardiac Effects (p231)
- Developmental Toxicology (p221)
- DNA Damage and Repair: Mechanisms and Agents (p233)
- Epidemiology and Exposure Assessment (p217)
- Gene Regulation and Genomic Approaches (p214)
- Mechanisms of Carcinogenesis (p213)
- Metals I (p228)
- Nanoparticles: Inhalation and Respiratory Cell Injury (p219)
- Respiratory and Skin Hypersensitivity (p215)
- Skin Penetration and Toxicity (p223)

**12:00 NOON–1:20 PM**

**INFORMATIONAL SESSION**

Mentoring 101—How to Mentor, and How to be Mentored (p236)

**MEET THE DIRECTORS: A CONVERSATION WITH THE DIRECTORS**

NIEHS Strategic Plan
Lecturer: Samuel Wilson (p235)

**1:00 PM–4:30 PM**

**POSTER SESSIONS**
- Biomarkers: Methods (p241)
- Developmental Neurotoxicity (p237)
- Human Biomarkers (p240)
- Juvenile Toxicity (p242)
- Metal Neurotoxicology: Experimental Models and Mechanisms (p248)
- Neurotoxicity: Miscellaneous Compounds, Models, and Mechanisms (p245)
- Oxidative Injury and Redox Biology I: In Vivo (p255)
- Pharmaceuticals (p251)
- Risk Assessment Applications (p243)
- Safety Assessment, Pharmaceutical—Liver, Kidney, Immune System (p253)

**1:30 PM–4:15 PM**

**SYMPOSIAS SESSIONS**
- Arsenic and Cardiovascular Disease (p257)
- Nanomaterial Pharmacokinetics: Where We Are and Where We Need to Go (p258)

**WORKSHOP SESSIONS**
- Advances in Technology and Increasing Acceptance for Zebras in Drug Discovery (p258)
- Chlortetracycline Herbicides and their Common Degradation Products of Concern: Disposition and Potential Health Effects (p259)
- Interdisciplinary Approaches for Improving Chemical Hazard Testing Paradigms (p259)

**PLATFORM SESSIONS**
- Apoptosis: Cardiopulmonary Targets (p260)
- Immunotoxicology: T Cells (p261)
- Issues in Regulatory Risk Assessment (p261)
- New Insights for Developmental Toxicology (p262)
- Nrf2 Induced Gene Regulation (p262)
- Selective Dopaminergic Neurotoxicity: Genetics and Mechanisms (p263)

**4:30 PM–5:50 PM**

**ROUNDTABLE SESSION**

A Case Study on the Risks and Benefits of Deca-BDE—a Major Brominated Flame Retardant (p264)

**INFORMATIONAL SESSIONS**
- Implementation of the ICH S8 Immunotoxicity Testing Guideline (p264)
- NIEHS Outstanding New Environmental Scientists (ONES) Awardees (p265)

**Thursday, March 20**

**7:30 AM–8:50 AM**

**ISSUES SESSION**


**ROUNDTABLE SESSION**

Biofuel Combustion: An Emerging Health Problem? (p266)

**8:30 AM–12:00 NOON**

**POSTER SESSIONS**
- AHR Mechanisms (p275)
- Cardiovascular System: Vascular Effects (p278)
- Chemoprevention (p276)
- Fish Alternative Models of Toxicity (p277)
- Food Safety II (p280)
- High Throughput, High Content Approaches to Assessing Genotoxicity (p282)
- Metals II (p269)
- Method Development, Autoimmunity, and Disease Mechanisms in Immunotoxicology (p272)
- Oxidative Injury and Redox Biology II: In Vitro (p266)
- Pesticide Neurotoxicity (p283)
- Safety Assessment, Pharmaceutical—Techniques, Pulmonary, Cardiovascular (p286)

**9:00 AM–11:45 AM**

**SYMPOSIAS SESSIONS**
- Cellular Redox Status and Zinc Signaling (p288)
- Perinatal Exposure to Nucleoside Reverse Transcriptase Inhibitors (NRTIs) Induces Transplacental Genotoxicity and Mitochondrial Toxicity (p288)
- Stem Cells in Developmental and Reproductive Biology and Toxicology (p289)

**WORKSHOP SESSIONS**
- Genotoxicity Testing from Early Discovery through Regulatory Submission: A Comprehensive Primer (p290)
- Incorporation of Mode-of-Action into Mechanistically-Based Quantitative Models (p290)
- Pulmonary Toxicity Testing of Nanoparticles (p291)

**INFORMATIONAL SESSION**

REACH: Implementation, Chemical Safety, and Information Requirements (p291)
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How to Use this Program

The Society of Toxicology’s (SOT) Annual Meeting is always an exciting opportunity to highlight advancements in the science of toxicology.

In order to maximize the value of your Annual Meeting attendance, we offer this overview of the Program publication layout and the scientific session reference to assist you. We hope that you find this information useful and welcome your comments.

Program Publication Layout Overview

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Fold-Out Cover—Scientific Program Overview</td>
<td>This quick reference guide lists the Annual Meeting sessions with page numbers to easily find your sessions of choice. This year the color-coded presentation titles will assist you in identifying sessions within each theme. A brief description for each theme is available as well.</td>
</tr>
<tr>
<td>Event Calendar (pages 3–15)</td>
<td>This at-a-glance calendar is your guide to the daily activities of the Annual Meeting including special sessions, Specialty Sections, Regional Chapters, Special Interest Groups, and ancillary functions; plus SOT committee meetings. We encourage you to tear out the daily guide for easy reference.</td>
</tr>
<tr>
<td>Schedule by Event Name (pages 17–25)</td>
<td>This is an alphabetical listing of all the functions held during the Annual Meeting. You may use this easy-to-read schedule to quickly locate an event. Please note that for the scientific sessions, you must refer to the Scientific Program Overview on the front fold out cover or Event Calendar on pages 3–15.</td>
</tr>
<tr>
<td>Poster Board Surface Maps—NEW (pages 36–42)</td>
<td>The poster board surface maps are displayed with a mock layout of the ToxExpo™ Exhibit Hall to assist you in finding poster sessions. Each poster surface map shows the poster session abstract numbers and the poster surface locations for each poster session time. Posters are displayed in Exhibit Hall 4E Monday–Wednesday and Ballroom 6C &amp; E on Thursday.</td>
</tr>
<tr>
<td>Scientific Session Index (pages 77–84)</td>
<td>This index lists the scientific sessions by type, date, and time. In addition, this information includes the session topics with abstract numbers, session locations, and corresponding page numbers in the Program Description section.</td>
</tr>
</tbody>
</table>

Scientific Session Reference

The Program layout is ordered by date and time. Please refer to the sample below. Each session includes a session overview abstract and list of speakers or the featured presenters.

<table>
<thead>
<tr>
<th>Listing</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session Type and Title</td>
<td>Session type and title display in bold type and formatted in uppercase.</td>
</tr>
<tr>
<td>Endorsed by</td>
<td>This section lists the endorsements from SOT Special Interest Groups, Specialty Sections, Regional Chapters, or SOT Committees. The list of endorsers (groups that developed the session) is sorted alphabetically and the primary endorser is identified by the asterisk (*).</td>
</tr>
<tr>
<td>Abstract Number or Presentation Time</td>
<td>The first number listed is the abstract number, or the SOT final identifying number. For scientific sessions (but not Continuing Education Courses or Poster Presentations), the second number is the poster presentation time. Individual Abstracts can be found on The Toxicologist CD-ROM (free to all attendees), The Toxicologist book (available for purchase on-site for $20), and on the SOT Web site.</td>
</tr>
<tr>
<td>Poster Sessions</td>
<td>The poster board surface number is listed above the title of each individual presentation for easy reference.</td>
</tr>
</tbody>
</table>

Scientific Session Type Legend

FS Featured Sessions—Plenary and special lectures as well as debates
S Symposia Sessions—Cutting-edge science; new areas, concepts, or data
W Workshop Sessions—State-of-the-art knowledge in toxicology
R Roundtable—Controversial subjects
PL Platform Sessions—Oral presentations that cover new areas, concepts, or data
PS Poster Sessions—Topic specific presentations that cover new areas, concepts, or data
IS Informational Sessions—Scientific planning or membership development
HM Historical Highlights—Review of a historical body of science that has impacted toxicology
S Theme Session—Timely topics of relevance to toxicology
Daily Pocket Calendar

For your convenience, please tear out and carry with you.

Friday

Events names are listed alphabetically by the event start time.
Events at the Washington State Convention and Trade Center are noted as CC.

4:00 PM to 7:00 PM
Council Orientation Meeting
Sheraton Douglas Room

7:00 PM to 10:00 PM
Council Orientation Reception/Dinner
Sheraton Cedar Room

Saturday

Events are listed alphabetically by the event start time.
Events at the Washington State Convention and Trade Center are noted as CC.

9:30 AM to 10:30 AM
IUTOX Membership Committee Meeting
Sheraton Capitol Hill Room

10:45 AM to 11:45 AM
IUTOX Developing Countries Committee Meeting
Sheraton Ballard Room

11:30 AM to 6:00 PM
Johnson & Johnson Toxicology Interest Group Meeting
Sheraton Greenwood Room

12:00 NOON to 1:00 PM
IUTOX Science Committee Meeting
Sheraton Ballard Room

1:00 PM to 6:00 PM
ABT Board of Directors Meeting
Sheraton Ravenna Room

1:30 PM to 5:30 PM
IUTOX Executive Committee Meeting I
Sheraton Capitol Hill Room

2:00 PM to 5:00 PM
SOT Committee Chair Orientation
Sheraton Willow A Room

4:00 PM to 7:00 PM
E-mail Center/Message Boards
CC East Lobby, Level 6

5:00 PM to 7:00 PM
Housing Desk
CC South Lobby, Level 4

4:00 PM to 7:00 PM
Registration
CC South Lobby, Level 4

4:00 PM to 7:00 PM
Speaker Ready Room
CC Room 213

4:00 PM to 7:00 PM
Tour Desk
CC South Lobby, Level 4

March 14, 2008

March 15, 2008

10:45 AM to 11:45 AM
IUTOX Developing Countries Committee Meeting
Sheraton Ballard Room

11:30 AM to 6:00 PM
Johnson & Johnson Toxicology Interest Group Meeting
Sheraton Greenwood Room

12:00 NOON to 1:00 PM
IUTOX Science Committee Meeting
Sheraton Ballard Room

1:00 PM to 6:00 PM
ABT Board of Directors Meeting
Sheraton Ravenna Room

1:30 PM to 5:30 PM
IUTOX Executive Committee Meeting I
Sheraton Capitol Hill Room

2:00 PM to 5:00 PM
SOT Committee Chair Orientation
Sheraton Willow A Room

4:00 PM to 7:00 PM
E-mail Center/Message Boards
CC East Lobby, Level 6

5:00 PM to 7:00 PM
Housing Desk
CC South Lobby, Level 4

4:00 PM to 7:00 PM
Registration
CC South Lobby, Level 4

4:00 PM to 7:00 PM
Speaker Ready Room
CC Room 213

4:00 PM to 7:00 PM
Tour Desk
CC South Lobby, Level 4

March 16, 2008

Sunday

Events are listed alphabetically by the event start time.
Events at the Washington State Convention and Trade Center are noted as CC.

8:00 AM to 10:00 AM
CRAD Committee Meeting I
CC Room 209

8:00 AM to 5:00 PM
Guest Hospitality Center
Sheraton Greenwood Room

8:00 AM to 4:00 PM
Tour Desk
CC South Lobby, Level 4

8:00 AM to 5:00 PM
Luggage/Coat Check
CC Room 454

8:00 AM to 8:00 PM
Registration
CC South Lobby, Level 4

7:00 AM to 5:30 PM
SOT Office
CC Room 303

7:00 AM to 5:30 PM
Speaker Ready Room
CC Room 213

7:30 AM to 2:30 PM
Concession Stands
CC Level 6

7:30 AM to 12:00 NOON
TEF Board of Trustees Meeting
Sheraton Leschi Room

8:00 AM to 10:00 AM
CRAD Committee Meeting I
CC Room 209

8:00 AM to 5:00 PM
Guest Hospitality Center
Sheraton Greenwood Room

8:00 AM to 4:00 PM
Tour Desk
CC South Lobby, Level 4

8:00 AM to 10:35 AM
Undergraduate Education Program
CC Room 2A

8:15 AM to 12:00 NOON
Continuing Education Courses
Ticket Required
CC Room 2A

3:00 PM to 5:00 PM
Undergraduate Education Program
CC Room 2A

4:00 PM to 5:15 PM
Awards Recipients Photographed
CC Room 601

4:45 PM to 5:15 PM
Awards Ceremony Music Prelude
Kaley Eaton, Pianist
CC Ballroom 6A

5:15 PM to 6:30 PM
Awards Ceremony
All Attendees Welcome
CC Ballroom 6A

6:30 PM to 7:30 PM
Welcoming Reception
All Attendees Welcome
CC Exhibit Hall 4F

12:00 NOON to 3:00 PM
Toxicological Sciences Associate Editors Meeting
Sheraton Issaquah Room

1:15 PM to 5:00 PM
Continuing Education Courses
Ticket Required
CC (See Signage for Room Location)

2:00 PM to 4:00 PM
Endowment Fund Board Meeting
CC Room 212

3:00 PM to 5:00 PM
Academic Program Session for Undergraduate Students
CC Room 2A

4:00 PM to 5:15 PM
Awards Recipients Photographed
CC Room 601

4:45 PM to 5:15 PM
Awards Ceremony Music Prelude
Kaley Eaton, Pianist
CC Ballroom 6A

5:15 PM to 6:30 PM
Awards Ceremony
All Attendees Welcome
CC Ballroom 6A

6:30 PM to 7:30 PM
Welcoming Reception
All Attendees Welcome
CC Exhibit Hall 4F

6:45 PM to 7:30 PM
Regional Chapter Graduate Committee Introductory Meeting
Sheraton Aspen Room

7:00 PM to 8:00 PM
25-Year (or More) Member Reception
By Invitation Only
CC Room 601

7:00 PM to 10:00 PM
University of Washington Alumni & Friends Reception
Seattle Children’s Orthopedic Hospital Research Institute

7:30 PM to 10:00 PM
Arizona Night
Sheraton Willow A Room

7:30 PM to 10:00 PM
Lovelace Respiratory Research Institute Reception for Past and Present Employees
Sheraton Willow B Room

7:30 PM to 8:30 PM
Student/Postdoctoral Fellow Mixer
Ticket Required
Sheraton Grand Ballroom C

8:00 PM to 10:00 PM
IUTOX Executive Committee Dinner
Palomino Restaurant

up-to-date information at www.toxicology.org
**Program Overview by Day & Time**

**Sunday**

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
</tr>
</thead>
</table>
| 7:00 AM - 7:45 AM | **Sunrise Continuing Education Course**  
1. Mini-Pigs as an Alternative Non-Rodent Species in Toxicology and Safety Studies |
| 8:15 AM - 12:00 PM | **Morning Continuing Education Courses**  
2. Introduction to Pathology for Toxicologists and Study Directors  
3. Stem Cells and their Multi-Potential Uses and Potential Dangers  
4. Dose-Response Modeling for Occupational and Environmental Risk Assessment  
5. The Use of Transgenic Animal Technology in Toxicological Research  
6. Process-Based Approaches to Modulating Gene and Protein Expression *In Vivo* and *In Vitro*  
7. Basic Embryology and Developmental Toxicology |  
| 1:15 PM - 5:00 PM | **Afternoon Continuing Education Courses**  
8. Introduction to Pathology for Toxicologists and Study Directors  
10. Clinical Dose Setting for Biotherapeutics  
11. Use of Data for Development of Uncertainty Factors in Non-Cancer Risk Assessment  
12. Essential Informatics for Toxicologists: Knowledge Management End-to-End  
13. Epidemiology for Toxicologists: Introduction |

For your convenience, please tear out and carry with you.
Monday

Events are listed alphabetically by the event start time.

Events at the Washington State Convention and Trade Center are noted as CC.

6:30 AM to 8:00 AM Composite and Veterinary Specialty Section Officers Meeting
CC Room 304

6:30 AM to 8:00 AM Metals Specialty Section Officers Meeting
CC Room 305

7:00 AM to 8:30 AM Carcinogenesis Specialty Section Officers Meeting
CC Room 209

7:00 AM to 8:30 AM Continuing Education Committee Meeting
CC Room 208

7:00 AM to 6:00 PM E-mail Center/Message Boards
CC East Lobby, Level 6

7:00 AM to 8:30 AM Food Safety Specialty Section Officers Meeting
CC Room 307

7:00 AM to 8:30 AM In Vitro and Alternative Methods Specialty Section Officers Meeting
CC Room 204

7:00 AM to 8:30 AM Luggage/Coat Check
CC Room 454

7:00 AM to 9:00 AM Mechanisms Specialty Section Officers Meeting
CC Room 214

7:00 AM to 8:30 AM Past Presidents Breakfast
CC Room 309

7:00 AM to 8:15 AM Postdoctoral Assembly Board Meeting
CC Room 212

7:00 AM to 8:30 AM Regional Chapter Graduate Committee Business Meeting
CC Room 307

7:00 AM to 5:00 PM Registration
CC South Lobby, Level 4

7:00 AM to 8:00 AM Regulatory and Safety Evaluation Specialty Section Officers Meeting
CC Room 203

7:00 AM to 9:00 AM Risk Assessment Specialty Section Officers Meeting
CC Room 211

7:00 AM to 5:00 PM SOT Office
CC Room 303

7:00 AM to 5:00 PM Speaker Ready Room
CC Room 213

7:00 AM to 8:00 AM Special Interest Group President and Officers Meeting
CC Room 201

7:15 AM to 8:15 AM Program Committee Walk-Through
CC Room 603

7:30 AM to 9:30 AM Concession Stands
CC Level 6

7:30 AM to 9:00 AM Toxicologic and Exploratory Pathology Specialty Section Officers Meeting
CC Room 202

7:30 AM to 2:00 PM Undergraduate Education Program
CC Room 3A

8:00 AM to 5:00 PM Guest Hospitality Center
Sheraton Greenwood Room

8:00 AM to 9:30 AM Poster Set Up
(See Poster Board Surface Map on Page 36)
CC Exhibit Hall

8:00 AM to 4:00 PM Tour Desk
CC South Lobby, Level 4

8:15 AM to 9:15 AM Plenary Opening Lecture: Perspectives on Science in the 21st Century
Nobel Laureate Lee Hartwell
CC Exhibit Hall 4F

9:15 AM to 10:15 AM Complimentary Coffee
CC Exhibit Hall

9:15 AM to 2:30 PM Concession Stands
CC Exhibit Hall

9:15 AM to 2:30 PM CRAD Job Bank Center
CC Room 205

9:15 AM to 2:30 PM Hot Zones (Wireless Internet Access)
CC Exhibit Hall

9:15 AM to 2:30 PM ToxExpo™ Exhibits Open
CC Exhibit Hall

9:30 AM to 11:15 AM Poster Session for Visiting Students
CC Exhibit Hall

9:30 AM to 12:30 PM Poster Sessions
CC Exhibit Hall

9:30 AM to 12:30 PM Scientific Sessions
CC (See Program Description for Room Locations)

9:45 AM to 10:45 AM Exhibitor Hosted Session: MPI Research: Scientific Advances in GLP Biomathematical Analysis
CC Exhibit Hall 4C-3

9:45 AM to 10:45 AM Exhibitor Hosted Session: Ricerca Biosciences, LLC: Biotechnology—Both a Business and a Science and Biotechnology—Changing Science and Service
CC Exhibit Hall 4C-4

11:00 AM to 12:30 PM Awards Committee Meeting
CC Room 304

11:00 AM to 12:00 NOON Exhibitor Hosted Session: Bio-Rad Laboratories: SELDI-TOF Strategies for Toxico logical Biomarker Discovery and Application
CC Exhibit Hall 4C-3

11:00 AM to 12:00 NOON Exhibitor Hosted Session: Promega Corporation: Multiplexing Luminex Instrumentation
AimsToC Cell-Based Assays Including Applications with Primary Cells and Stem Cells
CC Exhibit Hall 4C-4

11:30 AM to 1:30 PM Food and Chemical Toxicology Editorial Board Meeting
Sheraton Junior Room

11:30 AM to 1:30 PM Toxicology and Applied Pharmacology Associate Editors Meeting
Sheraton Madrona Room

12:00 NOON to 1:00 PM HESI-Sponsored Luncheon Seminar
Sheraton Grand Ballroom B

12:00 NOON to 1:30 PM Nanotoxicology Specialty Section Meeting/Luncheon
Sheraton Willow Room

12:00 NOON to 1:30 PM Neurotoxicology Specialty Section Officers Meeting/Luncheon
Sheraton Grand Ballroom D

12:15 PM to 1:15 PM Exhibitor Hosted Session: Phyxon Pharmaceuticals, Inc.; Fish First: Zebrfish are Increasingly Used for Early Stage Assessment of Drug Efficacy, Toxicity, and Safety
CC Exhibit Hall 4C-4

12:15 PM to 1:15 PM Exhibitor Hosted Session: Strategic Applications, Inc. (SAY): Innovations in Infusion and Sampling
CC Exhibit Hall 4C-3

12:15 PM to 1:20 PM In Vitro Toxicology Lecture and Luncheon for Students (Ticket Required)
Sheraton Grand Ballroom A

12:15 PM to 1:30 PM Regulatory Affairs and Legislative Assistance Committee Meeting
CC Room 209

12:15 PM to 1:30 PM Scientific Sessions
CC (See Program Description for Room Locations)

1:30 PM to 1:45 PM Exhibitor Hosted Session: ReachBio LLC: Primary Stem Cell Based Assays for Toxicology and Other Drug Screening Applications
CC Exhibit Hall 4C-4

1:30 PM to 4:15 PM Scientific Sessions
CC (See Program Description for Room Locations)

1:30 PM to 2:30 PM VIP ToxExpo™ Exhibit Hall Walk-Through
CC Exhibit Hall

2:45 PM to 3:45 PM Exhibitor Hosted Session: GeneGo Inc.: Tools for Systems Toxicology—Integrating Chemical, Gene Expression, and Metabolic Data into Safety Assessment
CC Exhibit Hall 4C-3

2:45 PM to 3:45 PM Exhibitor Hosted Session: National Toxicology Program: Public Access to the National Toxicology Program: From Acrylamide to Zinc
CC Exhibit Hall 4C-4

3:30 PM to 4:30 PM Undergraduate Toxicology Faculty Meeting
CC Room 201

4:30 PM to 6:00 PM AIB Annual Mixer Meeting
Sheraton Willow A Room

4:30 PM to 7:30 PM CAHB and Taconic: Discussion Session on Alternative Transgenic Models for Carcinogenicity Evaluation
Sheraton Grand Ballroom A

4:30 PM to 6:00 PM K–12 TEAMS Event Volunteers Meeting
CC Room 307

4:30 PM to 6:00 PM Northern California and Pacific Northwest Regional Chapters, UC Davis and UC Berkeley Joint Meeting/Reception
Sheraton Metropolitan B Room

4:30 PM to 9:30 PM Rosetta Biosoftware Hospitality Suite
Hyatt Blee Biltmore Suite

4:30 PM to 7:00 PM Roundtable of Toxicology Consultants Meeting/Reception
Sheraton Willow B Room

4:30 PM to 5:50 PM Scientific Sessions (Sunset)
CC (See Program Description for Room Locations)

4:30 PM to 6:00 PM Specialty Section Presidents and Officers Meeting
CC Room 307

5:00 PM to 8:00 PM American Association of Chinese in Toxicology Special Interest Group Business Meeting, Distinguished Chinese Toxicologist Lecture
Sheraton Grand Ballroom D

5:00 PM to 6:00 PM Gulf Coast and South Central Regional Chapters Joint Meeting/Reception
Gordon Biersch Brewery/Restaurant

5:30 PM to 7:30 PM Elsevier Editors’ Reception
Hyatt Leonesa 3 Room

Continued on next page
### Monday (Continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:30 PM to 8:00 PM</td>
<td>Korean Toxicologist Association in America Special Interest Group Meeting/Reception</td>
<td>Hyatt Leonesa 1 Room</td>
</tr>
<tr>
<td>5:30 PM to 6:30 PM</td>
<td>Organizational Meeting for a Potential New Ocular Toxicology Specialty Section</td>
<td>Sheraton Capitol Hill Room</td>
</tr>
<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Food Safety Specialty Section Meeting/Reception</td>
<td>CC Room 619</td>
</tr>
<tr>
<td>6:00 PM to 7:00 PM</td>
<td>Hispanic Organization for Toxicologists Special Interest Group Meeting/Reception</td>
<td>Sheraton Kirkland Room</td>
</tr>
<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Mechanisms Specialty Section Meeting/Reception</td>
<td>CC Room 612</td>
</tr>
<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Risk Assessment Specialty Section Meeting/Reception</td>
<td>CC Room 609</td>
</tr>
<tr>
<td>6:00 PM to 8:00 PM</td>
<td>St. John’s University 6th Annual Toxicology Alumni Dinner</td>
<td>Sheraton Ravenna Room</td>
</tr>
<tr>
<td>7:30 PM to 10:00 PM</td>
<td>North Carolina State University Alumni Reception</td>
<td>Sheraton Cedar Room</td>
</tr>
</tbody>
</table>
**Program Overview by Day & Time**

**Monday**

**8:15 AM–9:15 AM**
**PLENARY OPENING LECTURE**
Perspectives on Science in the 21st Century
Lecturer: Nobel Laureate Lee Hartwell (Exhibit Hall 4F)

**9:30 AM–12:15 PM**
**SYMPOSIA SESSIONS**
- Metals, Microglia, and Neuroinflammation (Room 6A)
- Molecular Basis for Susceptibility to Chemical Toxicity and Disease (Room 605)
- New Developments in Liver Tumor Biology (Room 6C)
- Particle Interactions with Biomaterials: Beyond Opsonization (Room 6B)

**WORKSHOP SESSIONS**
- Current Perspectives on Ocular and Systemic Safety Risks of Therapeutics (Room 611)
- LLNA: False Positives, False Negatives and Alternative Endpoints (Room 608)

**PLATFORM SESSIONS**
- Advancing the Science of Risk Assessment (Room 615)
- Developmental Immunotoxicology, Host Resistance and Genomics (Room 6E)
- Ecotoxicity and Chemical Exposure (Room 2A)
- Oxidative Stress and DNA Strand Breaks and Applications of the COMET Assay (Room 618)

**9:30 AM–12:30 PM**
**POSTER SESSIONS**
(Exhibit Hall—See Poster Board Surface Map on Page 37)
- Animal Models (Exhibit Hall)
- Bioinformatics and Computational Toxicology (Exhibit Hall)
- Chemical and Biological Weapons (Exhibit Hall)
- Endocrine Mechanisms of Toxicity (Exhibit Hall)
- Immuno-epidemiology (Exhibit Hall)
- Inhalants: Oxidative and Redox Mechanisms (Exhibit Hall)
- Oxidative Stress Mechanisms in Chemical Carcinogenesis (Exhibit Hall)
- Pesticide Metabolism and Toxicity (Exhibit Hall)
- Xenobiotic Biotransformation II (Exhibit Hall)

**12:15 PM–1:30 PM**
**ROUNDTABLE SESSIONS**
- The Future of Toxicology (Room 602)
- Risk Assessment for Biotherapeutics (Room 618)

**12:30 PM–1:20 PM**
**MERIT AWARD LECTURE**
The Dose Makes the Toxicologist—Paracelsus as Seen From Switzerland
Lecturer: Hanspeter Witschi (Ballroom 6B)

**1:00 PM–4:30 PM**
**SYMPOSIA SESSIONS**
- Drug-Induced Mitochondrial Toxicity: Novel Insights–Novel Tools (Room 6B)
- Environmental Influence on Female Puberty and Breast Tumorigenesis (Room 6E)
- Oxidant Air Pollution and Childhood Asthma (Room 6C)
- Stem Cells: New Tools for Neurotoxicologists (Room 605)

**WORKSHOP SESSIONS**
- Getting the Most Out of Model Organism Databases: From the Basic to the Complex (Room 615)
- Mixture Exposures to Metals/Metalloids and Related Health Effects (Room 608)
- Where the Rubber Meets the Road: Current Application of Genomic Tools in Product Development and Decision Making (Room 611)

**INFORMATIONAL SESSION**
- Future Paths for Puget Sound: Contaminants, Cultures, and Ecosystem Risk Characterization—A Special Regional Interest Session (Room 618)

**PLATFORM SESSIONS**
- APC’s, B Cells and Haematopoiesis (Room 602)
- Disposition/Pharmacokinetics (Room 6A)
- Frontiers in Liver Toxicology Research (Room 2A)

**4:30 PM–5:30 PM**
**ROUNDTABLE SESSION**
Immunotoxicity Testing: Should Elevated Antibody Responses be Interpreted as an Indicator of Immunotoxicological Hazard? (Room 615)

**HISTORICAL HIGHLIGHT SESSION**
Ozone Toxicology: Historical Perspectives of the Science that Shaped the Regulatory Standards (Room 602)

**INFORMATIONAL SESSION**
- Putting Your Best Foot Forward: Job Interviewing Workshop for Early-Career Scientists (Room 605)

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**March 17, 2008**

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**For your convenience, please tear out and carry with you.**

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**up-to-date information at www.toxicology.org**
### Daily Pocket Calendar

**Tuesday**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM to 8:50 AM</td>
<td>SOT/EUROTOX Debate: In Vivo Toxicology Is Useful for Regulatory Purposes CC Ballroom 6A</td>
</tr>
<tr>
<td>8:00 AM to 4:00 PM</td>
<td>Tour Desk CC South Lobby, Level 4</td>
</tr>
<tr>
<td>8:00 AM to 2:30 PM</td>
<td>Concession Stands CC Exhibit Hall</td>
</tr>
<tr>
<td>8:30 AM to 4:30 PM</td>
<td>CRAD Job Bank Center CC Room 205</td>
</tr>
<tr>
<td>8:30 AM to 9:30 AM</td>
<td>Exhibitor Hosted Session: Rosetta Biosoftware: Critical Path Analysis of Shared Toxicity Datasheer Pharmaceutical Companies Bridges Biomarker Discovery CC Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>8:30 AM to 9:30 AM</td>
<td>Exhibitor Hosted Session: VivoMetrics, Inc. One Year into the Modern Era of Data Collection: Successes, Improvements, and What's Next CC Exhibit Hall 4C-1</td>
</tr>
<tr>
<td>8:30 AM to 4:30 PM</td>
<td>Hot Zones (Wireless Internet Access) CC Exhibit Hall</td>
</tr>
<tr>
<td>8:30 AM to 12:00 NOON</td>
<td>K-12 Paracelsus Goes to the Classroom—The TEAMS Project: Toxicologists Educating and Mentoring Students Hyatt E. Anderson Amphitheater</td>
</tr>
<tr>
<td>8:30 AM to 9:00 AM</td>
<td>Poster Set Up (See Poster Board Surface Map on Page 38) CC Exhibit Hall</td>
</tr>
<tr>
<td>8:30 AM to 4:30 PM</td>
<td>ToxExpo™ Exhibits Open CC Exhibit Hall</td>
</tr>
<tr>
<td>9:00 AM to 12:30 PM</td>
<td>Poster Sessions CC Exhibit Hall</td>
</tr>
<tr>
<td>9:00 AM to 11:15 AM</td>
<td>Scientific Sessions (Sunrise) CC Exhibit Hall</td>
</tr>
<tr>
<td>9:15 AM to 10:15 AM</td>
<td>Complimentary Coffee CC Exhibit Hall</td>
</tr>
<tr>
<td>9:45 AM to 10:45 AM</td>
<td>Exhibitor Hosted Session: Chantest, Inc.: Progress in Ion Channel Safety Assessments CC Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>9:45 AM to 10:45 AM</td>
<td>Exhibitor Hosted Session: Charles River Laboratories: Building a Global Standard GLP Preclinical Research Operation in China CC Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>10:00 AM to 11:30 AM</td>
<td>50th Anniversary Task Force Meeting CC Room 209</td>
</tr>
<tr>
<td>10:30 AM to 12:00 NOON</td>
<td>ToxLearn Work Group Meeting CC Room 305</td>
</tr>
<tr>
<td>11:00 AM to 12:00 NOON</td>
<td>Exhibitor Hosted Session: Data Integrated Scientific Systems (D.I.S.S.): The Future of Telemetry CC Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>11:00 AM to 12:00 NOON</td>
<td>Exhibitor Hosted Session: NeuroScience Association (NSA): Key Contemporary Concepts in Neurotoxicity Screens CC Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>11:30 AM to 1:30 PM</td>
<td>Toxicology Editorial Board Meeting Sheraton Juniper Room</td>
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<tr>
<td>11:30 AM to 1:30 PM</td>
<td>Toxicology Letters Editorial Board Meeting Sheraton Madrona Room</td>
</tr>
<tr>
<td>11:30 AM to 1:30 PM</td>
<td>U.S. Environmental Protection Agency: Risk Assessment Data Repository—An Inter-Agency Collaboration Sheraton Aspen Room</td>
</tr>
<tr>
<td>12:00 NOON to 2:00 PM</td>
<td>Central States Regional Chapter Meeting/Luncheon Sheraton Cedar Room</td>
</tr>
<tr>
<td>12:00 NOON to 1:15 PM</td>
<td>Data Sciences International: Laboratory Animal Monitoring—Advanced Applications of Jacketed Telemetry: Respiring and More (By Invitation Only) Sheraton Grand Ballroom A</td>
</tr>
<tr>
<td>12:00 NOON to 1:30 PM</td>
<td>In Vivo and Alternative Methods Specialty Section Meeting/Luncheon Sheraton Grand Ballroom B</td>
</tr>
<tr>
<td>12:00 NOON to 1:15 PM</td>
<td>Postdoctoral Assembly Luncheon (Ticket Required) CC Room 3A</td>
</tr>
<tr>
<td>12:00 NOON to 1:20 PM</td>
<td>Town Hall Meeting: SOT Strategic Plan—Defining the Future of SOT CC Ballroom 6E</td>
</tr>
<tr>
<td>12:15 PM to 1:15 PM</td>
<td>Exhibitor Hosted Session: Affymetrix: Affymetrix is Accelerating Toxicology Decisions CC Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>12:15 PM to 1:15 PM</td>
<td>Exhibitor Hosted Session: Thermo Fisher Scientific: Cell Based Assays as an Alternative to Animal Testing? CC Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>12:30 PM - 1:20 PM</td>
<td>Distinguished Toxicology Scholar Award Lecture: Half a Century of Progress in Neurotoxicology: Past, Present, and Future Lecturer: Tosho Narahashi CC Ballroom 6B</td>
</tr>
<tr>
<td>12:30 PM to 1:00 PM</td>
<td>Poster Set Up (See Poster Board Surface Map on Page 39) CC Exhibit Hall</td>
</tr>
<tr>
<td>1:00 PM to 4:30 PM</td>
<td>Poster Sessions CC Exhibit Hall</td>
</tr>
<tr>
<td>1:30 PM to 2:30 PM</td>
<td>Exhibitor Hosted Session: Covance: Outscourcing Preclinical Safety Assessment—How to Create a Strategy for Success CC Exhibit Hall 4C-3</td>
</tr>
</tbody>
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### March 18, 2008

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30 PM to 2:30 PM</td>
<td>Exhibitor Hosted Session: Metabolon, Inc.: Global Metabolite Analysis in Drug Discovery and Development CC Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>1:30 PM to 4:30 PM</td>
<td>K-12 Paracelsus Goes to the Classroom—The TEAMS Project: Toxicologists Educating and Mentoring Students Hyatt E. Anderson Amphitheater</td>
</tr>
<tr>
<td>1:30 PM to 4:15 PM</td>
<td>Scientific Sessions CC (See Program Description for Room Locations)</td>
</tr>
<tr>
<td>2:00 PM to 3:30 PM</td>
<td>Special Information Meeting with Ken Olden for Students Seeking Postdocs at NEHS CC Room 210</td>
</tr>
<tr>
<td>2:45 PM to 3:45 PM</td>
<td>Exhibitor Hosted Session: Ingenuity Systems: Toxicity, Biomarker and Metabolomics Workflows: Result in Efficient Evaluation of Compound Toxicity • Safety and the Application of IPA Pathway Analysis Tools to Cancer Therapeutics CC Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>2:45 PM to 3:45 PM</td>
<td>Exhibitor Hosted Session: Trevegen: Trevegen Standardized CometAssay™ System CC Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>4:30 PM to 6:00 PM</td>
<td>Annual Business Meeting of the Society of Toxicology (SOT Members Only: Full, Associate, Postdoctoral, and Student Members Invited) CC Ballroom 6A</td>
</tr>
<tr>
<td>4:45 PM to 6:00 PM</td>
<td>ToxExpo™ 2009 Exhibit Space Selection Meeting CC Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>6:00 PM to 8:00 PM</td>
<td>Association of Scientists of Indian Origin in America Special Interest Group Meeting/Reception Sheraton Grand Ballroom A</td>
</tr>
<tr>
<td>8:00 PM to 8:00 PM</td>
<td>Asia Research Company: Celebration of Seattle Sheraton Metropolitan A Room</td>
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<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Biological Modeling Specialty Section Meeting/Reception CC Room 308</td>
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<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Carcinogenesis Specialty Section Meeting/Reception CC Room 606</td>
</tr>
<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Drug Discovery Toxicology Specialty Section Meeting/Reception CC Room 609</td>
</tr>
<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Inhalation and Respiratory Specialty Section Meeting/Reception CC Room 603</td>
</tr>
<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Metals Specialty Section Meeting/Reception CC Room 619</td>
</tr>
<tr>
<td>6:00 PM to 7:30 PM</td>
<td>Neurotoxicology Specialty Section Meeting/Reception CC Room 609</td>
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<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>6:00 PM - 7:30 PM</td>
<td>Regulatory and Safety Evaluation Specialty Section Meeting/Reception</td>
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<tr>
<td></td>
<td>CC Room 612</td>
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<tr>
<td>6:00 PM - 9:30 PM</td>
<td>Rosetta Biosoftware Hospitality Suite</td>
</tr>
<tr>
<td></td>
<td>Hyatt Blewett Suite</td>
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<tr>
<td>6:00 PM - 9:00 PM</td>
<td>Toxicologists of African Origin Special Interest Group Meeting/Reception</td>
</tr>
<tr>
<td></td>
<td>Hyatt Princesa 2 Room</td>
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<tr>
<td>6:30 PM - 8:00 PM</td>
<td>National Capital Area Regional Chapter Meeting/Reception</td>
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<td></td>
<td>Wild Ginger Restaurant</td>
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<tr>
<td>6:30 PM - 8:30 PM</td>
<td>Pfizer Recruiting/Outreach Effort</td>
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<td></td>
<td>Sheraton Grand Ballroom C</td>
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<tr>
<td>6:30 PM - 8:30 PM</td>
<td>Southeastern Regional Chapter Meeting/Reception</td>
</tr>
<tr>
<td></td>
<td>Hyatt Portland Room</td>
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<tr>
<td>7:00 PM - 8:30 PM</td>
<td>Kettering Laboratory, University of Cincinnati Reception</td>
</tr>
<tr>
<td></td>
<td>Sheraton Cedar Room</td>
</tr>
<tr>
<td>7:30 PM - 10:00 PM</td>
<td>University of Rochester Alumni Reception</td>
</tr>
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<td></td>
<td>Sheraton Willow A Room</td>
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<tr>
<td>9:00 PM - 11:00 PM</td>
<td>Rutgers Joint Graduate Program in Toxology Annual Dessert Reception</td>
</tr>
<tr>
<td></td>
<td>Sheraton Grand Ballroom B</td>
</tr>
<tr>
<td>9:00 PM - 10:00 PM</td>
<td>University of Connecticut Reception</td>
</tr>
<tr>
<td></td>
<td>Sheraton Issaquah Room</td>
</tr>
<tr>
<td>9:00 PM - 11:00 PM</td>
<td>University of Connecticut Environmental Toxology Reception</td>
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<td>Sheraton Wallingford Room</td>
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</tbody>
</table>
# Program Overview by Day & Time

## Tuesday

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM–8:50 AM</td>
<td><strong>ISSUES SESSION</strong>&lt;br&gt;• Over-the-Counter Cough and Cold Medications in Children: Efficacy, Safety, and Use (Ballroom 6B)</td>
</tr>
<tr>
<td>8:00 AM–8:50 AM</td>
<td><strong>ROUNDTABLE SESSIONS</strong>&lt;br&gt;• Breaking the Log-Jam: Public-Private Partnerships as a Way to Discover and Advance Biomarkers of Drug-Induced Toxicity (Room 618)&lt;br&gt;• Reproductive Toxicity Studies: One Generation versus Two Generations (Room 602)&lt;br&gt;• The 2007 Pet Food Related Toxic Nephropathy in Dogs and Cats (Room 6C)</td>
</tr>
<tr>
<td>9:00 AM–11:45 AM</td>
<td><strong>INFORMATIONAL SESSION</strong>&lt;br&gt;• Detection of Biological Free Radicals in Time and Space (Room 611)</td>
</tr>
<tr>
<td>9:00 AM–12:30 PM</td>
<td><strong>SYMPOSIA SESSIONS</strong>&lt;br&gt;• Molecular and Genomic Insights into the Nrf2-Regulated Oxidative Stress Response: Impact on Carcinogenesis (Room 605)&lt;br&gt;• New Concepts in the Etiology of Breast Cancer: From Genes to Environment and Back Again (Room 6B)</td>
</tr>
<tr>
<td>12:00 NOON–1:20 PM</td>
<td><strong>DEBATE</strong>&lt;br&gt;SOT/EUROTOX Debate: <em>In Vitro</em> Toxicology Is Useful for Regulatory Purposes (Ballroom 6A)</td>
</tr>
<tr>
<td>12:30 PM–1:20 PM</td>
<td><strong>PLATFORM SESSIONS</strong>&lt;br&gt;• Accelerating Discoveries in Toxicology Through ‘Omics Research (Room 6C)&lt;br&gt;• Chemical and Biological Weapons: Molecular Basis for Detection and Therapeutic Potential (Room 618)&lt;br&gt;• Developmental Basis of Disease (Room 6E)&lt;br&gt;• Health Risks and Food Safety (Room 615)&lt;br&gt;• Manganese Neurotoxicity: From Worms to Primates (Room 2A)</td>
</tr>
</tbody>
</table>

## March 18, 2008

<table>
<thead>
<tr>
<th>Time</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30 PM–4:15 PM</td>
<td><strong>SYMPOSIA SESSIONS</strong>&lt;br&gt;• Endothelial Dysfunction: More Than Just a ‘No NO’ Phenomenon (Room 605)&lt;br&gt;• Neurotoxicant-Induced Alterations in Developmental and Adult Neurogenesis: Structure-Function Studies and Clinical Relevance (Room 611)&lt;br&gt;• Novel Biomarkers of Drug-Induced Toxicity: Outcomes of Predtox and the Predictive Safety Testing Consortium (Room 602)</td>
</tr>
<tr>
<td>1:30 PM–4:15 PM</td>
<td><strong>WORKSHOP SESSIONS</strong>&lt;br&gt;• Dermal Toxicological Assessment of Nanomaterials and Nanodevices (Room 6C)&lt;br&gt;• Host Susceptibility and Chemical Safety Testing: New Approaches to Estimate Risks in the Human Population (Room 608)&lt;br&gt;• Molecular Mechanisms and Molecular Biology of Metal Carcinogenesis (Room 6B)&lt;br&gt;• Strategies for Assessing Developmental and Reproductive Toxicology of Bio-Pharmaceuticals (Room 6A)</td>
</tr>
<tr>
<td>1:30 PM–4:15 PM</td>
<td><strong>ROUNDTABLE SESSION</strong>&lt;br&gt;• Human Health Risk Assessment for Pharmaceuticals in the Environment (PIE) (Room 618)</td>
</tr>
</tbody>
</table>

## POSTER SESSIONS

- Applications of Biological Modeling (Exhibit Hall)<br>- Assessment of Ecological Toxicology (Exhibit Hall)<br>- Breast Cancer: Mechanisms, Biomarkers, and Chemoprevention (Exhibit Hall)<br>- Inhalation Toxicology (Exhibit Hall)<br>- Liver II: *In Vitro* (Exhibit Hall)<br>- Nanoparticles: Target Organs (Exhibit Hall)<br>- Pharmacokinetics and Disposition (Exhibit Hall)<br>- Regulation/Policy (Exhibit Hall)<br>- Reproductive System (Exhibit Hall)<br>- Risk Assessment Research (Exhibit Hall)<br>- Signal Transduction and Gene Regulation (Exhibit Hall)
Events are listed alphabetically by the event start time.

Events at the Washington State Convention and Trade Center are noted as CC.

7:00 AM to 8:30 AM
Committee on Diversity Initiatives Meeting
CC Room 305

7:00 AM to 8:00 AM
Ethical, Legal, and Social Issues Specialty Section Officers Meeting
CC Room 209

7:00 AM to 8:00 PM
Luggage/Coat Check
CC Room 454

7:00 AM to 8:30 AM
Membership Committee Meeting
CC Room 208

7:00 AM to 8:30 AM
Michigan Regional Chapter Meeting/ Breakfast
Sheraton Cedar Room

7:00 AM to 8:30 AM
Midwest Regional Chapter Meeting/ Breakfast
Sheraton Issaquah Room

7:00 AM to 8:30 AM
NIH Funding Task Force Meeting
CC Room 304

7:00 AM to 4:00 PM
SOT Office
CC Room 303

7:00 AM to 4:00 PM
Scientific Sessions (Sunrise)
CC Exhibit Hall

7:30 AM to 8:00 AM
Student Advisory Council Business Meeting
CC Room 307

7:30 AM to 9:30 AM
Concission Stands
CC Level 6

7:30 AM to 9:00 AM
Drug Discovery Specialty Section Officers Meeting
Sheraton Daily Grill

7:30 AM to 8:50 AM
Scientific Sessions (Sunrise)
CC (See Program Description for Room Locations)

8:00 AM to 9:00 AM
Dermal Toxicology Specialty Section Officers Meeting
CC Room 309

8:00 AM to 6:00 PM
E-mail Center/Message Boards
CC East Lobby, Level 6

8:00 AM to 5:00 PM
Guest Hospitality Center
Sheraton Greenwood Room

8:00 AM to 4:00 PM
Housing Desk
CC South Lobby, Level 4

8:00 AM to 8:50 AM
Keynote MRC Lecture: Biological Energy Conversion and Its Toxic Consequences
Nobel Laureate Professor Sir John E. Walker
CC Ballroom 6A

8:00 AM to 4:00 PM
Registration
CC South Lobby, Level 4

8:00 AM to 4:00 PM
Tour Desk
CC South Lobby, Level 4

8:30 AM to 2:30 PM
Concission Stands
CC Exhibit Hall

8:30 AM to 4:30 PM
CRAD Job Bank Center
CC Exhibit 205

8:30 AM to 9:30 AM
Exhibitor Hosted Session: BASi (Analytical Systems, Inc.): Automated In Vivo Sampling with Calix
CC Exhibit Hall 4C-3

8:30 AM to 9:30 AM
Exhibitor Hosted Session: Beckman Coulter, Inc.: Multiplex Gene Expression for Toxicology Screening of Target Compounds
CC Exhibit Hall 4C-4

8:30 AM to 4:30 PM
Hot Zones (Wireless Internet Access)
CC Exhibit Hall

8:30 AM to 9:00 AM
Poster Set Up
(See Poster Board Surface Map on Page 40)
CC Exhibit Hall

8:30 AM to 4:30 PM
ToxExpo™ Exhibits Open
CC Exhibit Hall

9:00 AM to 12:30 PM
Poster Sessions
CC Exhibit Hall

9:00 AM to 11:45 AM
Scientific Sessions
CC (See Program Description for Room Locations)

9:45 AM to 10:45 AM
Exhibitor Hosted Session: Hemogens Inc.: Drug-Drug Interaction Toxicity Screening at a Cellular Level
CC Exhibit Hall 4C-3

9:45 AM to 10:45 AM
Exhibitor Hosted Session: Huntington Life Sciences: Biosafety for Toxicologists: Everything You Wanted to Know but Were Afraid to Ask
CC Exhibit Hall 4C-4

11:00 AM to 12:00 NOON
Exhibitor Hosted Session: Numira Biosciences: MicroCT based Virtual Histology™ for Small Animal Imaging
CC Exhibit Hall 4C-3

11:00 AM to 12:00 NOON
Exhibitor Hosted Session: StemCell Technologies, Inc.: Utility of Hematopoietic Colony Forming Cell (CFC) Assays in Drug Development
CC Exhibit Hall 4C-4

11:30 AM to 1:30 PM
Finance Committee Meeting
CC Room 302

11:30 AM to 1:30 PM
K–12 Education Committee Meeting
CC Room 304

12:00 NOON to 1:30 PM
Comparative and Veterinary Specialty Section Meeting/Luncheon
Sheraton Willow Room

12:00 NOON to 1:30 PM
Immunotoxicology Specialty Section Officers Meeting
CC Room 208

12:00 NOON to 1:20 PM
Meet the Directors: A Conversation with the Directors
NIEHS Strategic Plan, Samuel Wilson
CC Ballroom 6B

12:00 NOON to 1:20 PM
Soapbox Session
CC South Lobby, Level 4

12:15 PM to 1:15 PM
Exhibitor Hosted Session: Beckman Coulter, Inc.: gTox Flow Kit: No-Waste, Room-Temperature, Fully Automated Flow Cytometric Detection of Murine Peripheral Blood Mononuclear Erythrocytes
CC Exhibit Hall 4C-3

12:15 PM to 1:15 PM
Exhibitor Hosted Session: Covance: Ocular Drug Development Selected Preclinical Topics—Pharmacokinetic Barriers to Ocular Drug Safety and Considerations in Species Selection for Safety Studies
CC Exhibit Hall 4C-4

12:30 PM to 1:00 PM
Poster Set Up
(See Poster Board Surface Map on Page 41)
CC Exhibit Hall

1:00 PM to 4:30 PM
Poster Sessions
CC Exhibit Hall

1:30 PM to 2:30 PM
Exhibitor Hosted Session: Cellumen Inc.: CellCpGr™ Cytotoxicity Profiling for Investigational Safety: Cellular Systems Biology with 3D Features in HopG2 and Primary Rat Hepatocytes
CC Exhibit Hall 4C-4

1:30 PM to 2:30 PM
Exhibitor Hosted Session: NOTOCORD Systems: Evaluation of the Use of an Unsupervised ECG Classification Tool in Cardiovascular Drug Safety Assessment
CC Exhibit Hall 4C-3

1:30 PM to 4:15 PM
Scientific Sessions
CC (See Program Description for Room Locations)

2:00 PM to 4:00 PM
Exhibit Liaison Advisory Committee Meeting
CC Room 309

2:45 PM to 3:45 PM
Exhibitor Hosted Session: SkinEthic Laboratories: An Alternative to Animal Use: Today and Prospective
CC Exhibit Hall 4C-3

2:45 PM to 3:45 PM
Exhibitor Hosted Session: VisualSonics: In Vivo Micro-Ultrasound Imaging for Quantification of Anatomical, Functional and Molecular Biomarkers in Preclinical Toxicology
CC Exhibit Hall 4C-4

3:00 PM to 5:00 PM
Board of Publications Committee Meeting
CC Room 304

4:30 PM to 6:00 PM
Education Committee Meeting
CC Room 208

4:30 PM to 9:30 PM
Rosetta Biosoftware Hospitality Suite
Hyatt Blevett Suite

4:30 PM to 5:30 PM
Scientific Sessions (Sunset)
CC (See Program Description for Room Locations)

5:00 PM - 7:00 PM
RETHINK: Impact of the Minipig in Toxicology Open Meeting
Sheraton Aspen Room

5:00 PM to 12:00 MIDNIGHT
ToxExpo™ Tear Down
CC Exhibit Hall

6:00 PM to 7:30 PM
Dermal Toxicology Specialty Section Meeting/Reception
CC Room 612

6:00 PM to 7:30 PM
Immunotoxicology Specialty Section Meeting/Reception
CC Room 606

6:00 PM to 7:30 PM
Molecular Biology Specialty Section Meeting/Reception
CC Room 619

6:00 PM to 7:30 PM
Reproductive and Developmental Toxicology Specialty Section Meeting/ Reception
CC Room 603

6:00 PM to 7:30 PM
Women in Toxicology Special Interest Group Meeting/Reception
Sheraton Grand Ballroom A

7:00 PM to 8:30 PM
President’s Reception (By Invitation Only)
Sheraton Cirrus Room

8:00 PM to 9:00 PM
Academy of Toxicological Sciences Reception
Sheraton Willow Room

up-to-date information at www.toxicology.org
<table>
<thead>
<tr>
<th>Time</th>
<th>Section</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM–8:50 AM</td>
<td>ROUNDTABLE SESSIONS</td>
<td>• Hazard vs. Risk for Chemical Regulation (Room 618)</td>
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<tr>
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<td>• Reconciling Scientific and Ethical Concerns in the Use of Animals for Toxicological Research (Room 615)</td>
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<td>• Toxicology Training Needs: New Faces and New Tools for the 21st Century (Room 608)</td>
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<tr>
<td>8:00 AM–8:50 AM</td>
<td>KEYNOTE LECTURE</td>
<td>Biological Energy Conversion and Its Toxic Consequences</td>
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<td>Lecturer: Nobel Laureate Professor Sir John E. Walker (Ballroom 6A)</td>
</tr>
<tr>
<td>9:00 AM–11:45 AM</td>
<td>SYMPOSIA SESSIONS</td>
<td>• Developmental Basis of Health and Disease: Persistent Effects of Tobacco Smoke Exposure (Room 605)</td>
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<td>• Unusual Manifestations of On-Target and Off-Target Toxicity: Toxicity of Kinase Inhibitors (Room 608)</td>
</tr>
<tr>
<td>9:00 AM–12:30 PM</td>
<td>POSTER SESSIONS</td>
<td>(Exhibit Hall—See Poster Board Surface Map on Page 40)</td>
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<tr>
<td></td>
<td></td>
<td>• Application of ‘Omics Research Tools in Toxicology (Exhibit Hall)</td>
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<td>• Cardiovascular System: Cardiac Effects (Exhibit Hall)</td>
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<td>• Developmental Toxicology (Exhibit Hall)</td>
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<td>• DNA Damage and Repair: Mechanisms and Agents (Exhibit Hall)</td>
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<td>• Epidemiology and Exposure Assessment (Exhibit Hall)</td>
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<td>• Gene Regulation and Genomic Approaches (Exhibit Hall)</td>
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<td>• Mechanisms of Carcinogenesis (Exhibit Hall)</td>
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<td>• Metals I (Exhibit Hall)</td>
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<td>• Nanoparticles: Inhalation and Respiratory Cell Injury (Exhibit Hall)</td>
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<td>• Respiratory and Skin Hypersensitivity (Exhibit Hall)</td>
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<td>• Skin Penetration and Toxicity (Exhibit Hall)</td>
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<tr>
<td>12:00 NOON–1:20 PM</td>
<td>INFORMATIONAL SESSIONS</td>
<td>• Mentoring 101—How to Mentor, and How to be Mentored (Room 615)</td>
</tr>
<tr>
<td>1:30 PM–4:15 PM</td>
<td>SYMPOSIA SESSIONS</td>
<td>• Arsenic and Cardiovascular Disease (Room 6B)</td>
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<td>• Nanomaterial Pharmacokinetics: Where We Are and Where We Need to Go (Room 6C)</td>
</tr>
<tr>
<td>1:30 PM–4:15 PM</td>
<td>WORKSHOP SESSIONS</td>
<td>• Advances in Technology and Increasing Acceptance for Zebrafish Use in Drug Discovery (Room 608)</td>
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<td>• Chlorotriazine Herbicides and their Common Degradation Products of Concern: Disposition and Potential Health Effects (Room 611)</td>
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<td>• Interdisciplinary Approaches for Improving Chemical Hazard Testing Paradigms (Room 6A)</td>
</tr>
<tr>
<td>1:30 PM–4:15 PM</td>
<td>PLATFORM SESSIONS</td>
<td>• Apoptosis: Cardiopulmonary Targets (Room 6E)</td>
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<td>• Immunotoxicology: T Cells (Room 602)</td>
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<td>• Issues in Regulatory Risk Assessment (Room 605)</td>
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<td>• New Insights for Developmental Toxicology (Room 618)</td>
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<td>• Nrf2 Induced Gene Regulation (Room 615)</td>
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<td>• Selective Dopaminergic Neurotoxicity: Genetics and Mechanisms (Room 2A)</td>
</tr>
<tr>
<td>4:30 PM–5:50 PM</td>
<td>ROUNDTABLE SESSIONS</td>
<td>• A Case Study on the Risks and Benefits of Deca-BDE—a Major Brominated Flame Retardant (Room 608)</td>
</tr>
<tr>
<td>4:30 PM–5:50 PM</td>
<td>INFORMATIONAL SESSIONS</td>
<td>• Implementation of the ICH S8 Immunotoxicity Testing Guideline (Room 615)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NIEHS Outstanding New Environmental Scientists (ONES) Awardees (Room 6C)</td>
</tr>
</tbody>
</table>
Daily Pocket Calendar

For your convenience, please tear out and carry with you.

Thursday

Events are listed alphabetically by the event start time.
Events at the Washington State Convention and Trade Center are noted as CC.

7:00 AM to 1:00 PM
Luggage/Cat Check
CC Room 454

7:00 AM to 11:30 AM
SOT Office
CC Room 303

7:00 AM to 11:30 AM
Speaker Ready Room
CC Room 233

7:30 AM to 12:00 NOON
Concession Stands
CC Level 6

7:30 AM to 9:30 AM
CRAD Committee Meeting II
CC Room 208

7:30 AM to 8:50 AM
ISSUES SESSION
CC Ballroom 6B

7:30 AM to 8:30 AM
Program Committee Meeting
CC Room 305

7:30 AM to 8:50 AM
Scientific Sessions (Sunrise)
CC (See Program Description for Room Locations)

8:00 AM to 11:30 AM
Concession Stands
CC Level 6

8:00 AM to 11:30 AM
Poster Set Up
(See Poster Board Surface Map on Pages 42 and 43)
CC Ballroom 6C & E

8:00 AM to 11:30 AM
Registration
CC South Lobby, Level 4

8:00 AM to 12:00 NOON
Poster Sessions
CC Ballroom 6C & E

9:00 AM to 11:45 AM
Scientific Sessions
CC (See Program Description for Room Locations)

9:00 AM to 11:45 AM
Tour Desk
CC South Lobby, Level 4

9:00 AM to 11:45 AM
CRAD Committee Meeting II
CC Room 208

9:00 AM to 11:45 AM
E-mail Center/Message Boards
E-mail Center/Message Boards

9:00 AM to 11:45 AM
Financial Support—A Revisited Perspective
Sheraton Willow Room

9:30 AM to 12:00 NOON
CRAD Committee Meeting II
CC Room 208

11:00 AM to 12:00 NOON
Lunch
CC South Lobby, Level 4

Program Overview by Day & Time

Thursday

7:30 AM – 8:50 AM
ISSUES SESSION
• 2007 National Research Council-National Academy of Sciences Reports: Impact on the Future of Toxicology (Ballroom 6B)

• Biofuel Combustion: An Emerging Health Problem? (Room 608)

8:30 AM – 12:00 NOON
POSTER SESSIONS
(Exhibit Hall—See Poster Board Surface Map on Page 42)
• AHR Mechanisms (Ballroom 6C & E)
• Cardiovascular System: Vascular Effects (Ballroom 6C & E)
• Chemoprevention (Ballroom 6C & E)
• Fish Alternative Models of Toxicity (Ballroom 6C & E)
• Food Safety II (Ballroom 6C & E)
• High Throuput, High Content Approaches to Assessing Genotoxicity (Ballroom 6C & E)
• Metals II (Ballroom 6C & E)
• Method Development, Autoimmunity and Disease Mechanisms in Immunotoxicology (Ballroom 6C & E)
• Oxidative Injury and Redox Biology II: In Vitro (Ballroom 6C & E)
• Pesticide Neurotoxicity (Ballroom 6C & E)
• Safety Assessment, Pharmaceutical—Techniques, Pulmonary, Cardiovascular (Ballroom 6C & E)

8:00 AM – 11:30 AM
Housing Desk
CC South Lobby, Level 4

8:00 AM – 12:00 NOON
Poster Set Up
(See Poster Board Surface Map on Pages 42 and 43)
CC Ballroom 6C & E

9:00 AM – 11:45 AM
Scientific Sessions
CC (See Program Description for Room Locations)

9:00 AM – 11:45 AM
Tour Desk
CC South Lobby, Level 4

9:00 AM – 11:45 AM
CRAD Committee Meeting II
CC Room 208

9:00 AM – 11:45 AM
E-mail Center/Message Boards
E-mail Center/Message Boards

9:00 AM – 11:45 AM
Financial Support—A Revisited Perspective
Sheraton Willow Room

9:00 AM – 11:45 AM
CRAD Committee Meeting II
CC Room 208

11:00 AM – 12:00 NOON
Lunch
CC South Lobby, Level 4

March 20, 2008

9:00 AM – 11:45 AM
Scientific Sessions
CC (See Program Description for Room Locations)

9:00 AM – 11:45 AM
Tour Desk
CC South Lobby, Level 4

9:00 AM – 11:45 AM
CRAD Committee Meeting II
CC Room 208

9:00 AM – 11:45 AM
E-mail Center/Message Boards
E-mail Center/Message Boards

9:00 AM – 11:45 AM
Financial Support—A Revisited Perspective
Sheraton Willow Room

9:00 AM – 11:45 AM
CRAD Committee Meeting II
CC Room 208

11:00 AM – 12:00 NOON
Lunch
CC South Lobby, Level 4

INFORMATIONAL SESSION
• REACH: Implementation, Chemical Safety, and Information Requirements (Room 6A)

WORKSHOP SESSIONS
• Genotoxicity Testing from Early Discovery through Regulatory Submission: A Comprehensive Primer (Room 618)
• Incorporation of Mode-of-Action into Mechanistically-Based Quantitative Models (Room 608)
• Pulmonary Toxicity Testing of Nanoparticles (Room 6B)
Notes
## Schedule by Event Name

<table>
<thead>
<tr>
<th>Event:</th>
<th>Date:</th>
<th>Time:</th>
<th>Location:</th>
<th>Room:</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-Year (or More) Member Reception (By Invitation Only)</td>
<td>Sunday, Mar 16</td>
<td>7:00 PM to 8:00 PM</td>
<td>Convention Center</td>
<td>601</td>
</tr>
<tr>
<td>50° Year Anniversary SOT Task Force Meeting</td>
<td>Tuesday, Mar 18</td>
<td>10:00 AM to 11:30 AM</td>
<td>Convention Center</td>
<td>209</td>
</tr>
<tr>
<td>ABT Annual Mixer Meeting</td>
<td>Monday, Mar 17</td>
<td>4:30 PM to 6:00 PM</td>
<td>Sheraton</td>
<td>Willow A</td>
</tr>
<tr>
<td>ABT Board of Directors Meeting</td>
<td>Saturday, Mar 15</td>
<td>1:00 PM to 6:00 PM</td>
<td>Sheraton</td>
<td>Ravena</td>
</tr>
<tr>
<td>Academic Program Session for Undergraduate Students</td>
<td>Sunday, Mar 16</td>
<td>3:00 PM to 5:00 PM</td>
<td>Convention Center</td>
<td>2A</td>
</tr>
<tr>
<td>Academy of Toxicological Sciences Board Meeting</td>
<td>Tuesday, Mar 18</td>
<td>6:30 AM to 7:30 AM</td>
<td>Sheraton</td>
<td>Juniper</td>
</tr>
<tr>
<td>Academy of Toxicological Sciences Reception</td>
<td>Wednesday, Mar 19</td>
<td>8:00 PM to 9:00 PM</td>
<td>Sheraton</td>
<td>Willow</td>
</tr>
<tr>
<td>American Association of Chinese in Toxicology Special Interest Group Business Meeting, Distinguished Chinese Toxicologist Lecture,</td>
<td>Monday, Mar 17</td>
<td>5:00 PM to 8:00 PM</td>
<td>Sheraton</td>
<td>Grand Ballroom D</td>
</tr>
<tr>
<td>American Board of Veterinary Toxicology Diplomate Meeting</td>
<td>Tuesday, Mar 18</td>
<td>6:45 AM to 7:45 AM</td>
<td>Sheraton</td>
<td>Kirkland</td>
</tr>
<tr>
<td>Animals in Research Committee Meeting</td>
<td>Tuesday, Mar 18</td>
<td>7:15 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>305</td>
</tr>
<tr>
<td>Annual Business Meeting of the Society of Toxicology (SOT Members Only: Full, Associates, Postdoctoral, and Student Members Invited)</td>
<td>Tuesday, Mar 18</td>
<td>4:30 PM to 6:00 PM</td>
<td>Convention Center</td>
<td>Ballroom 6A</td>
</tr>
<tr>
<td>Arizona Night</td>
<td>Sunday, Mar 16</td>
<td>7:30 PM to 10:00 PM</td>
<td>Sheraton</td>
<td>Willow A</td>
</tr>
<tr>
<td>Association of Scientists of Indian Origin in America Special Interest Group Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 8:00 PM</td>
<td>Sheraton</td>
<td>Grand Ballroom A</td>
</tr>
<tr>
<td>Award Ceremony Music Prelude Kaley Eaton, Pianist</td>
<td>Sunday, Mar 16</td>
<td>4:45 PM to 5:15 PM</td>
<td>Convention Center</td>
<td>Ballroom 6A</td>
</tr>
<tr>
<td>Awards Ceremony (All Attendees Welcome)</td>
<td>Sunday, Mar 16</td>
<td>5:15 PM to 6:30 PM</td>
<td>Convention Center</td>
<td>Ballroom 6A</td>
</tr>
<tr>
<td>Awards Committee Meeting</td>
<td>Monday, Mar 17</td>
<td>11:00 AM to 12:30 PM</td>
<td>Convention Center</td>
<td>304</td>
</tr>
<tr>
<td>Awards Recipients Photographed</td>
<td>Sunday, Mar 16</td>
<td>4:00 PM to 5:15 PM</td>
<td>Convention Center</td>
<td>601</td>
</tr>
<tr>
<td>Axio Research Company: Celebration of Seattle</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 8:00 PM</td>
<td>Sheraton</td>
<td>Metropolitan A</td>
</tr>
<tr>
<td>Biological Modeling Specialty Section Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>308</td>
</tr>
<tr>
<td>Board of Publications Committee Meeting</td>
<td>Wednesday, Mar 19</td>
<td>3:00 PM to 5:00 PM</td>
<td>Convention Center</td>
<td>304</td>
</tr>
<tr>
<td>CAHB and Taconic: Discussion Session on Alternative Transgenic Models for Carcinogenicity Evaluation</td>
<td>Monday, Mar 17</td>
<td>4:30 PM to 7:30 PM</td>
<td>Sheraton</td>
<td>Grand Ballroom A</td>
</tr>
<tr>
<td>Carcinogenesis Specialty Section Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>606</td>
</tr>
<tr>
<td>Carcinogenesis Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>209</td>
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<tr>
<td>Central States Regional Chapter Meeting/Luncheon</td>
<td>Tuesday, Mar 18</td>
<td>12:00 NOON to 2:00 PM</td>
<td>Sheraton</td>
<td>Cedar</td>
</tr>
<tr>
<td>Committee on Diversity Initiatives Meeting</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>305</td>
</tr>
<tr>
<td>Comparative and Veterinary Specialty Section Meeting/Luncheon</td>
<td>Wednesday, Mar 19</td>
<td>12:00 NOON to 1:30 PM</td>
<td>Sheraton</td>
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<tr>
<td>Comparative and Veterinary Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>6:30 AM to 8:00 AM</td>
<td>Convention Center</td>
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</tr>
<tr>
<td>Complimentary Coffee</td>
<td>Monday, Mar 17</td>
<td>9:15 AM to 10:15 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
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<tr>
<td>Complimentary Coffee</td>
<td>Tuesday, Mar 18</td>
<td>9:15 AM to 10:15 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Complimentary Coffee</td>
<td>Wednesday, Mar 19</td>
<td>9:15 AM to 10:15 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
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<tr>
<td>Concession Stands</td>
<td>Sunday, Mar 16</td>
<td>7:30 AM to 2:30 PM</td>
<td>Convention Center</td>
<td>Level 6</td>
</tr>
<tr>
<td>Concession Stands</td>
<td>Monday, Mar 17</td>
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<td>Convention Center</td>
<td>Level 6</td>
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<tr>
<td>Concession Stands</td>
<td>Monday, Mar 17</td>
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<td>Exhibit Hall</td>
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<td>Concession Stands</td>
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<td>Convention Center</td>
<td>Level 6</td>
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<td>Concession Stands</td>
<td>Tuesday, Mar 18</td>
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<td>Exhibit Hall</td>
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<td>Concession Stands</td>
<td>Wednesday, Mar 19</td>
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<td>Convention Center</td>
<td>Level 6</td>
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<td>Concession Stands</td>
<td>Wednesday, Mar 19</td>
<td>8:30 AM to 2:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
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<tr>
<td>Concession Stands</td>
<td>Thursday, Mar 20</td>
<td>7:30 AM to 12:00 NOON</td>
<td>Convention Center</td>
<td>Level 6</td>
</tr>
<tr>
<td>Continuing Education Committee Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:00 AM</td>
<td>Convention Center</td>
<td>208</td>
</tr>
<tr>
<td>Continuing Education Committee Walk-Through</td>
<td>Saturday, Mar 15</td>
<td>5:00 PM to 5:45 PM</td>
<td>Convention Center</td>
<td>603</td>
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</tbody>
</table>
| Continuing Education Courses (Ticket Required)                       | Sunday, Mar 16 | 8:15 AM to 12:00 NOON | Convention Center | (See Signage for Room Location)
<table>
<thead>
<tr>
<th>Event:</th>
<th>Date:</th>
<th>Time:</th>
<th>Location:</th>
<th>Room:</th>
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<tr>
<td>Continuing Education Courses <em>(Ticket Required)</em></td>
<td>Sunday, Mar 16</td>
<td>1:15 PM to 5:00 PM</td>
<td>Convention Center</td>
<td>(See Signage for Room Location)</td>
</tr>
<tr>
<td>Continuing Education Luncheon for Speakers, Committee, and Students <em>(By Invitation Only)</em></td>
<td>Sunday, Mar 16</td>
<td>11:45 AM to 1:15 PM</td>
<td>Convention Center</td>
<td>IMP Foyer, Level 2</td>
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<tr>
<td>Continuing Education Sunrise Mini-Course <em>(Ticket Required)</em></td>
<td>Sunday, Mar 16</td>
<td>7:00 AM to 7:45 AM</td>
<td>Convention Center</td>
<td>(See Signage for Room Location)</td>
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<tr>
<td>Council Meeting</td>
<td>Saturday, Mar 15</td>
<td>8:00 AM to 1:30 PM</td>
<td>Sheraton</td>
<td>Issaquah</td>
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<tr>
<td>Council Orientation Meeting</td>
<td>Friday, Mar 14</td>
<td>4:00 PM to 7:00 PM</td>
<td>Sheraton</td>
<td>Douglas</td>
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<tr>
<td>Council Orientation Reception/Dinner</td>
<td>Friday, Mar 14</td>
<td>7:00 PM to 10:00 PM</td>
<td>Sheraton</td>
<td>Cedar</td>
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<td>CRAD Committee Meeting I</td>
<td>Sunday, Mar 16</td>
<td>8:00 AM to 10:00 AM</td>
<td>Convention Center</td>
<td>209</td>
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<tr>
<td>CRAD Committee Meeting II</td>
<td>Thursday, Mar 20</td>
<td>7:30 AM to 9:30 AM</td>
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<tr>
<td>CRAD Job Bank Center</td>
<td>Sunday, Mar 16</td>
<td>10:00 AM to 4:30 PM</td>
<td>Convention Center</td>
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<tr>
<td>CRAD Job Bank Center</td>
<td>Monday, Mar 17</td>
<td>9:15 AM to 4:30 PM</td>
<td>Convention Center</td>
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<tr>
<td>CRAD Job Bank Center</td>
<td>Tuesday, Mar 18</td>
<td>8:30 AM to 4:30 PM</td>
<td>Convention Center</td>
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<td>CRAD Job Bank Center</td>
<td>Wednesday, Mar 19</td>
<td>8:30 AM to 4:30 PM</td>
<td>Convention Center</td>
<td>205</td>
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<tr>
<td>Data Sciences International: Laboratory Animal Monitoring—Advanced Applications of Jacketed Telemetry: Respiration and More <em>(By Invitation Only)</em></td>
<td>Tuesday, Mar 18</td>
<td>12:00 NOON to 1:15 PM</td>
<td>Sheraton</td>
<td>Grand Ballroom A</td>
</tr>
<tr>
<td>Dermal Toxicology Specialty Section Meeting/Reception</td>
<td>Wednesday, Mar 19</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>612</td>
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<tr>
<td>Dermal Toxicology Specialty Section Officers Meeting</td>
<td>Wednesday, Mar 19</td>
<td>8:00 PM to 9:00 AM</td>
<td>Convention Center</td>
<td>309</td>
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<tr>
<td>Distinguished Toxicology Scholar Award Lecture: Half A Century of Progress in Neurotoxicology: Past, Present, and Future Lecturer: Toshio Narahashi</td>
<td>Tuesday, Mar 18</td>
<td>12:30 PM to 1:20 PM</td>
<td>Convention Center</td>
<td>Ballroom 6B</td>
</tr>
<tr>
<td>Drug Discovery Specialty Section Officers Meeting</td>
<td>Wednesday, Mar 19</td>
<td>7:30 AM to 9:00 AM</td>
<td>Sheraton</td>
<td>Daily Grill</td>
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<tr>
<td>Drug Discovery Toxicology Specialty Section Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>616</td>
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<tr>
<td>Education Committee Meeting</td>
<td>Wednesday, Mar 19</td>
<td>4:30 PM to 6:00 PM</td>
<td>Convention Center</td>
<td>208</td>
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<tr>
<td>Elsevier Editors’ Reception</td>
<td>Monday, Mar 17</td>
<td>5:30 PM to 7:30 PM</td>
<td>Hyatt</td>
<td>Leonesa 3</td>
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<tr>
<td>E-mail Center/Message Boards</td>
<td>Saturday, Mar 15</td>
<td>4:00 PM to 7:00 PM</td>
<td>Convention Center</td>
<td>East Lobby, Level 6</td>
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<tr>
<td>E-mail Center/Message Boards</td>
<td>Sunday, Mar 16</td>
<td>7:00 AM to 6:00 PM</td>
<td>Convention Center</td>
<td>East Lobby, Level 6</td>
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<tr>
<td>E-mail Center/Message Boards</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 6:00 PM</td>
<td>Convention Center</td>
<td>East Lobby, Level 6</td>
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<tr>
<td>E-mail Center/Message Boards</td>
<td>Tuesday, Mar 18</td>
<td>8:00 AM to 6:00 PM</td>
<td>Convention Center</td>
<td>East Lobby, Level 6</td>
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<tr>
<td>E-mail Center/Message Boards</td>
<td>Wednesday, Mar 19</td>
<td>8:00 AM to 6:00 PM</td>
<td>Convention Center</td>
<td>East Lobby, Level 6</td>
</tr>
<tr>
<td>E-mail Center/Message Boards</td>
<td>Thursday, Mar 20</td>
<td>8:00 AM to 11:30 AM</td>
<td>Convention Center</td>
<td>East Lobby, Level 6</td>
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<tr>
<td>Endowment Fund Board Meeting</td>
<td>Sunday, Mar 16</td>
<td>2:00 PM to 4:00 PM</td>
<td>Convention Center</td>
<td>212</td>
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<tr>
<td>Ethical, Legal, and Social Issues Specialty Section Meeting/Reception</td>
<td>Monday, Mar 17</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>601</td>
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<tr>
<td>Ethical, Legal, and Social Issues Specialty Section Officers Meeting</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 8:00 AM</td>
<td>Convention Center</td>
<td>209</td>
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<tr>
<td>Exhibit Liaison Advisory Committee Meeting</td>
<td>Wednesday, Mar 19</td>
<td>2:00 PM to 4:00 PM</td>
<td>Convention Center</td>
<td>309</td>
</tr>
<tr>
<td>Exhibitor Hosted Session: Affymetrix: Affymetrix is Accelerating Toxicology Decisions</td>
<td>Tuesday, Mar 18</td>
<td>12:15 PM to 1:15 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>Exhibitor Hosted Session: BASi (Bioanalytical Systems, Inc.): Automated In Vivo Sampling with Culex</td>
<td>Wednesday, Mar 19</td>
<td>8:30 AM to 9:30 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>Exhibitor Hosted Session: Beckman Coulter, Inc.: Multiplex Gene Expression for Toxicology Screening of Target Compounds</td>
<td>Wednesday, Mar 19</td>
<td>8:30 AM to 9:30 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
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<td>Event:</td>
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<tr>
<td>Exhibitor Hosted Session: Beckman Coulter, Inc.: gTox Flow Kit: No-Wash, Room-Temperature, Fully Automated Flow Cytometric Detection of Murine Peripheral Blood Micronucleated Erythrocytes</td>
<td>Wednesday, Mar 19</td>
<td>12:15 PM to 1:15 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Bio-Rad Laboratories: SELDI-TOF Strategies for Toxicological Biomarker Discovery and Application</td>
<td>Monday, Mar 17</td>
<td>11:00 AM to 12:00 NOON</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Cellular Dynamics International, Inc.: Progress in Using Human Embryonic Stem Cells in Drug Screening, Toxicology and Drug Development</td>
<td>Monday, Mar 17</td>
<td>1:30 PM to 2:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>Exhibitor Hosted Session: Cellumen Inc.: CellCiphr™ Cytotoxicity Profiling for Investigational Safety: Cellular Systems Biology with 33-Features in HepG2 and Primary Rat Hepatocytes</td>
<td>Wednesday, Mar 19</td>
<td>1:30 PM to 2:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>Exhibitor Hosted Session: Chantest, Inc.: Progress in Ion Channel Safety Assessments</td>
<td>Tuesday, Mar 18</td>
<td>9:45 AM to 10:45 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Charles River Laboratories: Building a Global Standard GLP Preclinical Research Operation in China</td>
<td>Tuesday, Mar 18</td>
<td>9:45 AM to 10:45 AM</td>
<td>Convention Center</td>
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<tr>
<td>Exhibitor Hosted Session: Covance: Outsourcing Preclinical Safety Assessment—How to Create a Strategy for Success</td>
<td>Tuesday, Mar 18</td>
<td>1:30 PM to 2:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Covance: Ocular Drug Development Selected Preclinical Topics—Pharmacokinetic Barriers to Ocular Drug Safety and Considerations in Species Selection for Safety Studies</td>
<td>Wednesday, Mar 19</td>
<td>12:15 PM to 1:15 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
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<tr>
<td>Exhibitor Hosted Session: Data Integrated Scientific Systems (D.I.S.S.): The Future of Telemetry</td>
<td>Tuesday, Mar 18</td>
<td>11:00 AM to 12:00 NOON</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
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<tr>
<td>Exhibitor Hosted Session: GeneGo Inc.: Tools for Systems Toxicology—Integrating Chemical, Gene Expression, Protein and Metabolic Data into Safety Assessment</td>
<td>Monday, Mar 17</td>
<td>2:45 PM to 3:45 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Hemogenix Inc.: Drug-Drug Interaction Toxicity Screening at a Cellular Level</td>
<td>Wednesday, Mar 19</td>
<td>9:45 AM to 10:45 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Huntingdon Life Sciences: Bioanalysis for Toxicologists: Everything You Wanted to Know but Were Afraid to Ask</td>
<td>Wednesday, Mar 19</td>
<td>9:45 AM to 10:45 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
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<tr>
<td>Exhibitor Hosted Session: Ingenuity Systems: Toxicity, Biomarker and Metabolomics Workflows Result in Efficient Evaluation of Compound Toxicity and Safety and the Application of IPA Pathway Analysis Tools to Cancer Therapeutics</td>
<td>Tuesday, Mar 18</td>
<td>2:45 PM to 3:45 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Metabolon, Inc.: Global Metabolomic Analysis in Drug Discovery and Development</td>
<td>Tuesday, Mar 18</td>
<td>1:30 PM to 2:30 PM</td>
<td>Convention Center</td>
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<tr>
<td>Exhibitor Hosted Session: MPI Research: Scientific Advances in GLP Bioanalytical Analysis</td>
<td>Monday, Mar 17</td>
<td>9:45 AM to 10:45 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: National Toxicology Program: Public Access to the National Toxicology Program: From Acrylamide to Zinc</td>
<td>Monday, Mar 17</td>
<td>2:45 PM to 3:45 PM</td>
<td>Convention Center</td>
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<tr>
<td>Exhibitor Hosted Session: Neuroscience Associates (NSA): Key Contemporary Concepts in Neurotoxicity Screens</td>
<td>Tuesday, Mar 18</td>
<td>11:00 AM to 12:00 NOON</td>
<td>Convention Center</td>
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<td>Exhibitor Hosted Session: NOTOCORD Systems: Evaluation of the Use of an Unsupervised ECG Classification Tool in Cardiovascular Drug Safety Assessment</td>
<td>Wednesday, Mar 19</td>
<td>1:30 PM to 2:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Numira Biosciences: MicroCT Based Virtual Histology™ for Small Animal Imaging</td>
<td>Wednesday, Mar 19</td>
<td>11:00 AM to 12:00 NOON</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Phylonix Pharmaceuticals, Inc.: Fish First: Zebrafish are Increasingly Used for Early Stage Assessment of Drug Efficacy, Toxicity and Safety</td>
<td>Monday, Mar 17</td>
<td>12:15 PM to 1:15 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
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<tr>
<td>Exhibitor Hosted Session: Promega Corporation: Multiplexing Luminescent ADMETox Cell-Based Assays Including Applications with Primary Cells and Stem Cells</td>
<td>Monday, Mar 17</td>
<td>11:00 AM to 12:00 NOON</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
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<tr>
<td>Exhibitor Hosted Session: ReachBio LLC: Primary Stem Cell Based Assays for Toxicology and Other Drug Screening Applications</td>
<td>Monday, Mar 17</td>
<td>1:30 PM to 2:30 PM</td>
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<td>Exhibitor Hosted Session: Ricerca Biosciences, LLC: Biotechnology—Both a Business and a Science and Service</td>
<td>Monday, Mar 17</td>
<td>9:45 AM to 10:45 AM</td>
<td>Convention Center</td>
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<td>Exhibitor Hosted Session: Rosetta Biosoftware: Critical Path Analysis of Shared Toxicity Data between Pharmaceutical Companies Bridges Biomarker Discovery</td>
<td>Tuesday, Mar 18</td>
<td>8:30 AM to 9:30 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
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<tr>
<td>Exhibitor Hosted Session: SkinEthic Laboratories: An Alternative to Animal Use: Today and Prospective</td>
<td>Wednesday, Mar 19</td>
<td>2:45 PM to 3:45 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: StemCell Technologies, Inc.: Utility of Hematopoietic Colony Forming Cell (CFC) Assays in Drug Development</td>
<td>Wednesday, Mar 19</td>
<td>11:00 AM to 12:00 NOON</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>Exhibitor Hosted Session: Strategic Applications, Inc. (SAI): Innovations in Infusion and Sampling</td>
<td>Monday, Mar 17</td>
<td>12:15 PM to 1:15 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Exhibitor Hosted Session: Thermo Fisher Scientific: Cell Based Assays as an Alternative to Animal Testing?</td>
<td>Tuesday, Mar 18</td>
<td>12:15 PM to 1:15 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
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<tr>
<td>Exhibitor Hosted Session: Trevigen: Trevigen Standardized CometAssay™ System</td>
<td>Tuesday, Mar 18</td>
<td>2:45 PM to 3:45 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>Exhibitor Hosted Session: VisualSonics: In Vivo Micro-Ultrasound Imaging for Quantification of Anatomical, Functional and Molecular Biomarkers in Preclinical Toxicology</td>
<td>Wednesday, Mar 19</td>
<td>2:45 PM to 3:45 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-4</td>
</tr>
<tr>
<td>Exhibitor Hosted Session: VivoMetrics, Inc.: One Year into the Modern Era of Data Collection: Successes, Improvements, and What’s Next</td>
<td>Tuesday, Mar 18</td>
<td>8:30 AM to 9:30 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
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<tr>
<td>Fellowship Interviews by Awards Committee</td>
<td>Saturday, Mar 15</td>
<td>5:30 PM to 8:30 PM</td>
<td>Convention Center</td>
<td>308</td>
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<tr>
<td>Finance Committee Meeting</td>
<td>Wednesday, Mar 19</td>
<td>11:30 AM to 1:30 PM</td>
<td>Convention Center</td>
<td>302</td>
</tr>
<tr>
<td>Food and Chemical Toxicology Editorial Board Meeting</td>
<td>Monday, Mar 17</td>
<td>11:30 AM to 1:30 PM</td>
<td>Sheraton</td>
<td>Juniper</td>
</tr>
<tr>
<td>Food Safety Specialty Section Meeting/Reception</td>
<td>Monday, Mar 17</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>619</td>
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<tr>
<td>Food Safety Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>310</td>
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<tr>
<td>Guest Hospitality Center</td>
<td>Sunday, Mar 16</td>
<td>8:00 AM to 5:00 PM</td>
<td>Sheraton</td>
<td>Greenwood</td>
</tr>
<tr>
<td>Guest Hospitality Center</td>
<td>Monday, Mar 17</td>
<td>8:00 AM to 5:00 PM</td>
<td>Sheraton</td>
<td>Greenwood</td>
</tr>
<tr>
<td>Guest Hospitality Center</td>
<td>Tuesday, Mar 18</td>
<td>8:00 AM to 5:00 PM</td>
<td>Sheraton</td>
<td>Greenwood</td>
</tr>
<tr>
<td>Guest Hospitality Center</td>
<td>Wednesday, Mar 19</td>
<td>8:00 AM to 5:00 PM</td>
<td>Sheraton</td>
<td>Greenwood</td>
</tr>
<tr>
<td>Guest Hospitality Center</td>
<td>Thursday, Mar 20</td>
<td>8:00 AM to 11:30 AM</td>
<td>Sheraton</td>
<td>Greenwood</td>
</tr>
<tr>
<td>Gulf Coast and South Central Regional Chapters Joint Meeting/Reception</td>
<td>Monday, Mar 17</td>
<td>5:00 PM to 6:00 PM</td>
<td>Gordon Biersch</td>
<td>Brewery/Restaurant</td>
</tr>
<tr>
<td>HESI-Sponsored Luncheon Seminar</td>
<td>Monday, Mar 17</td>
<td>12:00 NOON to 1:00 PM</td>
<td>Sheraton</td>
<td>Grand Ballroom B</td>
</tr>
<tr>
<td>Hispanic Organization for Toxicologists Special Interest Group Meeting/Reception</td>
<td>Monday, Mar 17</td>
<td>6:00 PM to 7:00 PM</td>
<td>Sheraton</td>
<td>Kirkland</td>
</tr>
<tr>
<td>Hot Zones (Wireless Internet Access)</td>
<td>Monday, Mar 17</td>
<td>9:15 AM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Hot Zones (Wireless Internet Access)</td>
<td>Tuesday, Mar 18</td>
<td>8:30 AM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Hot Zones (Wireless Internet Access)</td>
<td>Wednesday, Mar 19</td>
<td>8:30 AM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Housing Desk</td>
<td>Saturday, Mar 15</td>
<td>4:00 PM to 7:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Housing Desk</td>
<td>Sunday, Mar 16</td>
<td>7:00 AM to 5:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Housing Desk</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 5:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Housing Desk</td>
<td>Tuesday, Mar 18</td>
<td>8:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Housing Desk</td>
<td>Wednesday, Mar 19</td>
<td>8:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Housing Desk</td>
<td>Thursday, Mar 20</td>
<td>8:00 AM to 11:30 AM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Immunotoxicology Specialty Section Meeting/Reception</td>
<td>Wednesday, Mar 19</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>606</td>
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</table>
### Event Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Date:</th>
<th>Time:</th>
<th>Location:</th>
<th>Room:</th>
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<tbody>
<tr>
<td>Immunotoxicology Specialty Section Officers Meeting</td>
<td>Wednesday, Mar 19</td>
<td>12:00 NOON to 1:30 PM</td>
<td>Convention Center 208</td>
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<tr>
<td>In Vitro and Alternative Methods Specialty Section Meeting/Luncheon</td>
<td>Tuesday, Mar 18</td>
<td>12:00 NOON to 1:30 PM</td>
<td>Sheraton Grand Ballroom B</td>
<td></td>
</tr>
<tr>
<td>In Vitro and Alternative Methods Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 9:00 AM</td>
<td>Convention Center 204</td>
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</tr>
<tr>
<td>In Vitro Toxicology Lecture and Luncheon for Students (Ticket Required)</td>
<td>Monday, Mar 17</td>
<td>12:15 PM to 1:20 PM</td>
<td>Sheraton Grand Ballroom A</td>
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<tr>
<td>Inhalation and Respiratory Specialty Section Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center 603</td>
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<tr>
<td>Issues Session—Over-the-Counter Cough and Cold Medications in Children: Efficacy, Safety, and Use</td>
<td>Tuesday, Mar 18</td>
<td>7:30 AM to 8:50 AM</td>
<td>Convention Center Ballroom 6B</td>
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<tr>
<td>IUTOX Communications Commission Meeting</td>
<td>Saturday, Mar 15</td>
<td>8:15 AM to 9:15 AM</td>
<td>Sheraton Capitol Hill</td>
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<tr>
<td>IUTOX Developing Countries Committee Meeting</td>
<td>Saturday, Mar 15</td>
<td>10:45 AM to 11:45 AM</td>
<td>Sheraton Ballard</td>
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<tr>
<td>IUTOX Education and Careers Committee Meeting</td>
<td>Saturday, Mar 15</td>
<td>8:15 AM to 9:15 AM</td>
<td>Sheraton Ballard</td>
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<tr>
<td>IUTOX Executive Committee Dinner</td>
<td>Sunday, Mar 16</td>
<td>8:00 PM to 10:00 PM</td>
<td>Palomino Restaurant</td>
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<tr>
<td>IUTOX Executive Committee Meeting I</td>
<td>Saturday, Mar 15</td>
<td>1:30 PM to 5:30 PM</td>
<td>Sheraton Capitol Hill</td>
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<tr>
<td>IUTOX Executive Committee Meeting II</td>
<td>Sunday, Mar 16</td>
<td>8:30 AM to 12:30 PM</td>
<td>Sheraton Capitol Hill</td>
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<tr>
<td>IUTOX Finance Committee Meeting</td>
<td>Saturday, Mar 15</td>
<td>9:30 AM to 10:30 AM</td>
<td>Sheraton Ballard</td>
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<tr>
<td>IUTOX Membership Committee Meeting</td>
<td>Saturday, Mar 15</td>
<td>9:30 AM to 10:30 AM</td>
<td>Sheraton Capitol Hill</td>
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<tr>
<td>IUTOX Science Committee Meeting</td>
<td>Saturday, Mar 15</td>
<td>12:00 NOON to 1:00 PM</td>
<td>Sheraton Ballard</td>
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<tr>
<td>Johnson &amp; Johnson Toxicology Interest Group Meeting</td>
<td>Saturday, Mar 15</td>
<td>11:30 AM to 6:00 PM</td>
<td>Sheraton Greenwood</td>
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<tr>
<td>K-12 Education Committee Meeting</td>
<td>Wednesday, Mar 19</td>
<td>11:30 AM to 1:30 PM</td>
<td>Convention Center 304</td>
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<tr>
<td>K-12 Teams Event Volunteers Meeting</td>
<td>Monday, Mar 17</td>
<td>4:30 PM to 6:00 PM</td>
<td>Convention Center 309</td>
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<tr>
<td>K-12 Paracelsus Goes to the Classroom—The TEAMS Project: Toxicologists Educating and Mentoring Students</td>
<td>Tuesday, Mar 18</td>
<td>8:30 AM to 12:00 NOON</td>
<td>Hyatt E. Anderson Amphitheater</td>
<td></td>
</tr>
<tr>
<td>K-12 Paracelsus Goes to the Classroom—The TEAMS Project: Toxicologists Educating and Mentoring Students</td>
<td>Tuesday, Mar 18</td>
<td>1:30 PM to 4:30 PM</td>
<td>Hyatt E. Anderson Amphitheater</td>
<td></td>
</tr>
<tr>
<td>Kettering Laboratory, University of Cincinnati Reception</td>
<td>Tuesday, Mar 18</td>
<td>7:00 PM to 8:30 PM</td>
<td>Sheraton Cedar</td>
<td></td>
</tr>
<tr>
<td>Keynote MRC Lecture: Biological Energy Conversion and its Toxic Consequences Lecturer: Nobel Laureate Professor Sir John E. Walker</td>
<td>Wednesday, Mar 19</td>
<td>8:00 AM to 8:50 AM</td>
<td>Convention Center Ballroom 6A</td>
<td></td>
</tr>
<tr>
<td>Korean Toxicologist Association in America Special Interest Group Meeting/Reception</td>
<td>Monday, Mar 17</td>
<td>5:30 PM to 8:00 PM</td>
<td>Hyatt Leonesa 1</td>
<td></td>
</tr>
<tr>
<td>Lovelace Respiratory Research Institute Reception for Past and Present Employees</td>
<td>Sunday, Mar 16</td>
<td>7:30 PM to 10:00 PM</td>
<td>Sheraton Willow B</td>
<td></td>
</tr>
<tr>
<td>Luggage/Coat Check</td>
<td>Sunday, Mar 16</td>
<td>7:00 AM to 8:30 PM</td>
<td>Convention Center 454</td>
<td></td>
</tr>
<tr>
<td>Luggage/Coat Check</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:30 PM</td>
<td>Convention Center 454</td>
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</tr>
<tr>
<td>Luggage/Coat Check</td>
<td>Tuesday, Mar 18</td>
<td>7:00 AM to 8:00 PM</td>
<td>Convention Center 454</td>
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</tr>
<tr>
<td>Luggage/Coat Check</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 8:00 PM</td>
<td>Convention Center 454</td>
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</tr>
<tr>
<td>Luggage/Coat Check</td>
<td>Thursday, Mar 20</td>
<td>7:00 AM to 1:00 PM</td>
<td>Convention Center 454</td>
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</tr>
<tr>
<td>Mechanisms Specialty Section Meeting/Reception</td>
<td>Monday, Mar 17</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center 612</td>
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</tr>
<tr>
<td>Mechanisms Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 9:00 AM</td>
<td>Convention Center 214</td>
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<tr>
<td>Meet the Directors: A Conversation with the Directors, NIEHS Strategic Plan, Samuel Wilson</td>
<td>Wednesday, Mar 19</td>
<td>12:00 NOON to 1:20 PM</td>
<td>Convention Center Ballroom 6B</td>
<td></td>
</tr>
<tr>
<td>Membership Committee Meeting</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center 208</td>
<td></td>
</tr>
<tr>
<td>Merit Award Lecture: The Dose Makes the Toxicologist—Paracelsus as Seen From Switzerland Lecture: Hanspeter Witschi</td>
<td>Monday, Mar 17</td>
<td>12:30 PM to 1:20 PM</td>
<td>Convention Center Ballroom 6B</td>
<td></td>
</tr>
<tr>
<td>Metals Specialty Section Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center 619</td>
<td></td>
</tr>
<tr>
<td>Metals Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>6:30 AM to 8:00 AM</td>
<td>Convention Center 305</td>
<td></td>
</tr>
<tr>
<td>Michigan Regional Chapter Meeting/Breakfast</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 8:30 AM</td>
<td>Sheraton Cedar</td>
<td></td>
</tr>
</tbody>
</table>

*Date: Time: Location: Room:*

- **Event:** Immunotoxicology Specialty Section Officers Meeting
- **Date:** Wednesday, Mar 19
- **Time:** 12:00 NOON to 1:30 PM
- **Location:** Convention Center
- **Room:** 208

*up-to-date information at www.toxicology.org*
## Schedule by Event Name (Continued)

<table>
<thead>
<tr>
<th>Event:</th>
<th>Date:</th>
<th>Time:</th>
<th>Location:</th>
<th>Room:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michigan State University Environmental Toxicology Reception</td>
<td>Tuesday, Mar 18</td>
<td>9:00 PM to 11:00 PM</td>
<td>Sheraton</td>
<td>Wallingford</td>
</tr>
<tr>
<td>Midwest Regional Chapter Meeting/Breakfast</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 8:30 AM</td>
<td>Sheraton</td>
<td>Issaquah</td>
</tr>
<tr>
<td>Mixtures Specialty Section Meeting/Reception</td>
<td>Wednesday, Mar 19</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>613</td>
</tr>
<tr>
<td>Molecular Biology Specialty Section Meeting/Reception</td>
<td>Wednesday, Mar 19</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>619</td>
</tr>
<tr>
<td>Molecular Biology Specialty Section Officers Meeting</td>
<td>Tuesday, Mar 18</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>304</td>
</tr>
<tr>
<td>Nanotoxicology Specialty Section Meeting/Luncheon</td>
<td>Monday, Mar 17</td>
<td>12:00 NOON to 1:30 PM</td>
<td>Sheraton</td>
<td>Willow</td>
</tr>
<tr>
<td>National Capital Area Regional Chapter Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:30 PM to 8:00 PM</td>
<td>Wild Ginger Restaurant</td>
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<tr>
<td>Neurotoxicology Specialty Section Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>609</td>
</tr>
<tr>
<td>Neurotoxicology Specialty Section Officers Meeting/Luncheon</td>
<td>Monday, Mar 17</td>
<td>12:00 NOON to 1:30 PM</td>
<td>Convention Center</td>
<td>214</td>
</tr>
<tr>
<td>NIH Funding Task Force Meeting</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>304</td>
</tr>
<tr>
<td>North Carolina State University Alumni Reception</td>
<td>Monday, Mar 17</td>
<td>7:30 PM to 10:00 PM</td>
<td>Sheraton</td>
<td>Cedar</td>
</tr>
<tr>
<td>Northern California and Pacific Northwest Regional Chapters, UC Davis</td>
<td>Monday, Mar 17</td>
<td>4:30 PM to 6:00 PM</td>
<td>Sheraton</td>
<td>Metropolitan B</td>
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<tr>
<td>Davis and UC Berkeley Joint Meeting/Reception</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational and Public Health Specialty Section Meeting/Luncheon</td>
<td>Tuesday, Mar 18</td>
<td>12:00 NOON to 1:30 PM</td>
<td>Sheraton</td>
<td>Willow</td>
</tr>
<tr>
<td>Occupational Toxicology Roundtable Planning Meeting</td>
<td>Tuesday, Mar 18</td>
<td>7:00 AM to 8:30 AM</td>
<td>Hyatt Stevens Boardroom</td>
<td></td>
</tr>
<tr>
<td>Organizational Meeting for a Potential New Ocular Toxicology Section</td>
<td>Monday, Mar 17</td>
<td>5:30 PM to 6:30 PM</td>
<td>Sheraton</td>
<td>Capitol Hill</td>
</tr>
<tr>
<td>Past Presidents Breakfast</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>309</td>
</tr>
<tr>
<td>Pfizer Recruiting/Outreach Effort</td>
<td>Tuesday, Mar 18</td>
<td>6:30 PM to 8:30 AM</td>
<td>Sheraton</td>
<td>Grand Ballroom C</td>
</tr>
<tr>
<td>Plenary Opening Lecture: Perspectives on Science in the 21st Century</td>
<td>Monday, Mar 17</td>
<td>8:15 AM to 9:15 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4F</td>
</tr>
<tr>
<td>Plenary: Nobel Laureate Lee Hartwell</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Postdoctoral Assembly Board Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:15 AM</td>
<td>Convention Center</td>
<td>212</td>
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<tr>
<td>Plenary: Perspectives on Science in the 21st Century</td>
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<tr>
<td>Postdoctoral Assembly Luncheon (Ticket Required)</td>
<td>Tuesday, Mar 18</td>
<td>12:00 NOON to 1:15 PM</td>
<td>Convention Center</td>
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<tr>
<td>Poster Session for Visiting Students</td>
<td>Monday, Mar 17</td>
<td>9:30 AM to 11:15 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
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<tr>
<td>Poster Sessions</td>
<td>Monday, Mar 17</td>
<td>9:30 AM to 12:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
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<tr>
<td>Poster Sessions</td>
<td>Monday, Mar 17</td>
<td>1:00 PM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
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<tr>
<td>Poster Sessions</td>
<td>Tuesday, Mar 18</td>
<td>9:00 AM to 12:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
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<tr>
<td>Poster Sessions</td>
<td>Tuesday, Mar 18</td>
<td>1:00 PM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Poster Sessions</td>
<td>Wednesday, Mar 19</td>
<td>9:00 AM to 12:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Poster Sessions</td>
<td>Wednesday, Mar 19</td>
<td>1:00 PM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Poster Set Up (See Poster Board Surface Map on Page 36)</td>
<td>Monday, Mar 17</td>
<td>8:00 AM to 12:30 NOON</td>
<td>Convention Center</td>
<td>Ballroom 6C &amp; E</td>
</tr>
<tr>
<td>Poster Set Up (See Poster Board Surface Map on Page 37)</td>
<td>Monday, Mar 17</td>
<td>12:30 PM to 1:00 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Poster Set Up (See Poster Board Surface Map on Page 38)</td>
<td>Tuesday, Mar 18</td>
<td>8:30 AM to 9:00 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Poster Set Up (See Poster Board Surface Map on Page 39)</td>
<td>Tuesday, Mar 18</td>
<td>12:30 PM to 1:00 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Poster Set Up (See Poster Board Surface Map on Page 40)</td>
<td>Wednesday, Mar 19</td>
<td>8:30 AM to 9:00 AM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Poster Set Up (See Poster Board Surface Map on Page 41)</td>
<td>Wednesday, Mar 19</td>
<td>12:30 PM to 1:00 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Poster Set Up (See Poster Board Surface Map on Pages 42 and 43)</td>
<td>Thursday, Mar 20</td>
<td>8:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>Ballroom 6C &amp; E</td>
</tr>
<tr>
<td>President’s Reception (By Invitation Only)</td>
<td>Wednesday, Mar 19</td>
<td>7:00 PM to 8:30 PM</td>
<td>Sheraton</td>
<td>Cirrus</td>
</tr>
<tr>
<td>Program Committee Meeting</td>
<td>Thursday, Mar 20</td>
<td>7:30 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>305</td>
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<tr>
<td>Program Committee Walk/Through</td>
<td>Monday, Mar 17</td>
<td>7:15 AM to 8:15 AM</td>
<td>Convention Center</td>
<td>603</td>
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<tr>
<td>Regional Chapter Graduate Committee Business Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
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<tr>
<td>Regional Chapter Graduate Committee Introductory Meeting</td>
<td>Sunday, Mar 16</td>
<td>6:45 PM to 7:30 PM</td>
<td>Sheraton</td>
<td>Aspen</td>
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<tr>
<td>Regional Chapter Presidents and Officers Meeting</td>
<td>Tuesday, Mar 18</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>307</td>
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</table>
### Schedule by Event Name (Continued)

<table>
<thead>
<tr>
<th>Event:</th>
<th>Date:</th>
<th>Time:</th>
<th>Location:</th>
<th>Room:</th>
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<tbody>
<tr>
<td>Registration</td>
<td>Saturday, Mar 15</td>
<td>4:00 PM to 7:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Registration</td>
<td>Sunday, Mar 16</td>
<td>7:00 AM to 8:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Registration</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 5:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Registration</td>
<td>Tuesday, Mar 18</td>
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<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Registration</td>
<td>Wednesday, Mar 19</td>
<td>8:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Registration</td>
<td>Thursday, Mar 20</td>
<td>8:00 AM to 11:30 AM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Regulatory Affairs and Legislative Assistance Committee Meeting</td>
<td>Monday, Mar 17</td>
<td>12:15 PM to 1:30 PM</td>
<td>Convention Center</td>
<td>209</td>
</tr>
<tr>
<td>Regulatory and Safety Evaluation Specialty Section Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>612</td>
</tr>
<tr>
<td>Regulatory and Safety Evaluation Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:00 AM</td>
<td>Convention Center</td>
<td>203</td>
</tr>
<tr>
<td>Reproductive and Developmental Toxicology Specialty Section Meeting/Reception</td>
<td>Wednesday, Mar 19</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>603</td>
</tr>
<tr>
<td>Reproductive and Developmental Toxicology Specialty Section Officers Meeting</td>
<td>Tuesday, Mar 18</td>
<td>7:00 AM to 8:00 AM</td>
<td>Convention Center</td>
<td>309</td>
</tr>
<tr>
<td>RETHINK: Impact of the Minipig in Toxicology Open Meeting</td>
<td>Wednesday, Mar 19</td>
<td>5:00 PM–7:00 PM</td>
<td>Sheraton</td>
<td>Aspen Room</td>
</tr>
<tr>
<td>Risk Assessment Specialty Section Meeting/Reception</td>
<td>Monday, Mar 17</td>
<td>6:00 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>609</td>
</tr>
<tr>
<td>Risk Assessment Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 9:00 AM</td>
<td>Convention Center</td>
<td>211</td>
</tr>
<tr>
<td>Rosetta Biosoftware Hospitality Suite</td>
<td>Monday, Mar 17</td>
<td>4:30 PM to 9:30 PM</td>
<td>Hyatt</td>
<td>Blewett Suite</td>
</tr>
<tr>
<td>Rosetta Biosoftware Hospitality Suite</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 9:30 PM</td>
<td>Hyatt</td>
<td>Blewett Suite</td>
</tr>
<tr>
<td>Rosetta Biosoftware Hospitality Suite</td>
<td>Wednesday, Mar 19</td>
<td>4:30 PM to 9:30 PM</td>
<td>Hyatt</td>
<td>Blewett Suite</td>
</tr>
<tr>
<td>Roundtable of Toxicology Consultants Meeting/Reception</td>
<td>Monday, Mar 17</td>
<td>4:30 PM to 7:00 PM</td>
<td>Sheraton</td>
<td>Willow B</td>
</tr>
<tr>
<td>Rutgers Joint Graduate Program in Toxicology Annual Dessert Reception</td>
<td>Tuesday, Mar 18</td>
<td>9:00 PM to 11:00 PM</td>
<td>Sheraton</td>
<td>Grand Ballroom B</td>
</tr>
<tr>
<td>Satellite Meeting: The Kleinfelder Group: Perchlorate Exposures,</td>
<td>Thursday, Mar 20</td>
<td>1:00 PM to 4:30 PM</td>
<td>Sheraton</td>
<td>Willow</td>
</tr>
<tr>
<td>Iodine Modulation of Effect, and Epidemiologic Associations: Implications for Risk Assessment</td>
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</tr>
<tr>
<td>Satellite Meeting: The Kleinfelder Group: Perchlorate Exposures,</td>
<td>Friday, Mar 21</td>
<td>9:00 AM to 3:30 PM</td>
<td>Sheraton</td>
<td>Willow</td>
</tr>
<tr>
<td>Iodine Modulation of Effect, and Epidemiologic Associations: Implications for Risk Assessment</td>
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<tr>
<td>Scientific Sessions</td>
<td>Monday, Mar 17</td>
<td>9:30 AM to 12:15 PM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions</td>
<td>Monday, Mar 17</td>
<td>12:15 PM to 1:30 PM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions</td>
<td>Monday, Mar 17</td>
<td>1:30 PM to 4:15 PM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions (Sunset)</td>
<td>Monday, Mar 17</td>
<td>4:30 PM to 5:50 PM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions (Sunrise)</td>
<td>Tuesday, Mar 18</td>
<td>7:30 AM to 8:50 AM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions</td>
<td>Tuesday, Mar 18</td>
<td>9:00 AM to 11:45 AM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions</td>
<td>Tuesday, Mar 18</td>
<td>1:30 PM to 4:15 PM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Event:</td>
<td>Date:</td>
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<tr>
<td>Scientific Sessions (Sunrise)</td>
<td>Wednesday, Mar 19</td>
<td>7:30 AM to 8:50 AM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
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<tr>
<td>Scientific Sessions</td>
<td>Wednesday, Mar 19</td>
<td>9:00 AM to 11:45 AM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
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<tr>
<td>Scientific Sessions</td>
<td>Wednesday, Mar 19</td>
<td>12:00 NOON to 1:20 PM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
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<tr>
<td>Scientific Sessions</td>
<td>Wednesday, Mar 19</td>
<td>1:30 PM to 4:15 PM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions (Sunset)</td>
<td>Wednesday, Mar 19</td>
<td>4:30 PM to 5:50 PM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions (Sunrise)</td>
<td>Thursday, Mar 20</td>
<td>7:30 AM to 8:50 AM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Scientific Sessions</td>
<td>Thursday, Mar 20</td>
<td>9:00 AM to 11:45 AM</td>
<td>Convention Center</td>
<td>(See Program Description for Room Locations)</td>
</tr>
<tr>
<td>Soapbox Session</td>
<td>Wednesday, Mar 19</td>
<td>12:00 NOON to 1:20 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>SOT Committee Chair Orientation</td>
<td>Saturday, Mar 15</td>
<td>2:00 PM to 5:00 PM</td>
<td>Sheraton</td>
<td>Willow A</td>
</tr>
<tr>
<td>SOT Office</td>
<td>Saturday, Mar 15</td>
<td>4:00 PM to 7:00 PM</td>
<td>Convention Center</td>
<td>303</td>
</tr>
<tr>
<td>SOT Office</td>
<td>Sunday, Mar 16</td>
<td>7:00 AM to 5:30 PM</td>
<td>Convention Center</td>
<td>303</td>
</tr>
<tr>
<td>SOT Office</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 5:00 PM</td>
<td>Convention Center</td>
<td>303</td>
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<td>SOT Office</td>
<td>Tuesday, Mar 18</td>
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<td>Convention Center</td>
<td>303</td>
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<td>SOT Office</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>303</td>
</tr>
<tr>
<td>SOT Office</td>
<td>Thursday, Mar 20</td>
<td>7:00 AM to 11:30 AM</td>
<td>Convention Center</td>
<td>303</td>
</tr>
<tr>
<td>SOT/EUROTOX Debate: <em>In Vitro</em> Toxicology Is Useful for Regulatory Purposes</td>
<td>Tuesday, Mar 18</td>
<td>8:00 AM to 8:50 AM</td>
<td>Convention Center</td>
<td>Ballroom 6A</td>
</tr>
<tr>
<td>Southeastern Regional Chapter Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:30 PM to 8:30 PM</td>
<td>Hyatt</td>
<td>Portland</td>
</tr>
<tr>
<td>Speaker Ready Room</td>
<td>Saturday, Mar 15</td>
<td>4:00 PM to 7:00 PM</td>
<td>Convention Center</td>
<td>213</td>
</tr>
<tr>
<td>Speaker Ready Room</td>
<td>Sunday, Mar 16</td>
<td>7:00 AM to 5:30 PM</td>
<td>Convention Center</td>
<td>213</td>
</tr>
<tr>
<td>Speaker Ready Room</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 5:00 PM</td>
<td>Convention Center</td>
<td>213</td>
</tr>
<tr>
<td>Speaker Ready Room</td>
<td>Tuesday, Mar 18</td>
<td>7:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>213</td>
</tr>
<tr>
<td>Speaker Ready Room</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>213</td>
</tr>
<tr>
<td>Speaker Ready Room</td>
<td>Thursday, Mar 20</td>
<td>7:00 AM to 11:30 AM</td>
<td>Convention Center</td>
<td>213</td>
</tr>
<tr>
<td>Special Information Meeting with Ken Olden for Students Seeking Postdocs at NIEHS</td>
<td>Tuesday, Mar 18</td>
<td>2:00 PM to 3:30 PM</td>
<td>Convention Center</td>
<td>210</td>
</tr>
<tr>
<td>Special Interest Group Presidents and Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>7:00 AM to 8:00 AM</td>
<td>Convention Center</td>
<td>603</td>
</tr>
<tr>
<td>Specialty Section Graduate Committee Business Meeting</td>
<td>Tuesday, Mar 18</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>211</td>
</tr>
<tr>
<td>Specialty Section Presidents and Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>4:30 PM to 6:00 PM</td>
<td>Convention Center</td>
<td>307</td>
</tr>
<tr>
<td>St. John’s University 6th Annual Toxicology Alumni Dinner</td>
<td>Monday, Mar 17</td>
<td>6:00 PM to 8:00 PM</td>
<td>Sheraton</td>
<td>Ravenna</td>
</tr>
<tr>
<td>Student Advisory Council Business Meeting</td>
<td>Wednesday, Mar 19</td>
<td>7:00 AM to 8:00 AM</td>
<td>Convention Center</td>
<td>307</td>
</tr>
<tr>
<td>Student/Postdoctoral Fellow Mixer (<em>Ticket Required</em>)</td>
<td>Sunday, Mar 16</td>
<td>7:30 PM to 8:30 PM</td>
<td>Sheraton</td>
<td>Grand Ballroom C</td>
</tr>
<tr>
<td>TEF Board of Trustees Meeting</td>
<td>Sunday, Mar 16</td>
<td>7:30 AM to 12:00 NOON</td>
<td>Sheraton</td>
<td>Leshki</td>
</tr>
<tr>
<td>Tour Desk</td>
<td>Saturday, Mar 15</td>
<td>4:00 PM to 7:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Tour Desk</td>
<td>Sunday, Mar 16</td>
<td>8:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Event:</td>
<td>Date:</td>
<td>Time:</td>
<td>Location:</td>
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<tr>
<td>Tour Desk</td>
<td>Monday, Mar 17</td>
<td>8:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Tour Desk</td>
<td>Tuesday, Mar 18</td>
<td>8:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Tour Desk</td>
<td>Wednesday, Mar 19</td>
<td>8:00 AM to 4:00 PM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Tour Desk</td>
<td>Thursday, Mar 20</td>
<td>8:00 AM to 11:30 AM</td>
<td>Convention Center</td>
<td>South Lobby, Level 4</td>
</tr>
<tr>
<td>Town Hall Meeting: SOT Strategic Plan—Defining the Future of SOT</td>
<td>Tuesday, Mar 18</td>
<td>12:00 NOON to 1:20 PM</td>
<td>Convention Center</td>
<td>Ballroom 6E</td>
</tr>
<tr>
<td>ToxExpo™ 2009 Exhibit Space Selection Meeting</td>
<td>Tuesday, Mar 18</td>
<td>4:45 PM to 6:00 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4C-3</td>
</tr>
<tr>
<td>ToxExpo™ Exhibits Open</td>
<td>Monday, Mar 17</td>
<td>9:15 AM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>ToxExpo™ Exhibits Open</td>
<td>Tuesday, Mar 18</td>
<td>8:30 AM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>ToxExpo™ Exhibits Open</td>
<td>Wednesday, Mar 19</td>
<td>8:30 AM to 4:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>ToxExpo™ Set Up</td>
<td>Saturday, Mar 15</td>
<td>8:00 AM to 5:00 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>ToxExpo™ Set Up</td>
<td>Sunday, Mar 16</td>
<td>8:00 AM to 5:00 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>ToxExpo™ Tear Down</td>
<td>Wednesday, Mar 19</td>
<td>5:00 PM to 12:00 MIDNIGHT</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>ToxExpo™ Tear Down</td>
<td>Thursday, Mar 20</td>
<td>8:00 AM to 12:00 NOON</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Toxicologic and Exploratory Pathology Specialty Section Meeting/Luncheon</td>
<td>Monday, Mar 17</td>
<td>12:00 NOON to 1:30 PM</td>
<td>Sheraton Grand Ballroom</td>
<td>D</td>
</tr>
<tr>
<td>Toxicologic and Exploratory Pathology Specialty Section Officers Meeting</td>
<td>Monday, Mar 17</td>
<td>7:30 AM to 9:00 AM</td>
<td>Convention Center</td>
<td>202</td>
</tr>
<tr>
<td>Toxicological Sciences Associate Editors Meeting</td>
<td>Sunday, Mar 16</td>
<td>12:00 NOON to 3:00 PM</td>
<td>Sheraton Issaquah</td>
<td></td>
</tr>
<tr>
<td>Toxicologists of African Origin Special Interest Group Meeting/Reception</td>
<td>Tuesday, Mar 18</td>
<td>6:00 PM to 9:00 PM</td>
<td>Hyatt Princessa 2</td>
<td></td>
</tr>
<tr>
<td>Toxicology and Applied Pharmacology Associate Editors Meeting</td>
<td>Monday, Mar 17</td>
<td>11:30 AM to 1:30 PM</td>
<td>Sheraton Madrona</td>
<td></td>
</tr>
<tr>
<td>Toxicology Editorial Board Meeting</td>
<td>Tuesday, Mar 18</td>
<td>11:30 AM to 1:30 PM</td>
<td>Sheraton Juniper</td>
<td></td>
</tr>
<tr>
<td>Toxicology Letters Editorial Board Meeting</td>
<td>Tuesday, Mar 18</td>
<td>11:30 AM to 1:30 PM</td>
<td>Sheraton Madrona</td>
<td></td>
</tr>
<tr>
<td>ToxLearn Work Group Meeting</td>
<td>Tuesday, Mar 18</td>
<td>10:30 AM to 12:00 NOON</td>
<td>Convention Center</td>
<td>305</td>
</tr>
<tr>
<td>U.S. Environmental Protection Agency: Risk Assessment Data Repository—An Inter-Agency Collaboration</td>
<td>Tuesday, Mar 18</td>
<td>11:30 AM to 1:30 PM</td>
<td>Sheraton Aspen</td>
<td></td>
</tr>
<tr>
<td>Undergraduate Education Program Orientation for SOT Hosts, Peer Mentors and Advisors</td>
<td>Saturday, Mar 15</td>
<td>5:30 PM to 6:00 PM</td>
<td>Convention Center</td>
<td>305</td>
</tr>
<tr>
<td>Undergraduate Education Program Lecture &amp; Reception</td>
<td>Saturday, Mar 15</td>
<td>6:15 PM to 9:00 PM</td>
<td>Convention Center</td>
<td>3A</td>
</tr>
<tr>
<td>Undergraduate Education Program</td>
<td>Sunday, Mar 16</td>
<td>8:00 AM to 10:35 AM</td>
<td>Convention Center</td>
<td>2A</td>
</tr>
<tr>
<td>Undergraduate Education Program</td>
<td>Sunday, Mar 16</td>
<td>10:35 AM to 3:00 PM</td>
<td>Convention Center</td>
<td>2A</td>
</tr>
<tr>
<td>Undergraduate Education Program</td>
<td>Monday, Mar 17</td>
<td>7:30 AM to 2:00 PM</td>
<td>Convention Center</td>
<td>3A</td>
</tr>
<tr>
<td>Undergraduate Toxicology Faculty Meeting</td>
<td>Monday, Mar 17</td>
<td>3:30 PM to 4:30 PM</td>
<td>Convention Center</td>
<td>201</td>
</tr>
<tr>
<td>University of Connecticut Reception</td>
<td>Tuesday, Mar 18</td>
<td>9:00 PM to 10:00 PM</td>
<td>Sheraton Issaquah</td>
<td></td>
</tr>
<tr>
<td>University of Rochester Alumni Reception</td>
<td>Tuesday, Mar 18</td>
<td>7:30 PM to 10:00 PM</td>
<td>Sheraton Willow A</td>
<td></td>
</tr>
<tr>
<td>University of Washington Alumni &amp; Friends Reception</td>
<td>Sunday, Mar 16</td>
<td>7:00 PM to 10:00 PM</td>
<td>Seattle Children’s Orthopedic Hospital Research Institute</td>
<td></td>
</tr>
<tr>
<td>VIP ToxExpo™ Exhibit Hall Walk-Through</td>
<td>Monday, Mar 17</td>
<td>1:30 PM to 2:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>Welcoming Reception (All Attendees Welcome)</td>
<td>Sunday, Mar 16</td>
<td>6:30 PM to 7:30 PM</td>
<td>Convention Center</td>
<td>Exhibit Hall 4F</td>
</tr>
<tr>
<td>Women in Toxicology Special Interest Group Meeting/Reception</td>
<td>Wednesday, Mar 19</td>
<td>6:00 PM to 7:30 PM</td>
<td>Sheraton Grand Ballroom</td>
<td>A</td>
</tr>
<tr>
<td>WWW Advisory Committee Meeting</td>
<td>Tuesday, Mar 18</td>
<td>7:00 AM to 8:30 AM</td>
<td>Convention Center</td>
<td>208</td>
</tr>
</tbody>
</table>
Washington State Convention and Trade Center (Continued)

LEVEL 2

CRAD
CRAD Office

Up escalators to Exhibit Hall and Registration (Level 4), CE Courses, Meeting Rooms, and Scientific Sessions (Level 6)

LEVEL 3

Int’l. Meeting Place

Up escalators to Exhibit Hall and Registration (Level 4), CE Courses, Meeting Rooms, and Scientific Sessions (Level 6)

SOT Office
Seattle Hotel Accommodations

1) Crowne Plaza Seattle

- $152 Government Rate or $165 Standard Rate
- 1113 6th Avenue
- Seattle, WA 98101
- Tel: (206) 464-1980
- Fax: (206) 340-1617
- Web site: www.cphotelseattle.com
- Club: Priority Club Rewards
- Check in: 4:00 PM
- Check out: 12:00 NOON
- 3 blocks from Convention Center
- Valet parking only
- Internet access at $9.95/day—wireless
- Internet available

2) The Fairmont Olympic Hotel

- $199 Single/Double
- 411 University Street
- Seattle, WA 98101
- Tel: (206) 621-1700
- Fax: (206) 682-9633
- Web site: www.fairmont.com/seattle
- Club: Fairmont's President Club
- Check in: 3:00 PM
- Check out: 12:00 NOON
- 4 blocks from Convention Center
- Self and valet parking
- Complimentary high speed Internet in guest room—complimentary wireless
- Internet in lobby

3) Grand Hyatt Seattle

- SOT Co-Headquarters Hotel
- $186 Single/Double
- 721 Pine Street
- Seattle, WA 98101
- Tel: (206) 774-1234
- Fax: (206) 774-6120
- Web site: www.grandseattle.hyatt.com
- Club: Hyatt Gold Passport
- Check in: 3:00 PM
- Check out: 12:00 NOON
- 1 block from Convention Center
- Self and valet parking
- Internet access at $9.99/day—wireless
- Internet available for T-Mobile account users only

4) Hilton Seattle

- $170 Single/Double
- 1301 6th Avenue
- Seattle, WA 98101
- Tel: (206) 624-0500
- Fax: (206) 682-9029
- Web site: www.seattlehilton.com
- Club: Hilton HHonors
- Check in: 3:00 PM
- Check out: 12:00 NOON
- 2 blocks from Convention Center
- Self parking
- Internet access at $9.95/day—complimentary wireless Internet in lobby
- Wireless Internet available at $9.95/day

5) Hotel Max

- $159 Single/Double
- 620 Stewart Street
- Seattle, WA 98101
- Tel: (206) 728-6299
- Fax: (206) 443-5754
- Web site: www.hotelmaxseattle.com
- Club: N/A
- Check in: 3:00 PM
- Check out: 12:00 NOON
- 3 blocks from Convention Center
- Self and valet parking
- Wireless Internet available at $11.95/day
- Wireless Internet available

6) Mayflower Park Hotel

- $159 Single/Double
- 405 Olive Way
- Seattle, WA 98101
- Tel: (206) 623-8700
- Fax: (206) 382-6996
- Web site: www.mayflowerpark.com
- Club: N/A
- Check in: 4:00 PM
- Check out: 12:00 NOON
- 4 blocks from Convention Center
- Valet parking only
- Complimentary high speed Internet in guest room and lobby—wireless Internet available

7) Paramount Hotel

- $152 Government Rate or $159 Standard Rate
- 724 Pine Street
- Seattle, WA 98101
- Tel: (206) 292-9500
- Fax: (206) 292-8610
- Web site: www.paramounthotelseattle.com
- Club: Coast Rewards
- Check in: 3:00 PM
- Check out: 12:00 NOON
- 1 block from Convention Center
- Valet parking only
- Internet access at $9.95/day—wireless
- Internet available

8) Pike Street Suites

- $152 Government Rate or $155 One Bedroom Suites
- 1011 Pike St.
- Seattle, WA 98101
- Tel: (206) 682-8282
- Fax: (206) 682-5315
- Web site: www.pikestreetsuites.com
- Club: N/A
- Check in: 4:00 PM
- Check out: 12:00 NOON
- Less then 1 block from Convention Center
- Self parking and valet parking
- Complimentary Internet access—wireless Internet available
Seattle Hotel Accommodations (Continued)

9) Red Lion Hotel on Fifth Avenue
$172 Single/Double
1415 5th Avenue
Seattle, WA 98101
Tel: (206) 971-8000
Fax: (206) 971-8101
Web site: www.redlion5thavenue.com
Club: GuestAwards
Check in: 3:00 PM—
Check out: 12:00 NOON
2 blocks from Convention Center
Self parking
Complimentary wireless Internet

10) Renaissance Hotel Seattle
$170 Single/Double
515 Madison Street
Seattle, WA 98104
Tel: (206) 583-0300
Fax: (206) 447-0992
Web site: www.renaissancehotels.com/seasm
Club: Marriott Rewards
Check in: 4:00 PM—
Check out: 12:00 NOON
5 blocks from Convention Center
Valet parking only
Internet access at $9.95/day
The hotel is under construction/remodeling; guest rooms and lobby should not be affected.

11) Roosevelt Hotel
$152 Government Rate or
$159 Standard Rate
1531 7th Avenue
Seattle, WA 98101
Tel: (206) 621-1200
Fax: (206) 233-0335
Web site: www.roosevelthotel.com
Club: Coast Rewards
Check in: 4:00 PM—
Check out: 12:00 NOON
1 block from Convention Center
Valet parking only
Wireless Internet available at $9.95/day

12) Sixth Avenue Inn
$149 Single/Double
2000 6th Avenue
Seattle, WA 98101
Tel: (206) 441-8300
Fax: (206) 441-9903
Web site: www.sixthavenueinn.com
Club: N/A
Check in: 3:00 PM—
Check out: 12:00 NOON
5 blocks from Convention Center
Self parking
Internet access at $9.95/day—wireless Internet in lobby

13) Sheraton Seattle Hotel
SOT Headquarters Hotel
$184 Single/Double
1400 6th Avenue
Seattle, WA 98101
Tel: (206) 621-9000
Fax: (206) 621-8441
Web site: www.sheraton.com/seattle
Club: Starwood Preferred Guest
Check in: 3:00 PM—
Check out: 12:00 NOON
1 block from Convention Center
Valet parking only
Internet access at $9.95/day—complimentary wireless Internet in lobby

14) The Westin Seattle
$175 Single/Double
1900 5th Avenue
Seattle, WA 98101
Tel: (206) 728-1000
Fax: (206) 728-2259
Web site: www.westin.com/seattle
Club: Starwood Preferred Guest
Check in: 3:00 PM—
Check out: 12:00 NOON
4 blocks from Convention Center
Self and valet parking
Internet access at $9.95/day

Legend:

<table>
<thead>
<tr>
<th>Valet Parking</th>
<th>Swimming Pool</th>
<th>In-Room Safe</th>
<th>Complimentary Breakfast</th>
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<tbody>
<tr>
<td>Self Parking</td>
<td>Business Center</td>
<td>Gift Shop</td>
<td>Restaurant</td>
</tr>
<tr>
<td>Fitness Center</td>
<td>In-Room Wireless</td>
<td>Concierge</td>
<td>All hotels have internet access. Hotel sales tax is currently 15.5%</td>
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*Please note that the discounted room rates within the SOT Room Block include a 1090 commission and $3 room rebate payable to the Society to offset the expenses associated with the Annual Meeting.
Map of Seattle Hotels
## Seattle Restaurants

Restaurants Within Six Blocks of the Convention Center, Listed Alphabetically

<table>
<thead>
<tr>
<th>$ = Under $12</th>
<th>$ = $12–$18</th>
<th>$ = $18–$30</th>
<th>$$$ = over $30</th>
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<td>94 Stewart</td>
<td>94 Stewart Street (206) 441-5505</td>
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<tr>
<td>Andaluca Restaurant &amp; Bar</td>
<td>407 Olive Way (206) 382-6999</td>
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<td>Assaggio Ristorante</td>
<td>2010 Fourth Avenue (206) 441-1399</td>
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<td>Athenian Inn</td>
<td>1517 Pike Place Market (206) 624-7166</td>
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<td>Bambuza</td>
<td>820 Pike Street (206) 219-5505</td>
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<td>Barolo</td>
<td>1940 Westlake Avenue (206) 770-9000</td>
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<tr>
<td>Belle Epicurean Patisserie</td>
<td>1206 Fourth Avenue (206) 262-9404</td>
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<tr>
<td>Benihana</td>
<td>1200 Fifth Avenue (206) 682-4686</td>
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<tr>
<td>Buenos Aires Grill</td>
<td>220 Virginia Street (206) 441-7076</td>
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<td>Cafe Campagne</td>
<td>1600 Post Alley (206) 728-2233</td>
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<td>Camagne</td>
<td>86 Pine Street (206) 728-2800</td>
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<td>Coldwater Bar and Grill</td>
<td>1900 Fifth Avenue (206) 256-7697</td>
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<tr>
<td>Copacabana Cafe</td>
<td>1520 1/2 Pike Place (206) 622-6359</td>
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<tr>
<td>Dahlia Lounge</td>
<td>2001 Fourth Avenue (206) 682-4142</td>
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<tr>
<td>Dragonfish Asian Cafe</td>
<td>722 Pine Street (206) 467-7777</td>
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<td>Earth &amp; Ocean</td>
<td>1112 Fourth Avenue (206) 264-6060</td>
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<tr>
<td>Fox Sports Grill</td>
<td>1522 Sixth Avenue (206) 340-1369</td>
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<td>Geneva</td>
<td>1106 Eighth Avenue (206) 624-2519</td>
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<td>Gordon Biersch Brewery Restaurant</td>
<td>600 Pine Street (206) 405-4205</td>
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<td>Icon Grill</td>
<td>1933 Fifth Avenue (206) 441-6330</td>
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<tr>
<td>Il Bistro</td>
<td>93 Pike Place Suite A (206) 682-3049</td>
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<td>Il Fornai</td>
<td>600 Pine Street (206) 264-0994</td>
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<td>Ipanema Brazilian Grill</td>
<td>1225 First Avenue (206) 957-8444</td>
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<td>Islander Restaurant &amp; Tiki Lounge</td>
<td>96 Union Street (206) 344-8088</td>
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<td>Juice It Cafe</td>
<td>725 Pike Street #16A (206) 447-6960</td>
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<td>Le Panier French Bakery</td>
<td>1902 Pike Place Market (206) 441-3669</td>
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<td>Lola</td>
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<td>Lowell's Restaurant &amp; Bar</td>
<td>1519 Pike Place (206) 622-2036</td>
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<tr>
<td>Maximilien in the Market</td>
<td>81 A Pike Street (206) 682-7270</td>
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<tr>
<td>Mexico Cantina y Veracruz Cooking</td>
<td>600 Pine Street (206) 405-3400</td>
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<tr>
<td>Morton's The Steakhouse</td>
<td>1511 Sixth Avenue (206) 223-0550</td>
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<tr>
<td>P.F. Chang's China Bistro</td>
<td>400 Pine Street #136 (206) 393-0070</td>
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<td>Palace Kitchen</td>
<td>2030 Fifth Avenue (206) 448-2001</td>
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<td>Palomino</td>
<td>1420 Fifth Avenue (206) 623-1300</td>
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<td>Pellini Ristorante</td>
<td>515 Madison Street (206) 627-2201</td>
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<td>Pike Place Chowder</td>
<td>1530 Post Alley Suite 1 (206) 627-2537</td>
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<tr>
<td>Purple Cafe &amp; Wine Bar</td>
<td>1218 Third Avenue #900 (206) 829-2280</td>
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<td>Rock Bottom Restaurant</td>
<td>1333 Fifth Avenue (206) 623-3070</td>
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<td>Ruth's Chris Steak House</td>
<td>1809 Seventh Avenue (206) 624-8524</td>
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<td>Sazerac Restaurant</td>
<td>1101 Fourth Avenue (206) 624-7755</td>
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<td>Shuckers</td>
<td>411 University Street (206) 621-1700</td>
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<td>Sisters European Snacks</td>
<td>1530 Post Alley #2A (206) 623-6723</td>
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<td>Sound View Cafe</td>
<td>1501 Pike Place Market #501 (206) 623-5700</td>
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<td>Soups</td>
<td>1420 Fifth Avenue (206) 625-9973</td>
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<tr>
<td>Specialty’s Café &amp; Bakery</td>
<td>1400 Fifth Avenue (877) 502-837</td>
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<tr>
<td>Tango Restaurant &amp; Lounge</td>
<td>1100 Pike Street (206) 583-0382</td>
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<tr>
<td>Tap House Grill</td>
<td>1506 Sixth Avenue (206) 816-3314</td>
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<tr>
<td>Thai Ginger</td>
<td>600 Pine Street (206) 749-9100</td>
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<tr>
<td>The Brooklyn Seafood, Steak &amp; Oyster House</td>
<td>1212 Second Avenue (206) 224-7000</td>
<td>$$$</td>
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<tr>
<td>The Cheesecake Factory</td>
<td>700 Pike Street (206) 652-5400</td>
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<tr>
<td>The Daily Grill</td>
<td>629 Pike Street (206) 624-8400</td>
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<tr>
<td>The Elephant and Castle Pub &amp; Restaurant</td>
<td>1415 Fifth Avenue (206) 624-9977</td>
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<tr>
<td>The Georgian</td>
<td>411 University Street (206) 621-1700</td>
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<td>The Oceanaire Seafood Room</td>
<td>1700 Seventh Avenue (206) 267-2277</td>
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<tr>
<td>The Pike Brewing Company</td>
<td>1415 First Avenue (206) 622-6044</td>
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<tr>
<td>The Triple Door</td>
<td>216 Union Street (206) 838-4330</td>
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<td>Todai</td>
<td>600 Pine Street (206) 749-5100</td>
<td>$$$</td>
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<tr>
<td>Top of the Hilton Restaurant</td>
<td>Sixth &amp; University, 29th Floor (206) 624-0500</td>
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<tr>
<td>Tuilo Ristorante</td>
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<td>Union Restaurant</td>
<td>1400 First Avenue (206) 838-8000</td>
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<tr>
<td>Union Square Grill</td>
<td>621 Union Street (206) 224-4321</td>
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<td>Von’s Grand City Cafe</td>
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<tr>
<td>Wild Ginger Asian Restaurant &amp; Satay Bar</td>
<td>1401 Third Avenue (206) 623-4450</td>
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</tbody>
</table>

**Notes:**
- **$** = Under $12
- **$** = $12–$18
- **$$** = $18–$30
- **$$** = over $30

*Up-to-date information at [www.toxicology.org](http://www.toxicology.org)*
Poster Board Surface Maps

Monday, March 17—9:30 AM to 12:30 PM—Exhibit Hall 4-E, Level 4
Poster Set Up—8:00 AM to 9:30 AM

The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Presenters should ONLY display posters on the assigned date and time communicated in your acceptance notice.
Monday, March 17—1:00 PM to 4:30 PM—Exhibit Hall 4-E, Level 4

Poster Set Up—12:30 PM to 1:00 PM

The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Presenters should ONLY display posters on the assigned date and time communicated in your acceptance notice.
Posters will be displayed in Exhibit Hall 4-E, Level 4, 700's wing, on Tuesday, March 18, from 9:00 AM to 12:30 PM. Presenters should display their posters on the assigned date and time communicated in your acceptance notice. The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Poster set up will take place from 8:30 AM to 9:00 AM. The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Presenters should only display posters on the assigned date and time communicated in your acceptance notice.
## Poster Board Surface Maps (Continued)

### Tuesday, March 18—1:00 PM to 4:30 PM—Exhibit Hall 4-E, Level 4

**Poster Set Up—12:30 PM to 1:00 PM**

The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Presenters should ONLY display posters on the assigned date and time communicated in your acceptance notice.

### Session Title | Abstract Numbers | Poster Board Numbers
--- | --- | ---
Pharmacokinetics & Disposition | 943-297 | 101-133
Regulation/Policy | 976-391 | 134-140 AND 201-209
Applications of Biological Modeling | 962-322 | 210-240
Nanoparticles: Target Organs | 1023-1056 | 301-334
Breast Cancer: Mechanisms, Biomarkers and Chemoprevention | 1057-1070 | 335-340 AND 401-408
Inhalation Toxicology | 1071-1102 | 409-440
Signal Transduction and Gene Regulation | 1103-1131 | 901-329
Reproductive Sperm | 1132-1181 | 532-581
Risk Assessment Research | 1162-1199 | 601-638
Liver I: in Vivo | 1200-1222 | 640-682
Assessment of Ecological Toxicology | 1233-1250 | 701-728

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### POSTER SURFACES NOT IN USE—NO POSTERS SHOULD BE DISPLAYED ON THESE BOARDS.

### 100's | 200's | 300's | 400's | 500's | 600's | BACK SURFACE NOT USED
--- | --- | --- | --- | --- | --- | ---
101-140 | 201-240 | 301-340 | 401-440 | 501-562 | 601-662 | 701-730
962-120 | 963-121 | 1002-220 | 1003-221 | 1042-320 | 1043-321 | 1082-420 | 1083-421
961-119 | 964-122 | 1001-219 | 1004-222 | 1041-319 | 1044-322 | 1081-419 | 1084-422
959-117 | 966-124 | 999-217 | 1006-224 | 1039-317 | 1046-324 | 1079-417 | 1086-424
956-114 | 969-127 | 996-214 | 1009-227 | 1036-314 | 1049-327 | 1076-414 | 1089-427

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### 500's | 600's
--- | ---
531 | 1132-532 | 1192-631 | 1193-632
530 | 1133-533 | 1191-630 | 1194-633
1131-529 | 1134-534 | 1190-629 | 1195-634
1130-528 | 1135-535 | 1189-628 | 1196-635
1129-527 | 1136-536 | 1188-627 | 1197-636
1128-526 | 1137-537 | 1187-626 | 1198-637
1127-525 | 1138-538 | 1186-625 | 1199-638
1126-524 | 1139-539 | 1185-624 | 1200-639
1125-523 | 1140-540 | 1184-623 | 1201-640
1124-522 | 1141-541 | 1183-622 | 1202-641
1123-521 | 1142-542 | 1182-621 | 1203-642
1122-520 | 1143-543 | 1181-620 | 1204-643
1121-519 | 1144-544 | 1180-619 | 1205-644
1120-518 | 1145-545 | 1179-618 | 1206-645
1119-517 | 1146-546 | 1178-617 | 1207-646
1118-516 | 1147-547 | 1177-616 | 1208-647
1117-515 | 1148-548 | 1176-615 | 1209-648
1116-514 | 1149-549 | 1175-614 | 1210-649
1115-513 | 1150-550 | 1174-613 | 1211-650
1114-512 | 1151-551 | 1173-612 | 1212-651
1113-511 | 1152-552 | 1172-611 | 1213-652
1112-510 | 1153-553 | 1171-610 | 1214-653
1111-509 | 1154-554 | 1170-609 | 1215-654
1110-508 | 1155-555 | 1169-608 | 1216-655
1109-507 | 1156-556 | 1168-607 | 1217-656
1108-506 | 1157-557 | 1167-606 | 1218-657
1107-505 | 1158-558 | 1166-605 | 1219-658
1106-504 | 1159-559 | 1165-604 | 1220-659
1105-503 | 1160-560 | 1164-603 | 1221-660
1104-502 | 1161-561 | 1163-602 | 1222-661
1103-501 | 1162-562 | 1162-601 | 1223-662

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**Entrance**

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**up-to-date information at www.toxicology.org**
The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Presenters should ONLY display posters on the assigned date and time communicated in your acceptance notice.
**Poster Board Surface Maps (Continued)**

**Wednesday, March 19—1:00 PM to 4:30 PM—Exhibit Hall 4-E, Level 4**

**Poster Set Up—12:30 PM to 1:00 PM**

The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Presenters should ONLY display posters on the assigned date and time communicated in your acceptance notice.

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**POSTER SURFACES NOT IN USE—NO POSTERS SHOULD BE DISPLAYED ON THESE BOARDS.**

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**Maps**

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**Entrance**

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**Society of Toxicology 2008**

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**up-to-date information at www.toxicology.org**

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### Poster Board Surface Maps (Continued)

**Thursday, March 20—8:30 AM to 12:00 NOON**
**Ballroom 6C & E, Level 6**

**Poster Set Up—8:00 AM to 8:30 AM**

The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Presenters should ONLY display posters on the assigned date and time communicated in your acceptance notice.

<table>
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<th>Session Titles</th>
<th>Abstract Numbers</th>
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<td>Oxidative Injury and Redox Biology II: In Vivo</td>
<td>2045-2084</td>
<td>101-110</td>
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<tr>
<td>Metals II</td>
<td>2085-2122</td>
<td>141-160 AND 201-218</td>
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<tr>
<td>Method Development, Autoimmunity and Disease Mechanisms in Immunotoxicology</td>
<td>2123-2155</td>
<td>221-253</td>
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<td>AHR Mechanisms</td>
<td>2156-2171</td>
<td>254-260 AND 301-309</td>
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<tr>
<td>Chemoprevention</td>
<td>2172-2183</td>
<td>311-322</td>
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<td>Fish Alternative Models of Toxicity</td>
<td>2184-2199</td>
<td>325-340</td>
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<td>Cardiovascular System: Vascular Effects</td>
<td>2205-2220</td>
<td>341-360 AND 401</td>
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<td>Food Safety I</td>
<td>2221-2241</td>
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**BALLROOM E**

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Thursday, March 20—8:30 AM to 12:00 NOON  
Ballroom 6C & E, Level 6

Poster Set Up—8:00 AM to 8:30 AM

The abstract final ID# is located to the left of the hyphen (-); the number to the right refers to the poster location number, which does not change throughout the week. Presenters should ONLY display posters on the assigned date and time communicated in your acceptance notice.

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**Ballroom C**

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up-to-date information at www.toxicology.org
Exhibit Hall 4-E

Exhibit Hours:

Monday
9:15 AM–4:30 PM

Tuesday
8:30 AM–4:30 PM

Wednesday
8:30 AM–4:30 PM

Poster Boards 100s
Poster Boards 200s
Poster Boards 300s
Poster Boards 400s
Poster Boards 500s
Poster Boards 600s
Poster Boards 700s

To Exhibit Hall 4A-B

GENERAL SESSION/ WELCOMING RECEIPTION

EXHIBIT HALL 4-E
To Exhibit Hall 4-E and Posters

To General Session/Welcoming Reception

Exhibit Hall 4A-B

Escalator to Level 6

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Pavilion

To Registration
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## ToxExpo™ 2008 Exhibitors (Continued)

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Admittance to the Exhibit Hall is limited to attendees with full registration. Children under the age of 13 years of age are not allowed in the Exhibit Hall.

Photography is prohibited in the Exhibit Hall. Special requests can be brought to the Show Manager. The Show Management Office is located in the Exhibit Hall (see map on page 28).
You probably know ToxExpo™ as the exhibition associated with the Society of Toxicology’s Annual Meeting—it’s that—but it’s also a great deal more.

**ToxExpo™ is:**

- **A UNIQUE ENVIRONMENT** to research products and services of exhibiting companies and keep you informed of new cutting-edge science and technology.
- **A COMPREHENSIVE APPROACH** to organizing the wealth of ideas and insights in cross-disciplinary areas of toxicology.
- **THE TOXICOLOGY MARKETPLACE**—your source for product information and resources to keep your lab competitive.
- **THE PLACE WHERE PROFESSIONALS WILL LEARN** how to explore a rapidly changing science.
- **A CHANCE TO THINK OUTSIDE THE BOX**—find out how your work relates to research in other disciplines.
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*It all adds up to an uncommonly rich resource for the scientist, the toxicologist, the policy maker, the educator, the student—anyone looking for the best products and services that toxicology has to offer!*
Registration

Annual Meeting Registration Fees:

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(Guests do not have access to the Scientific Sessions or the Exhibit Hall.)

Continuing Education Sunrise Mini-Course Fees:  
(includes continental breakfast)

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Continuing Education Course Fees:  
(per AM or PM course)  
(Only Annual Meeting Registrants may enroll in CE Courses)

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<td>$165</td>
</tr>
<tr>
<td>Retired</td>
<td>$160</td>
</tr>
<tr>
<td>Non-Member</td>
<td>$280</td>
</tr>
<tr>
<td>Postdoctoral (SOT Member or Non-Member)</td>
<td>$140</td>
</tr>
<tr>
<td>Graduate or Undergraduate Student (SOT Member or Non-Member)</td>
<td>$95</td>
</tr>
<tr>
<td>Press</td>
<td>$0</td>
</tr>
</tbody>
</table>

Annual Meeting Registration Includes:

- Awards Ceremony, Sunday, March 16 from 5:15 PM–6:30 PM.
- Welcoming Reception, Sunday, March 16 from 6:30 PM–7:30 PM.
- Plenary Opening Lecture, Monday, March 17 from 8:15 AM–9:15 AM.
- All Scientific Sessions (see program descriptions beginning on page 85) 9:30 AM, Monday, March 17 through 11:45 AM, Thursday, March 20.
- ToxExpo™ Exhibit Hall, 9:15 AM–4:30 PM Monday, March 17; 8:30 AM–4:30 PM Tuesday, March 18 and Wednesday, March 19.

Participants are also encouraged to register for the Continuing Education Courses. These are available during three time intervals on Sunday, March 16: the Sunrise Mini-Course is from 7:00 AM–7:45 AM, morning courses are 8:15 AM–12:00 NOON, and afternoon courses are from 1:15 PM–5:00 PM.

Registration Desk

Registration Desk will be located on the Level 4, South Lobby.

Registration Desk Hours:

Saturday .............................................. 4:00 PM–7:00 PM
Sunday ................................................. 7:00 AM–8:00 PM
Monday ................................................. 7:00 AM–5:00 PM
Tuesday .............................................. 8:00 AM–4:00 PM
Wednesday ......................................... 8:00 AM–4:00 PM
Thursday ............................................ 8:00 AM–11:30 PM

Registration Materials

Register before January 25, 2008, and your badge, Program and The Toxicologist on CD-ROM will be sent to you prior to the Annual Meeting. Your 2008 Annual Meeting Registration badge must be presented to obtain access to SOT functions.

When you arrive at the Washington State Convention and Trade Center, please go to the registration area on the 4th floor to pick up your ToxExpo™ Directory and registration badge. If you already have your registration badge and CE course tickets, there is no need to stand in a registration line. Simply stop by the handout table in the registration area and present your badge to obtain the other registration materials (i.e., The Toxicologist on CD-ROM, the ToxExpo™ Directory and other supplementary materials).
**General Information**

**Accessibility for Persons with Disabilities**
The Washington State Convention and Trade Center and most of the SOT hotels are accessible to persons with disabilities. If you require special services, please mark the appropriate box on the Housing Request Form and the Registration Form. If you require more information about disabled access, please contact Heidi Prange at SOT Headquarters: (703) 438-3115 ext. 1424 or e-mail: heidi@toxicology.org.

**Attire**
The official attire for the Annual Meeting is business casual. No coat or tie is required! We encourage you to bring comfortable clothing and shoes. Because meeting rooms may seem cold, please bring a sweater or jacket and/or dress in layers.

**Badges**
Annual Meeting attendees who have registered before January 25, 2008, will receive badges and registration materials in the mail. If you already have your 2008 Annual Meeting badge you do not need to wait in a registration line. If you have registered and have NOT received your badge by mail or need a replacement badge, go to the “Badge Pick Up Only” registration counter to pick up your badge.

If you have not registered for the meeting, please complete the on-site registration form found at the kiosks in the registration area and proceed to the appropriate registration line.

**Business Center—FedEx Kinko’s**
FedEx Kinko’s is a full-service business center offering FedEx shipping, high-speed duplication, binding, posters, signs, banners, fax service, instant passport photos, laminating, Mac and PC rentals, Internet access, and free pick-up and delivery. E-mail your documentation preparation requests right from your computer. FedEx Kinko’s is located on Level 1. Hours: 7:00 AM Monday to 9:00 PM Friday and on Saturday and Sunday from 9:00 AM to 6:00 PM. Telephone: (206) 467-1767; e-mail: usa5161@fedexkinkos.com.

**Climate**
Seattle is known for its remarkable beauty and climate. The lush green hills and gardens are a result of seasonal, gentle rains brought by Pacific air currents. The resulting maritime climate keeps Seattle’s temperatures moderate. It rarely freezes or snows in the winter and the days are mild in the summer. According to a study by WeatherBill, Inc. (May 2007), Seattle is ranked number 42 for average annual rainfall, lower than New Orleans, Houston, Miami, New York City, Memphis, and Washington, D.C. Daytime temperatures in the winter months are typically in the 40s or 50s and seldom drop below freezing. Average temperature for March: highs in the mid 50s °F and lows in the upper 30s °F.

**Exhibit Hall (Hours/Location)**
Exhibit hours at the Convention Center are as follows:

- Monday .................................................... 9:15 AM–4:30 PM
- Tuesday ..................................................... 8:30 AM–4:30 PM
- Wednesday ................................................ 8:30 AM–4:30 PM

A map of the Exhibit Hall is located on page 44. Exhibitor personnel may enter the hall one hour before the Exhibit Hall opens with appropriate identification. Poster presenters may enter the hall at the poster set up times specified in the Events Calendars.

**Exhibit Space Meeting**
Exhibiting companies should plan on attending the 2009 Space Selection Meeting on Tuesday, March 18 at 4:45 PM in Exhibit Hall 4C-3 on Level 4.

**Exhibit Hall Policy**
Admittance to the Exhibit Hall is limited to attendees with full registration. Guest Registrants and children under the age of 15 are not allowed in the Exhibit Hall.

Photography is prohibited in the Exhibit Hall. Special requests can be brought to the Show Manager. The Show Office is located in Room 401.

**First Aid and Security at the Convention Center**
If an emergency should occur while at the Washington State Convention and Trade Center, proceed directly to the nearest house phone, located throughout the facilities, and dial 5127. You will be connected to the Security Control office. From any phone that is not a house phone, dial (206) 694-5127. Red “hot line” phones are also located around the facility and ring directly into the Security Control office. Alternatively, any uniformed WSCTC personnel with a two-way radio can contact the Security Control office if needed.

SOT will provide a First Aid Room that will be open during exhibit move-in, exhibit move-out, and scientific session hours. The First Aid Room will be located in the South Lobby Level 4 near the entrance of the exhibit hall.
General Information (Continued)

Food Services

Coffee Breaks
The exhibiting companies are pleased to sponsor complimentary coffee in the Exhibit Hall between 9:15 AM–10:15 AM, Monday through Wednesday. See Exhibit Hall signage for locations.

Concessions
Concession stands are available in the Exhibit Hall Monday 9:15 AM–2:30 PM, and Tuesday and Wednesday from 8:30 AM–2:30 PM. Breakfast and lunch items will be available, as well as coffee, soda, bottled water, and snacks for purchase. Concession stands will also be available near Level 6 meeting rooms. Seating is available in the Concession area in Exhibit Hall 4E.

Restaurants—Food and Drink at the Convention Center

Bambuza—offers fresh and delicious international cuisine for lunch and dinner. Daily happy hour with drink and appetizer specials from 4:00 PM to 6:00 PM. Located at Pike and Ninth. Lunch: Monday–Saturday from 11:00 AM to 3:00 PM, or try quick sandwich service Monday–Friday, 10:00 AM to 3:00 PM. Dinner: Monday–Thursday from 5:00 PM to 9:30 PM and Friday and Saturday, 5:00 PM to 10:30 PM. Reservations are accepted. Telephone: (206) 219-5555.

Crêpes Voilà—is a sidewalk café specializing in fresh, European-style fast food. Delicate, golden crêpes folded around your choice of twenty different fillings for breakfast, lunch, dinner and dessert. Located outside under the arch on Pike. Hours: Monday–Thursday from 8:00 AM to 8:30 PM, Friday from 8:00 AM to 9:30 PM, Saturday from 9:30 AM to 4:30 PM. Telephone: (206) 447-2737. Web site: www.lacreperievoila.com.

Cyber Dogs—Internet Café—Enjoy gourmet international hot dogs, espresso, teas and beverages. T1 high-speed Internet service is available. Located just across Convention Place on Pike Street. Hours: Open daily from 10:00 AM to 12:00 Midnight. Telephone: (206) 405-3647. Web site: www.cyber-dogs.com.

Espresso Caffé Dior—offers specialty coffee drinks, teas, beverages, a large variety of tasty pastries and freshly made sandwiches. Located on Level 1. Hours: Monday–Friday from 7:00 AM to 5:00 PM and Saturday 8:00 AM to 2:00 PM. Sunday hours are based on the Convention Center event schedule. Telephone: (206) 624-0814.

Juice It Café—specialty is freshly squeezed fruit and vegetable juice, brown rice bowls, salads, sandwiches, and soups. Energy bars, vitamins, and supplements are also available. Located in the Level 1 corridor near Gold’s Gym. Hours: Monday–Friday, 8:00 AM to 7:00 PM and Saturday, 10:00 AM to 4:00 PM. Telephone: (206) 447-6960.

Moby’s Restaurant and Lounge—is a full service restaurant featuring grilled steaks, burgers, seafood, and microbrews. Open for lunch, dinner, and happy hour. Level 1, near the Union Street entrance. Hours: Monday from 11:00 AM to 3:00 PM, Tuesday–Friday from 11:00 AM to 8:00 PM and weekends from 12:00 NOON to 8:00 PM. Telephone: (206) 447-0507. Web site: www.mobysrestaurant.tk.

Subway Sandwiches—offers sandwiches, salads and breakfast items. Subway has two convenient locations at the Center: Under the arch on Pike and on Level 4 next to Tully’s Coffee. Hours: Subway on Level 4 is open daily from 8:00 AM to 5:30 PM and the Pike Street location is open daily from 8:00 AM to 9:00 PM. Telephone: Level 4—(206) 505-6498, Pike Street—(206) 694-5149.

Taco Del Mar—Seattle’s biggest and best mission-style burritos, made fresh to order. Try famous fish tacos, enchiladas, Baja bowls and other delicious Mexican dishes. Located on Level 1. Hours: Monday–Saturday, 10:00 AM to 8:00 PM and Sunday, 12:00 NOON to 6:00 PM. Telephone: (206) 628-8982.

Tully’s Coffee—Enjoy a cup of Seattle’s world-famous handcrafted coffee, made fresh by an expert barista. Tully’s also offers refreshing cold drinks, teas, pastries, ice cream, and more. Located on Level 4 of the South Galleria. Hours: Open Monday–Friday from 7:00 AM to 5:00 PM. Weekend schedule is based on Convention Center event activity. Telephone: (206) 694-5371.

Unconventional Pizza & Salad—Freshly made pizzas by the slice or the whole pie, calzone, salads, and several varieties of pasta. Unconventional Pizza is located on Level 1, next to FedEx Kinko’s. Hours: Monday–Saturday, 10:00 AM to 6:00 PM. Hours may be extended for convention event activity. Telephone: (206) 625-0102.

Take a Break!
Grab a bite! Check e-mail! Plenty of seating is available in the Hot Zones in Exhibit Halls 4A and 4E and in the Concessions area in Exhibit Hall 4E.
General Information (Continued)

Citywide Concierge & Visitor Center
The Citywide Concierge & Visitor Center can assist with everything from tour bookings and sightseeing suggestions to dining reservations and local travel information. Operated as a complimentary service by Seattle's Convention and Visitors Bureau, the Citywide Concierge & Visitor Center is located on Level 1 in the corridor adjacent to Lotte Salon. Hours: Open 9:00 AM to 5:00 PM, Monday–Friday. Telephone: (206) 461-5888.

A full listing of restaurants by cuisine and price is on page 35.

Guest Hospitality Center and Program
The SOT Guest Hospitality Center provides guest participants (non-scientists) with a place to meet and socialize with other guests. To visit the Hospitality Center, guests must register for the Annual Meeting with the person they are accompanying. Guests are welcome to attend the Welcoming Reception, but will not have access to the scientific sessions or the Exhibit Hall. Please remember to wear your badge to all SOT events.

The Guest Hospitality Center will be located in the Sheraton Hotel, Greenwood room.

Guest Hospitality Center hours:
Sunday .................................................. 8:00 AM–5:00 PM
Monday .................................................. 8:00 AM–5:00 PM
Tuesday .................................................. 8:00 AM–5:00 PM
Wednesday .......................................... 8:00 AM–5:00 PM
Thursday .............................................. 8:00 AM–11:30 AM

Housing

Housing Desk
The deadline for housing reservations is February 20, 2008. You may continue to make new reservations, changes, or cancellations with the Housing Bureau until February 28; however the SOT room rate may not be available. Beginning February 29, you may call the hotels directly for any housing requests. For information regarding your hotel room reservation, please visit the SOT Housing Desk located in the South Lobby, Level 6 of the Convention Center.

Housing Desk hours:
Saturday .............................................. 4:00 PM–7:00 PM
Sunday .................................................. 7:00 AM–5:00 PM
Monday .................................................. 7:00 AM–5:00 PM
Tuesday .............................................. 8:00 AM–4:00 PM
Wednesday .......................................... 8:00 AM–4:00 PM
Thursday ............................................. 8:00 AM–11:30 AM

Housing desk hours are subject to change.

Hotel Reservations
Make your hotel reservations through the Seattle Housing Bureau on the SOT Annual Meeting Web site.

If you are logged on to the SOT Web site and you have already registered for the Annual Meeting, your address information will be pre-populated when you proceed to the hotel reservation service.

The Society of Toxicology has reserved and made arrangements for SOT Annual Meeting attendee discounted room rates at various Seattle hotels—known as the SOT hotel block. This block includes discounted room rates at many premier hotel chains and details can be found on page 30.

The Room Sharing program will be continued for 2008 SOT Annual Meeting Registrants. Access this option from the Annual Meeting section of the SOT Web site.

Did you know that your choice of hotel for the SOT Annual Meeting has direct impact on Society’s Strategic initiatives? Although we understand that making your reservations outside of the SOT block can sometimes be more economical, it decreases the money available to the Society to carry out its strategic goals and may cause the Society to have to pay attrition fees for unutilized rooms. In addition, the Society is unable to assist you if you have any difficulties with your room reservation, such as the hotel over-booking or misplacing your reservation.

SOT depends on the Annual Meeting revenue to fund other programs throughout the year and to keep future registration fees low. Please assist the Society by making your hotel reservation through the Seattle Housing Bureau.

A note about calling the hotel directly: please do not call your hotel “to be sure” until after Friday, February 29, 2008. Please understand that processing your reservations from the Housing Bureau into the hotel system will take a few days. Rest assured that if you have received a confirmation number from the Housing Bureau, the hotel will honor your booking. Thank you for your consideration.

Methods for Making Housing Reservations
ON-LINE: www.toxicology.org

TELEPHONE:
Toll-Free (USA and Canada): (888) 877-0255
International: (206) 461-5881

FAX: (206) 461-5853
General Information (Continued)

MAIL:
Seattle Housing Bureau
701 Pike Street, Suite 800
Seattle, Washington 98101
United States

E-MAIL: hotelres@visitseattle.org

Internet Access
SOT knows the importance of staying connected to your daily activities while attending the Annual Meeting and provides you several ways to access the Internet.

Computers Available at the Convention Center
SOT will provide computers you can use to access the Internet. These computers are available to attendees in the E-mail Center, located on Level 6 of the Convention Center.

“Hot Zone” Wireless Access
“Hot Zone” designated areas in the Exhibit Hall will be clearly marked for laptop and handheld users to access the Internet via the Wi-Fi network at the Convention Center.

Internet E-mail Center
The SOT Annual Meeting E-mail Center is provided to help you stay connected to your colleagues during the Annual Meeting. SOT members, 2008 Annual Meeting attendees including exhibitors, and CRAD Job Bank registrants can access the E-mail Center on the SOT Web site to send and receive e-mail messages during the 2008 Annual Meeting—just like a standard e-mail application. The difference? The 2008 SOT Annual Meeting E-mail Center gives you a unique mailbox without having to provide your personal e-mail address to correspondents.

The service will send you an e-mail alert when you receive a message. Use the communication preference to forward your incoming messages to your standard e-mail address or PDA. Available 24/7, access to the E-mail Center is available any time of day and from any computer with an Internet connection, before, during and after the 2008 Annual Meeting (March 1 through April 1). Simply visit the SOT Web site and follow the E-mail Center link from the homepage.

To log into your mailbox, use your e-mail address and password or Annual Meeting badge number. If you don’t know your login, you can use the SOT password retrieval request from the login on the SOT Web site or ask the Annual Meeting registration staff or E-mail Center attendant for assistance.

Job Bank users will have the option to send messages to the Annual Meeting E-mail Center mailboxes. E-mail Center users will have the option to send messages to Job Bank registrant mailboxes by name or position number or resume number.

Additionally, the E-mail Center provides extended communication permitting members and CRAD registrants who do not attend the meeting to communicate with attendees. Even colleagues and family members can e-mail messages into the Center.

Lost and Found
Lost and found articles may be taken to the SOT Headquarters Office, Room 303, of the Washington State Convention and Trade Center. Any items left in the SOT Headquarters Office after 11:30 AM, Thursday, March 20 will be deposited in the Security Office at the Convention Center.

Luggage/Coat Check
For your convenience, a complimentary luggage/coat check will be available in the Washington State Convention and Trade Center in Room 454 on Level 4. Laptop computers will not be accepted. The luggage/coat check will be open from Sunday, March 16 through Thursday, March 20.

Hours of operation:
Sunday ........................................ 7:00 AM–8:30 PM
Monday ........................................ 7:00 AM–8:30 PM
Tuesday ....................................... 7:00 AM–8:00 PM
Wednesday ................................ 7:00 AM–8:00 PM
Thursday .................................. 7:00 AM–1:00 PM

Luggage/coat check hours are subject to change.

Lunch with an Expert Board
The Specialty Section Graduate Committee coordinates Lunch with an Expert. The poster containing the Expert groups will be located on Level 6 of the Convention Center in the West Lobby past Room 614. Experts and students meet at the Lunch with an Expert board at the designated time to go to the chosen restaurant.

Media Support Services
The Society of Toxicology welcomes accredited representatives of Media Organizations. Journalists may receive complimentary credentials for all meeting sessions, as well as a complete media kit, by contacting Clarissa Wilson, Media Contact at SOT Headquarters: (703) 438-3115 or
General Information (Continued)

e-mail: clarissa@toxicology.org. On-site, media kits can be picked up at the SOT Headquarters Office, Room 303, in the Washington State Convention and Trade Center.

Meeting Pole
In order to facilitate attendees in locating friends and new acquaintances, a centralized meeting location has been designated on Level 6 in the Washington State Convention and Trade Center. The meeting pole tower of the Space Needle makes it easy to locate colleagues and will also present a great photo opportunity.

Memorabilia
Shirts, portfolios, and other items customized for SOT are available for sale at the Annual Meeting in the Memorabilia Booth on Level 4, South Lobby of the Washington State Convention and Trade Center.

Message Boards
The pen is still mighty. Leave a quick note on the message boards. Note pads and push pins will be available to post messages on the message boards. SOT Message Boards will be located across from the E-mail Center computers on Level 6 of the Washington State Convention and Trade Center.

Photography Policy During Scientific Sessions
Photography of scientific presentations and poster presentations is prohibited without the specific consent of the presenter(s)/author(s). Session chairs are asked to strictly enforce this policy and individuals who do not comply will be asked to leave the session. In addition, cameras and recording devices are prohibited in the Exhibit Hall. If you have any questions regarding this policy, please contact SOT Headquarters or stop by the SOT Office in Room 303 on Level 3.

Registration
Full registration details may be found on page 49.

Registration Desk Hours
The Annual Meeting Registration Desk is located in the Washington State Convention and Trade Center, Level 4, South Lobby.

Registration Desk hours:
Saturday .................................................... 4:00 PM–7:00 PM
Sunday .................................................... 7:00 AM–8:00 PM
Monday .................................................. 7:00 AM–5:00 PM
Tuesday ................................................. 8:00 AM–4:00 PM
Wednesday .............................................. 8:00 AM–4:00 PM
Thursday ................................................ 8:00 AM–11:30 AM

Safety and Security
The possibility of demonstrators is very real given the nature of our conference. Events of this nature range from verbal confrontations, protests, strikes, to riots. We recommend the following procedures in the event of demonstrations:

• Have your name badge available upon entering the Convention Center. Wear your name badge in the Convention Center. When leaving the facility, remove it so as to blend with other people.

• If you see a demonstration or protest beginning, please contact any member of the SOT Annual Meeting staff and they will initiate an SOT response. If you see actions that appear threatening, notify the nearest security officer.

• Do not engage, defend either side, or subdue person(s) in any type of disturbance. Demonstrators are usually trying to attract media attention. Don’t help them!

• SOT representatives will respond to media inquiries. Do not participate in interviews or other media responses.

• In the unlikely event that outsiders disrupt a scientific session or other event, SOT security officials have developed a contingency plan. Please follow directions from the chairperson and avoid becoming involved in the situation.

Safety Tips
Walk “smart” when you leave the Convention Center:

• Know your destination and the best way to reach it.

• Travel along sidewalks in lighted areas at night, and don’t walk alone.

• Establish a “buddy” system with another delegate to the convention.

• Share schedules and check up on each other periodically.

• Build your awareness of unknown surroundings by reviewing local information.

• Laptop computers are attractive, easy targets for thieves. Be sure your laptop is in a secure place.
General Information (Continued)

• Jackets with pockets provide a convenient alternative for women to reduce the chance for lost or stolen handbags.

Our first priority is safety. The best way to stay safe is to be aware of your surroundings and to avoid situations where you feel uncomfortable.

SOT Headquarters Office
The SOT Headquarters Office is located in the Washington State Convention and Trade Center, Room 303 on Level 3.

SOT Headquarters Office hours:
Saturday .................................................... 4:00 PM–7:00 PM
Sunday ..................................................... 7:00 AM–5:30 PM
Monday ..................................................... 7:00 AM–5:00 PM
Tuesday ................................................... 7:00 AM–4:00 PM
Wednesday ............................................... 7:00 AM–4:00 PM
Thursday ................................................ 7:00 AM–11:30 AM

Speaker Ready Room
The Speaker Ready Room will be located in Room 213 and is available during the SOT Headquarters Office hours listed above.

Sponsorship
The Society would like to invite your organization to be a proud sponsor of the 2008 Annual Meeting. SOT appreciates the generous contributions of sponsors that make the SOT Annual Meeting possible. Sponsor names are prominently displayed on the Annual Meeting and ToxExpo™ Web sites, as well as in print materials that are distributed before and during the Annual Meeting. Sponsorship is recognized through signage displayed around the Convention Center during the Annual Meeting.

There are five levels of sponsorship available: Diamond (over $10,000), Platinum ($5,000–$9,999), Gold ($2,500–$4,999), Silver ($1,000–$2,499), and Contributor ($999 or below). You will find a complete menu of sponsorships designed to assist your organization in establishing a leadership position at the SOT 2008 Annual Meeting on the Web site at www.toxicology.org and promotional opportunities can be reviewed at www.ToxExpo.com.

For detailed information about SOT sponsor and promotional opportunities, please contact Liz Kasabian at SOT Headquarters: (703) 438–3115 or e-mail: liz@toxicology.org.

For a listing of sponsors at the print deadline, see the inside back cover and the back cover.

Transportation

Air Transportation
The Seattle-Tacoma International Airport (Sea-Tac) is located approximately 20 miles away from the Washington State Convention and Trade Center and downtown Seattle. The airport provides almost 30 million passengers a year with non-stop service to 87 domestic and international locations. These flights are provided by 8 major domestic carriers as well as several regional and international airlines. For more information, call (206) 433-5388 or visit www.portseattle.org/seatac.

Ground Transportation
The Seattle-Tacoma International Airport (Sea-Tac) is served by taxi, shuttle, and bus services. The airport is 20 miles south of downtown Seattle.

From baggage claim, follow the signs directing you to ground transportation which is located on the 3rd floor of the parking garage—the same level as baggage claim.

Once in the garage, proceed to the transportation booth by following the group transportation check-in signs. You will find booths alongside the Sea-Tac ground transportation information center. For more information on ground transportation to and from the airport, visit www.portseattle.org/seatac/ground. For airport information, call (206) 433-5388.

From the Airport—Shuttles and Buses

Shuttle Express
• Share and Ride Door-to-Door Shuttle Express is $21.
• Private, Direct Service Express Car is $50 for 1–3 guests.
• Private, Exclusive Van for 7 or less passengers is $61.
• Private, Exclusive Van for 10 or less passengers is $70.
• Kids under 12 ride free per paying adult.
• Board the Shuttle Express at the inner drive curb on the third floor of the parking garage.
• Reservations: Call (425) 981-7000.

Downtown Airporter (Gray Line of Seattle)
• Adults One-Way Fare is $10.25; Roundtrip is $17.
• Children (2–12 years) One-Way Fare is $7.25; Roundtrip is $12.
• Kids under 2 years old travel at no charge.
• Operates from 5:30 AM–11:00 PM.
General Information (Continued)

Board the Downtown Airporter at the south end of the baggage claim level. Follow signs for Scheduled Airporters, located at Door 00, just beyond baggage claim carousel #1. Direct Downtown Airporter service is provided to and from the following locations: Crowne Plaza, Fairmont Olympic, Hilton, Sheraton, Hyatt, Westin.

For more information or to purchase tickets, call (206) 626-6088 or (800) 426-7532.

E-mail: info@graylinesseattle.com  
www.graylineofseattle.com

Metro Transit
One-Way Fare to downtown is between $1.50 and $2 (exact change required).

Board the Metro Transit buses outside door 6 by baggage carousel No. 5, on the baggage claim level.  
http://transit.metrokc.gov

Taxi Service
Taxis are readily available at Seattle-Tacoma International Airport (Sea-Tac). Cost of a taxi from the airport to downtown is approximately $30–35 one-way and most downtown hotels are a 30 minute drive.

Taxis can also be an efficient way to get around town, although other means of public transportation may be equally, if not more, efficient and less costly. A trip within the downtown area will cost $5 to $10 depending on the distance. Taxis are readily available at the Colman Dock Ferry Terminal and at the cruise ship terminals. Elsewhere, call for a taxi or ask your concierge.

Public Transportation
The best way to see downtown is on foot. Most of the dining, shops, and entertainment centers are within walking distance of the Convention Center. However, Seattle offers a number of other efficient and interesting ways of getting around.

Buses
Metro operates Seattle’s bus system and provides on-line tools to help riders. Between 6:00 AM and 7:00 PM daily, no fares are required when riding downtown in the Ride Free Area, bordered on the north by Battery Street, on the South by S. Jackson Street, on the east by Sixth Avenue and on the west by the Seattle Waterfront. To see your Metro travel options in greater detail, visit http://transit.metrokc.gov.

The Greyhound bus station is located at 811 Stewart St. Tickets are available on-line, by phone, at the station or at King Street (Amtrak) Station. Go to www.greyhound.com for more information.

Trains
The Seattle Center Monorail is an excellent transportation option, providing a quick, convenient and fun ride to the best attractions in town. Costing only $1.50, it travels between Westlake Mall in downtown Seattle and the Seattle Center and takes two minutes to go the 1.2 miles to the Center House near the Space Needle. Visit www.seattlemonorail.com for more information.

Three Amtrak trains arrive and depart at historic King Street Station (303 S Jackson St.), providing service to Vancouver, B.C., Tacoma, Portland, Spokane and other destinations. King Street Station is located between the International District and Pioneer Square, just north of Qwest Field. Tickets may be purchased on-line or at the station. Greyhound tickets are also sold at the station. Call (800) USA-RAIL, or visit www.amtrak.com for more information.

The Sounder is a commuter train running from Seattle to Everett and from Seattle to Tacoma. The trains are boarded at King Street Station. Call (206) 398-5000, or visit www.soundtransit.org for more information.

Ride Share
SOT is offering a Ride Sharing program in conjunction with the Annual Meeting. For those who live close enough to the Seattle area or those that do not wish to fly, you may want to consider the Ride Share Program. Avoid airport hassles by driving and make it easier for other scientists to attend by sharing rides. Students especially appreciate ways to make the meeting even more economical.

Once you have registered for the Annual Meeting, you can access the Ride Sharing program from the Annual Meeting section of the Web site. You can indicate whether you want to drive or be a passenger, and then see a list of others who have signed up. It will be up to you to match your plans with someone else whom is registered, and then to remove your names when you have travel plans in place.

Car Rental
Avis Rent A Car System is the official car rental company for the 47th Annual Meeting. SOT discounted rates, including unlimited mileage, begin at $43.99 per day. These special group rates are good one week before and after the SOT Annual Meeting so you can take in the sights and explore the surroundings at your own pace. To reserve your car on-line,
General Information (Continued)

go to www.avis.com. You may also call Avis directly at (800) 331-1600 to reserve your car. Be sure to mention the SOT Avis Worldwide Discount Number: (AWD) T534999.

Tour Information

For tour information, visit the Tour Desk located in the Registration area, Level 4, South Lobby.

Tour Desk hours:
Saturday, March 15.................................4:00 PM–7:00 PM
Sunday, March 16.................................8:00 AM–4:00 PM
Monday, March 17.................................8:00 AM–4:00 PM
Tuesday, March 18...............................8:00 AM–4:00 PM
Wednesday, March 19.........................8:00 AM–4:00 PM
Thursday, March 20.........................8:00 AM–11:30 AM

Tour desk hours are subject to change.

If you are interested in signing up in advance for tours, please visit the SOT Web site or call Seattle Hospitality at (206) 623-2090. The deadline date to sign up in advance is February 29, 2008, with the exception of the Victoria BC excursion which has a deadline of February 1, 2008. All cancellations must be received by February 8, 2008, in writing, faxed to (206) 623-2540. There will be no cancellations on-site. Tour buses will be departing from Convention Place on Level 1 of the Washington State Convention and Trade Center.

Tour Tickets

Tickets can be picked up on-site at the Tour Desk and will not be mailed in advance.

The Toxicologist/Itinerary Planner
(Print and CD-ROM)

All Annual Meeting registrants receive a copy of this Program and The Toxicologist on CD-ROM, a special issue of Toxicological Sciences that includes all meeting abstracts. Special software on the CD, the Itinerary Planner, allows the meeting attendee to search the meeting abstracts and develop a personalized schedule for the meeting.

1. SOT members in the U.S. and Canada will receive the Program and The Toxicologist on CD-ROM (with Itinerary Planner) prior to the meeting, as will U.S. and Canadian non-members who pre-register by January 25, 2008. A printed version of The Toxicologist will be available on-site in the registration area for a fee of $20. Registrants may reserve a copy by signing up on the Registration form or may purchase a copy on-site, while supplies last.

2. Non-member registrants in the U.S. who register after January 25 will receive the printed Program and The Toxicologist on CD-ROM (with Itinerary Planner) at the registration area on-site.

3. The Annual Meeting Itinerary Planner will be available on the SOT Web site January–March.

4. International members who do not attend the Annual Meeting may contact the Headquarters office to request a copy of the printed 2008 Program and The Toxicologist on CD-ROM. These items will be mailed following the Annual Meeting.

5. The Toxicologist will be available on the SOT Web site after March 1, 2008.

NOTE: Please bring your copy of the Program with you to the Annual Meeting.
Career Resources and Development Services

The Society of Toxicology’s Career Resource and Development (CRAD) Services include an on-line Job Bank, special Job Bank activities at the Annual Meeting, career development seminars and resources, and employer ads in SOT’s newsletter, the Communique, which reach the entire SOT membership and beyond.

SOT’s Job Bank Services

On-Line Job Bank and On-Site Job Bank Center Are Free to SOT Members!

The Society’s on-line SOT Job Bank makes it easy for candidates and employers alike to access this resource year-round, any time, any place via the SOT Web site at www.toxicology.org.

This forum links job candidates with employment positions in toxicology and related biological sciences. The SOT Job Bank allows you to:

- Register as an employer or candidate,
- Post employment positions,
- Search the Job Bank database,
- Contact candidates or employers.

The on-line Job Bank includes more than 100 positions available at corporations, academic institutions, government agencies, and private research organizations. Employers rely on this on-line service to provide them with a robust database of candidates available for career opportunities, ranging from junior- to senior-level positions. There are between 150 and 250 candidate profiles posted on the Job Bank at any time.

The Job Bank helps streamline the process for candidates and employers. Candidates can gain access to a variety of positions suited to their experience, areas of expertise, and desired geographical location. In addition, job seekers can see which sectors are hiring and stay abreast of new and emerging areas. Employers from corporate, university, governmental, and nonprofit organizations can attract potential candidates in a targeted and cost-effective manner through this SOT service. By having access to detailed candidate resumes, employers can determine the right match for a specific position and expedite the recruitment process. SOT Affiliate Members receive a reduced rate in appreciation for supporting the Society in achieving its objectives.

### Job Seeker Registration for SOT On-Line Job Bank

<table>
<thead>
<tr>
<th>Candidate Types</th>
<th>Fees</th>
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<tr>
<td>All SOT Members</td>
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<td>Non-SOT Members</td>
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<td>Non-SOT Members—Postdoctoral</td>
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<td>Non-SOT Members—Student</td>
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### Employer Registration for SOT On-Line Job Bank

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<th>Employer Types</th>
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</thead>
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<tr>
<td>Corporation</td>
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<tr>
<td>University or Governmental</td>
<td>$110</td>
</tr>
<tr>
<td>Nonprofit Organizations</td>
<td>$110</td>
</tr>
</tbody>
</table>
Annual Meeting On-Site Job Bank Center—We’ve Gone Electronic

Located in the Washington State Convention and Trade Center, the on-site Job Bank Center provides Annual Meeting attendees with access to the CRAD Job Bank system as well as assistance in facilitating interviews at the SOT Annual Meeting. All users with current registrations at the time of the Annual Meeting will be permitted to use this service.

For the first time this year, the Job Bank Center is nearly paperless. There will be no posted positions nor envelopes for candidates to deposit resumes. For your convenience, printers will be available for producing paper copies of candidate profiles and position descriptions. If you are a candidate attending the Annual Meeting, you should bring multiple copies of your personal resume for interested interviewers. All candidates and positions will be sought on-line.

Employers recognize and appreciate that the Annual Meeting On-Site Job Bank Center provides a cost-effective and efficient way to interview a distinguished pool of candidates. Therefore, interview rooms are available on a first-come, first-served basis.

To ensure privacy for candidates, the SOT Job Bank Center is located away from the scientific sessions. It is up to the registrants of this service to exercise the confidentiality options that are offered. SOT is not responsible if any information contained in the Job Bank database is released.

Although you are encouraged to pre-register before entering the Job Bank Center, you can register on-site in Room 205. Follow the signage that will lead you to the Job Bank Center Registration Office as well as to Room 206, which has multiple spaces available to hold interviews.

The center is available during the following hours of operation:

- Sunday, March 16: 10:00 AM–4:30 PM
- Monday, March 17: 9:15 AM–4:30 PM
- Tuesday, March 18: 8:30 AM–4:30 PM
- Wednesday, March 19: 8:30 AM–4:30 PM

On-line Job Bank access will be available—as always—through your personal computer and at the Annual Meeting E-mail Center. Access to the on-line Job Bank in the center is limited to short searches for updates or new information. Be advised that all career service activities at the SOT Annual Meeting will be carried out at the SOT Job Bank Center.

For additional information, contact Kristy Rand at SOT Headquarters: (703) 483-3115 ext. 1429 or e-mail: kristy@toxicology.org.

Employer Ads in SOT Communiqué

The Society’s newsletter, the Communiqué, is published four times annually. It includes career opportunity advertisements for employers from corporate, university, governmental, and nonprofit organizations wishing to reach the entire SOT membership and beyond. For more information, contact Marcia Lawson at SOT Headquarters: (703) 438-3115 ext. 1446 or e-mail: marcia@toxicology.org.

SOT’s Career Development Program Track

To help you develop your near-term and long-term career pathway, plan on attending the sessions in this year’s program that will be of special interest to you, including the following:

- The Future of Toxicology—Roundtable Session
- Putting Your Best Foot Forward: Job Interviewing Session for Early-Career Scientists—Informational Session
- NIEHS Outstanding New Environmental Scientists (ONES) Awardees—Informational Session
- Mentoring 101—How to Mentor, How to Be Mentored—Informational Session
- Professional Career Development as a Toxicologist—Informational Session
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www.toxsci.oxfordjournals.org

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FOR A FREE SAMPLE COPY

*ISI Journal Citation Reports 2006 Science Edition, published August 2007
Social Events

Awards Ceremony Music Prelude
Kaley Eaton, Pianist
Sunday, March 16, 4:45 PM–5:15 PM
Convention Center
Ballroom 6A

Kaley Eaton, a versatile musician, is currently pursuing a Bachelor of Arts in Vocal Performance with a minor in French and German at Whitman College. She sings with the Whitman Chorale and Chamber Singers (directed by Dr. Robert Bode), is a frequent solo recitalist, and most recently appeared in Harper Joy Theater’s production of Mozart’s Cosi Fan Tutte. Along with her vocal endeavors, Kaley is also an experienced classical pianist, composer, guitarist, actor, cook, and extreme music theory geek. She would like to thank her father, Dr. David Eaton, and SOT for the wonderful opportunity to share in the gift of music!

Awards Ceremony
Sunday, March 16, 5:15 PM–6:30 PM
Ballroom 6A
Washington State Convention and Trade Center

Join us as SOT honors our prestigious award winners at the SOT Awards Ceremony. Please refer to the Awards and Fellowships section of the SOT Web site for complete details and the nominating form for next year.
(Open to all attendees)

Welcoming Reception
Sunday, March 16, 6:30 PM–7:30 PM
Exhibit Hall 4F
Washington State Convention and Trade Center

Continue the celebration by attending the Welcoming Reception following the Awards Ceremony. The Welcoming Reception is a great opportunity to renew old friendships and to make new acquaintances. Please join the Society in this kick-off of the Annual Meeting.

25-Year (or More) Member Reception
Sunday, March 16, 7:00 PM–8:00 PM
Room 601
Washington State Convention and Trade Center

Have you been a member of the Society of Toxicology for 25 years (or more)? If so, please join your colleagues in celebration and recognition of the scientists who established the Society.

Student/Postdoctoral Fellow Mixer
Sunday, March 16, 7:30 PM–8:30 PM
Grand Ballroom C
Sheraton Seattle Hotel

All students and postdoctoral fellows are invited to attend this reception. Refreshments will be provided by SOT and sponsors. A cash bar will also be available. Ticket and Meeting Badge are required.

Postdoctoral Assembly Luncheon
Tuesday, March 18, 12:00 NOON–1:15 PM
Room 3A
Washington State Convention and Trade Center

Amidst scrambling to attend all of the symposia, poster sessions, and social events at the meeting, this will be time for postdocs to kick back and relax! All postdoctoral fellows are invited to a casual, fun-filled luncheon organized by the Postdoctoral Assembly (PDA). We will announce the recipients of the Best Postdoctoral Publication Awards and acknowledge the postdocs who received awards this year from Specialty Sections and Regional Chapters. The PDA Board members will present a short overview of accomplishments and future directions for the PDA and will introduce the newly elected board members for 2008–2009. This is a great opportunity for you to meet and congratulate your postdoctoral colleagues and check out opportunities to volunteer and assume leadership roles within SOT. There will be a drawing for prizes. Postdocs can reserve a ticket when registering for the Annual Meeting.

Regional Chapter Receptions
Monday, March 17 through Wednesday, March 19, Various Times

(Refer to the Annual Meeting Daily Pocket Calendar for more details.)

Many of the SOT Regional Chapters meet during the SOT Annual Meeting. A list of Regional Chapter receptions is listed in the Daily Pocket Calendar beginning on page 3.
Social Events (Continued)

Special Interest Group Receptions
Monday, March 17 through Wednesday, March 19, Various Times

(Refer to the Annual Meeting Daily Pocket Calendar for more details.)

Each of the 6 Special Interest Groups will hold a meeting/reception during the SOT 2008 Annual Meeting at the Sheraton or Hyatt Hotels or at a local venue. All current and prospective SOT Special Interest Group members are encouraged to attend. The Daily Pocket Calendar beginning on page 3 has a listing of locations and function times.

Specialty Section Receptions
Monday, March 17 through Wednesday, March 19, Various Times

(Refer to the Annual Meeting Daily Pocket Calendar for more details.)

Each of the 21 SOT Specialty Sections will hold either a luncheon or early evening meeting/reception during the SOT 2008 Annual Meeting. All current and prospective SOT Specialty Section members are encouraged to attend. Please check the Daily Pocket Calendar beginning on page 3 for a listing of meeting and reception times.
Achievement Award

Ivan Rusyn, M.D., Ph.D., is recognized by the Society of Toxicology for his outstanding research in elucidating the mechanisms of adverse health effects of environmental agents. His M.D. was earned at Ukrainian State Medical University, and the University of North Carolina conferred the Ph.D. He has been a major contributor to the Toxicogenomics Consortium where his research led to a better understanding of the molecular basis of the hepatotoxicity of acetaminophen. Dr. Rusyn’s early work with Dr. Thurman stands as a classic in teasing out the pathway of toxicity of non-genotoxic rodent liver carcinogens related to oxidative stress. His recent work has focused on systems biology, toxicogenetics and the use of computational approaches to elucidate and predict toxicity of xenobiotics. Dr. Rusyn is the exemplar of the spirit of the Achievement Award. He is an outstanding mentor, facilitator, and educator, as well as the director of several toxicology courses and the toxicology seminar series at UNC-Chapel Hill. He is an active member of the SOT, serving on the Program Committee. In addition, Dr. Rusyn has been the recipient of the Leon and Bertha Golberg Memorial Postdoctoral Fellowship at UNC, an NIEHS TIP Award and is a Principal Investigator or Co-Principal Investigator on multiple grants funded by NIH and the U.S. EPA. It is an honor to recognize Dr. Ivan Rusyn as the Society of Toxicology’s 2008 Achievement Award recipient.

Arnold J. Lehman Award

Vicki Dellarco, Ph.D., has provided strong leadership within the U.S. EPA and the international community for risk assessments that utilize the best scientific information available. Dr. Dellarco, a senior science advisor in the Office of Pesticide Programs, has worked effectively to develop methods for mode of action analyses in risk assessment and to implement those methods through case studies and Agency assessments for specific chemicals. She has promoted revisions of toxicity testing guidelines including the thyroid developmental toxicity study guidance, development of toxicity testing strategies for improving and refining approaches to health risk assessment, development of common mechanism policy decisions and cumulative risk assessment methods and guidance. Her energy, enthusiasm, and collaborative skills have greatly enriched the work of Agency and international scientific and risk assessment groups.
**SOT 2008 Award Winners** *(Continued)*

**Best Postdoctoral Publication Award**

The Postdoctoral Assembly recognizes these three recipients of their 2008 awards:

**Joshua P. Gray**, *University of Medicine and Dentistry of New Jersey*


**Christie M. Sayes**, *DuPont Haskell Laboratory for Health and Environment*


**Khristy J. Thompson**, *Elizabethtown College*


**Board of Publications Award for the Best Paper in Toxicological Sciences**

The Board of Publications has unanimously selected the paper entitled “Sequential Exposure to Cytokines Reflecting Embryogenesis: The key for *In Vitro* Differentiation of Adult Bone Marrow Stem Cells into Functional Hepatocyte-like Cells” as the best paper published in *Toxicological Sciences* in the past year (December 2006; 94:330-341). The authors of the paper, comprising an international research team, are Sarah Snykers, Tamara Vanhaecke, Peggy Papelue, Aernout Luttun, Yuehua Jiang, Yvan Vander Heyden, Catherine Verfaillie, and Vera Rogiers.

The plasticity of stem cells renders them capable of overcoming germ lineage restrictions to develop molecular characteristics of cells from a different tissue. It has previously been shown that adult bone marrow stem cells (BMSC) can differentiate into hepatocyte-like cells when exposed to a cocktail of cytokines and growth factors. However, in the recognized paper, Snykers and colleagues applied basic knowledge of liver embryogenesis and development to design an experimental paradigm in which BMSC were treated sequentially with liver-specific factors that regulate hepatocyte differentiation in a manner that reflected their temporal expression during *in vivo* hepatogenesis. They evaluated the morphological, molecular and functional characteristics of the resulting hepatocyte-like cells and compared these features to BMSCs treated simultaneously to the cocktail of differentiation factors. Their innovative approach produced polygonal cells that presented with many features of differentiated hepatocytes which included binucleated morphology, expression of α-fetoprotein early in the course of the culture that then disappeared, expression of maximal levels of albumin and cytokeratin 18, markers of later stage differentiated hepatocytes, only after 18 days in culture, and evidence for constitutive and inducible cytochrome P450 1A1/2 and 2B1/2. These features comprise a profile that is consistent with the array of developmental stages that is comparable with liver development, whereas the simultaneous exposure paradigm induced an aberrant pattern of differentiation.

The use of stem cells in clinical and preclinical research is an important, timely and controversial topic. As such, the work by Snykers *et al.* is a major scientific achievement relative to the development of a method that yields...
hepatocyte-like cells from BMSC and represents a significant contribution to the field of stem cell research. The model provides important new methods for the purification and culture of pluripotent stem cells from nonembryonic origin. Furthermore, the work offers new opportunities to study fundamental biological processes involved in development and differentiation, and it yields an unlimited source of hepatocyte-like cells for pharmacology and toxicology research.

**SOT 2008 Award Winners (Continued)**

**Distinguished Toxicology Scholar Award**

Toshio Narahashi, D.V.M., Ph.D., is the John Evans Professor of Pharmacology in the Department of Molecular Pharmacology and Biological Chemistry, Feinberg School of Medicine, Northwestern University. Since the 1950s his discoveries have elucidated the mode-of-action of important toxicants that impact human lives across the globe. Dr. Narahashi has been considered as the person responsible for driving the field of the effects of chemicals on excitable cell membrane function. Some of his publications are listed as Citation Classics. His studies have added immeasurably to our understanding of basic neuronal physiology and the action of a variety of neurotoxicants and drugs on axonal and junctional physiology. He is respected around the world and has received numerous scientific honors.

**Education Award**

Steven D. Cohen, M.S., D.Sc., ATS, has contributed to the field of toxicology in education by developing new scientists and leaders in toxicology, providing professional leadership, and fostering the scientific growth of toxicology. He has received international recognition for his scientific contributions to understanding the mechanisms of acetaminophen-induced hepatotoxicity.

Dr. Cohen joined the University of Connecticut Storrs in 1972. In the early 1980s he founded the Center for Biochemical Toxicology and the Interdepartmental Graduate and Postdoctoral Research Training Program in Environmental Toxicology at the University of Connecticut at Storrs. He directed both for nearly 20 years until leaving the University in 2000 as Emeritus Professor of Toxicology. The Center was supported by the State of Connecticut as a “Center for Excellence” and became a statewide resource for toxicology expertise and training. The Toxicology Program was supported by funds from the University, the State, the chemical and pharmaceutical industry and importantly, by an Environmental Toxicology Research Training Grant from the National Institute of Environmental Health Sciences. Over 50 alumni of the Connecticut program are making important contributions to toxicology through their professional positions in academia, industry and government. His career contributions in toxicology education were recognized with the establishment in 2004 of an endowed graduate fellowship at the University of Connecticut (Rosenberg/Cohen Graduate Fellowship in Pharmacology and Toxicology) in his honor. In 2007 the School of Pharmacy Alumni Association further honored him with the Distinguished Emeritus Professor Award.

In 2000 Dr. Cohen joined the Leadership Team for establishment of the Massachusetts College of Pharmacy and Health Sciences School of Pharmacy –Worcester where he is Professor of Pharmacology and Toxicology and Chair of the Department of Pharmaceutical Sciences. For his dynamic leadership in toxicology education, his guidance of toxicology programs for over 30 years, and his outstanding example as a scientist-educator, the Society of Toxicology honors Dr. Steven D. Cohen with the 2008 Education Award.
Founders Award

John Doull, M.D., Ph.D., ATS, is the recipient of the first Founders Award for his illustrious career in toxicology with more than 50 years of productive contributions to teaching, research, and the application of toxicological principles to safety evaluation in the support and enhancement of public health. Dr. Doull is trained and experienced both as a physician and as a scientist. He obtained his Ph.D. in pharmacology and his M.D. from the University of Chicago, spent several years at the University of Kansas where he is currently Professor Emeritus of Pharmacology and Toxicology. Dr. Doull has had the experience of diagnosing and treating individuals who have been poisoned and has counseled many individuals who were concerned that they may have been poisoned. He has had far-reaching influence on the development and application of the safety evaluation of chemicals through his extensive research (with particular emphasis on modes of action) as evidenced by his numerous high quality publications. Particularly noteworthy has been his leadership in promulgating a most authoritative source of toxicology principles presented in the serial publication of Casarett and Doull’s Toxicology: The Basic Science of Poisons. Furthermore, he has advanced the safety evaluation of chemicals through his formal participation in numerous national and international authoritative groups including the National Academy of Sciences, the International Life Sciences Institute, and the National Institute of Environmental Health Sciences. Dr. Doull has served on numerous governmental and non-governmental committees, and has been a leader in promoting use of the best science to understand problems and how to deal with them. In the face of emotionally-charged issues, Dr. Doull has been a source of reason in objectively approaching the issues and using common sense in decision-making, typically resulting in a report that is highly regarded and respected. His contributions to the use of sound science in safety evaluations have led to major improvements in governmental and non-governmental initiatives aimed at protecting and enhancing public health.

One of Dr. Doull’s outstanding contributions in toxicology is the training and guidance that he has provided to many productive scientists. At the University of Chicago and the University of Kansas, Dr. Doull helped train many young and aspiring toxicologists in the sound, fundamental principles of toxicology and the application of these principles to real-world toxicological problems in both medicine and the environment. In addition, Dr. Doull has served as a role model, mentor, colleague, and friend to many scientists in the field of toxicology. Those fortunate to have learned from his scientific creativity and insights have greatly expanded the field, and have helped to provide toxicology with a high degree of respect and recognition.

Dr. Doull displayed great foresight in 1961 when he joined the group that founded the fledgling Society of Toxicology. Since that time, he has fostered the aims of the Society by engaging in major leadership roles including serving ably as its President. He has been a major force in molding the future of the Society and in having it recognized worldwide as the central organization in the field of toxicology and in the enhancement of public health. The Society of Toxicology is pleased to recognize Dr. John Doull as the recipient of the first Founders Award for his leadership and integrity as a premier scientist and physician.
SOT 2008 Award Winners (Continued)

Merit Award

Hanspeter Witschi, M.D., is Professor Emeritus, University of California – Davis. Dr. Witschi was an enthusiastic proponent of the value of mechanistic toxicology in contributing to risk assessment. He represented the thinking man’s pathologist. As an experimentalist, Dr. Witschi put much thought into the design of a study and what the outcomes could be. Consequently, his studies were precise, economical, and always produced results. His studies were a stimulus to himself and others to reveal a greater understanding of the phenomenon under investigation. He published seminal articles in pulmonary toxicology, adaptation to toxicant exposure, second-hand smoke, and lung carcinogenesis. He made an enormous contribution to teaching and education, and was the recipient of the SOT Education Award in 1991. His service to toxicology has been exceptional as he served on many local, regional, and national offices. He is considered a complete scientist—always interested in discussing the dilemmas of toxicology and never tempted to arrive at the quick and easy conclusion.

AstraZeneca Traveling Lectureship Award

José Manautou, Ph.D., Associate Professor of Toxicology at the University of Connecticut, receives the 2008 AstraZeneca Traveling Lectureship Award. The award recognizes excellence in research and service in toxicology and enables a lecture tour of Europe to promote collaboration between European and North American toxicologists. Dr. Manautou’s research in the fields of hepatotoxicity and drug transporters has gained international recognition for excellence. In addition to an impressive publication record, he has been Associate Editor of Toxicology and Applied Pharmacology and a member of an NIH study section. Dr. Manautou has been a contributor to SOT programs since 1998, serving as a member of several committees, as principal investigator of the SOT’s NIH grant that supports its undergraduate educational program and as SOT Councilor. Dr. Manautou’s planned visits to Switzerland, Portugal, France, Hungary, and England will expand his collaborative network and bring new perspectives to his research efforts.

SOT/AstraZeneca IUTOX Fellowship

Sayed Bakry (Egypt)
Phillip Burcham (Australia)
Kemal Buyukguzel (Turkey)
Jin-Ho Chung (Korea)
Hande Gurer-Orhan (Turkey)
Lyndy McGaw (South Africa)
Gafer Rageh Ahmed (Egypt)
Zdravko Paskalev (Bulgaria)
2008 Award Winners (Continued)

Colgate-Palmolive Awards for Student Research Training in Alternative Methods

Kimberly A. Hays, Oklahoma State University
Project Title: AFLP-Based Assessment of Small Mammal Populations from a Metal Contaminated Superfund Site
Host Institution: Tarleton State University

Haitian Lu, Michigan State University
Project Title: Gene Microarray Analysis of the 2, 3, 7, 8-Tetrachlorodibenzo-p-Dioxin (TCDD) Effects on Ex Vivo Activated Human Peripheral Blood B Lymphocytes
Host Institution: The Hamner Institutes for Health Sciences

Colgate-Palmolive Grants for Alternative Research

Daniel Cerven, MB Research Laboratories
Project Title: Pre-Validation of the Porcine Corneal Opacity and Reversibility Assay (PorCORA)

Duncan Ferguson, University of Illinois at Urbana-Champaign
Project Title: Human Neural Stem Cell Line in Defined Medium as a Screen for Neurodevelopmental Toxins

Shashi Ramaiah, Texas A&M University
Project Title: Evaluation of Osteopontin as a Potential In Vitro Biomarker for Chemically-Mediated Hepatic Inflammation

Colgate-Palmolive Traveling Lectureship in Alternative Methods in Toxicology Award

George Michalopoulos, M.D., Ph.D., is the Professor and Head of the Department of Pathology, University of Pittsburgh School of Medicine. Dr. Michalopoulos is an eminent researcher and an authority on hepatocyte culture techniques and their use in research. His current areas of research focus are growth factors and receptors in hepatocytes, mechanisms of liver regeneration, growth regulation in human hepatocytes, and hepatic carcinogenesis. He will be hosted by the Toxicology program at University of Louisiana—Monroe College of Pharmacy where he will demonstrate the newest hepatocyte culture techniques, present liver toxicity and in vitro techniques lectures, and participate in hepatobiology and carcinogenesis discussion forums.
2008 Award Winners (Continued)

**Pfizer Undergraduate Student Travel Award**

Amy DeMicco  
*Rutgers University*

Tharu Fernando  
*Wright State University*

Yamel Perdomo  
*Medgar Evers College*

Amy Yi Hsan Saik  
*University of Western Australia*

Kelly Sullivan  
*Colorado State University*

**2007 Fellowship Recipients**

These scientists were selected for Fellowships at the 2007 SOT Annual Meeting. Visit their presentations at this Meeting to see the outstanding work from their 2006–2007 Fellowship year.

**2007 Novartis Graduate Fellowship**

Atrayee Banerjee, *Texas A&M University, College Station, TX*

Abstract Number: 846  
Poster Board Number: 422

Abstract Title: Osteopontin Mediated b1 and b2 Integrin Signaling: A Mechanism for Higher Hepatic Neutrophil Infiltration and Liver Injury in Female Alcoholic Liver Disease

**2007 Colgate-Palmolive Postdoctoral Fellowship Award in In Vitro Toxicology**

Aaron Rowland, *University of Utah, Salt Lake City, UT*

Abstract Number: 784  
Poster Board Number: 240

Abstract Title: Mechanisms Regulating Lung-Selective Basal and Induced Cytochrome P450 2S1 Expression.

Nominations for 2009 awards are due October 9, 2008. Visit the SOT Web site for award details at...

www.toxicology.org
Lee Hartwell has made important contributions to our understanding of cell division and cancer through his study of genes that control cell division in yeast. For this work Hartwell has received many scientific awards, including the 2001 Nobel Prize in Physiology or Medicine. Other honors include the Albert Lasker Basic Medical Research Award, the Gairdner Foundation International Award and the Alfred P. Sloan Award in cancer research.

Many of the genes that control yeast division also control cell division in humans and often are the site of alteration in cancer. Hartwell discovered a new class of gene responsible for accurate cellular reproduction: the “checkpoint” gene. These genes halt cell division when mistakes are made during cellular reproduction so that repair can take place. His insights into cell-cycle control are being used to develop treatments for cancer and other diseases. In collaboration with Steve Friend, Hartwell explored the potential to identify cancer therapeutics using a panel of yeast mutants defective in DNA repair. He and Lee Hood have founded a company to use transcript profiles and yeast mutants to identify new therapeutic targets.

As part of his efforts to use the enormous knowledge that has accumulated over the last 50 years in genetics and biochemistry to benefit cancer patients, he strives to improve molecular diagnostics to identify individuals at high risk for disease, detect cancer and other diseases at an early stage when they can be cured, provide prognostic information, and monitor therapeutic response. Proteins will likely provide the best diagnostic information because of their greater diversity and because their state reflects biological function. The technology for protein diagnostics, however, is in its infancy. He is involved in national and international projects to increase the number of laboratories working in protein diagnostics, develop more team science, improve the availability of informatics for data sharing, provide standardized reagents, and stimulate new technology development. He and Michael Birt organized the first international Pacific Health Summit held in June 2005.

Hartwell earned a Ph.D. from the Massachusetts Institute of Technology under the mentorship of Boris Magasanik. He engaged in postdoctoral work at the Salk Institute for Biological Studies with Renato Dulbecco. He then joined the University of Washington faculty and has been a genetics professor there since 1973. In 1996 he joined the faculty of Seattle’s Fred Hutchinson Cancer Research Center and in 1997 became its president and director. He is a member of the National Academy of Sciences.

Pioneering studies by H. Robert Horvitz have made him one of the central figures in research on programmed cell death (apoptosis). He discovered key genes that control cell death in C. elegans. For this work and for his studies concerning organ development in C. elegans, Horvitz won the 2002 Nobel Prize in Physiology or Medicine, an award he shared with Sydney Brenner and John Sulston.

Horvitz’s work with C. elegans began during a postdoctoral fellowship in Brenner’s laboratory in Britain in the 1970s. There, Horvitz teamed with Sulston to trace the ultimate fate of each cell as it developed from an embryo into an adult. Their work revealed that cell division in the worm produces many more cells than survive to make up the mature animal.

In the mid-1980s at the Massachusetts Institute of Technology, Horvitz identified the first “cell death” genes, called ced-3 and ced-4. “Discovering that programmed cell death is specified by particular genes established that programmed cell death is a basic biological process, much like cell division, cell migration, and cell differentiation,” Horvitz explained. Later, Horvitz showed the gene ced-9 protects against cell death by regulating both ced-3 and ced-4.

Horvitz’s graduate studies at Harvard were under the guidance of James Watson and Walter Gilbert (who developed a method to determine the exact sequence of the nucleotides in DNA). Both men are also Nobel laureates.

“As a graduate student, I came away with two beliefs that have driven my research career,” Horvitz said. “First, do the ‘doable.’ I recognize early on that working on an important but intractable problem would not suit me. Second, it is no harder to work on an important problem than one that is not important; this bit of advice, from Jim Watson, was engraved in me.”

Horvitz has also identified many additional apoptosis genes. His studies may improve the understanding of neurological disorders such as amyotrophic lateral sclerosis (ALS), a disease that killed Horvitz’s father. Horvitz collaborated in identifying a gene involved in the inherited form of ALS, and he is pursuing other genes involved in the disease.

He has also worked to understand how genes control other aspects of development and behavior and has discovered genes that are involved, again using C. elegans. His work reveals specific pathways shared by both worms and humans that are involved in a variety of human diseases.

Dr. Horvitz is a David H. Koch Professor of Biology at the Massachusetts Institute of Technology and Neurobiologist and Geneticist at Massachusetts General Hospital, in Boston.
Continuing Education

CONTINUING EDUCATION COURSES

The Continuing Education Program offers a wide range of courses that cover state-of-the-art knowledge in toxicology, as well as new developments in toxicology and related disciplines. Courses can be applied toward certifying and licensing board requirements and may also be used for recertification with the American Board of Toxicology (ABT). Both basic and advanced course topics are offered. The basic course is intended to provide a broad overview of an area or to assist individuals in learning new techniques or approaches. The advanced course is intended to be of interest to individuals with previous knowledge of the subject or already working in the field.

All courses will be held on Sunday, March 16, 2008, at the Washington State Convention and Trade Center. Please check the signage in the registration area and at the CE Booth for room assignments. Note: Your course materials will be available in the room immediately prior to the course (they will not be available at the registration area). If you have your course ticket, go directly to the assigned course room. If you have not received your course ticket or have not registered, please go to the registration area on Saturday afternoon/evening or on Sunday morning. If you have misplaced your ticket, please go to one of the Continuing Education Booths, Level 6, at the Convention Center on Sunday. The booth will be open from 6:30 AM–5:15 PM.

*Indicates the Primary Special Interest Group (SIG), Specialty Section (SS), or Regional Chapter (RC) endorser.

7:00 AM–7:45 AM Sunrise (SR) Continuing Education Course:

1. Mini-Pigs as an Alternative Non-Rodent Species in Toxicology and Safety Studies

8:15 AM–12:00 NOON Morning (AM) Continuing Education Courses:

2. Introduction to Pathology for Toxicologists and Study Directors
3. Stem Cells and their Multi-Potential Uses and Potential Dangers
4. Dose-Response Modeling for Occupational and Environmental Risk Assessment
5. The Use of Transgenic Animal Technology in Toxicological Research
6. Process-Based Approaches to Modulating Gene and Protein Expression In Vivo and In Vitro
7. Basic Embryology and Developmental Toxicology

1:15 PM–5:00 PM Afternoon (PM) Continuing Education Courses:

8. Introduction to Pathology for Toxicologists and Study Directors
10. Clinical Dose Setting for Biotherapeutics
11. Use of Data for Development of Uncertainty Factors in Non-Cancer Risk Assessment
12. Essential Informatics for Toxicologists: Knowledge Management End-to-End
13. Epidemiology for Toxicologists: Introduction

Sunday, March 16
7:00 AM–7:45 AM
Level 6 (See signage at CE Booth for room locations)

MINI-PIGS AS AN ALTERNATIVE NON-RODENT SPECIES IN TOXICOLOGY AND SAFETY STUDIES

SR01  BASIC

Chairperson(s): Glenn Washer, LAB Research Inc., Montreal, Quebec, Canada and Andrew Makin, LAB Research Denmark (Scantox), Copenhagen, Denmark

Endorsed by:
- Animals in Research Committee*
- Comparative and Veterinary Specialty Section
- Dermal Toxicology Specialty Section

This course will focus on the regulatory acceptability and utility of mini-pigs as an alternative to traditional non-rodent species for non-clinical studies of pharmaceuticals. Attention will be given to their use in general toxicology and safety studies, including non-routine routes and embryofetal development studies.

The choice of non-rodent species for safety assessment of new pharmaceuticals is becoming increasingly important. For many years researchers have adopted the paradigm that we use the dog, and if the dog is no good, then we use the primate. With the ever increasing ethical concerns relating to the use of primates, and other groups concerned with the use of “man’s best friend”, attention has been increasingly focussed on the potential of the pig and mini-pig. An increasing appreciation of the similarities between man and the pig in structure, gastrointestinal tract, urogenital system, and metabolism is the principal reason for the increased popularity. There are 13 species of pig, however, biomedical research has been largely restricted to the domestic pig derived from the Eurasian wild boar (Sus scrofa) and the warthog (Phacochoerus africanus). Smaller strains (“mini-pigs”) have increasingly come to prominence in non-clinical testing and are now widely employed as non-rodent alternatives for regulatory-driven safety programs. For pharmaceutical compounds whose route is dermal in man, there is a growing realization that the mini-pig is a valid model. Pig skin has been shown to be anatomically, physiologically, biochemically, and immunologically similar to human skin. Although the use of the mini-pig in the development of dermal products is well accepted by regulators, its suitability for a wide range of other study types has been somewhat overlooked although in many ways it is more representative of man than other species. The mini-pig is now recognized as a suitable non-rodent species for efficacy and safety studies of many types of pharmaceutical products. Mini-pigs are suitable experimental models using many of the commonly applied techniques used in other species, and they have also been used as alternative non-rodent species for embryofetal studies.

- Introduction, Glenn Washer, LAB Research Inc., Montreal, Canada
- Practical Considerations of the Use of Mini-Pigs in Toxicology and Safety Studies, Andrew Makin, LAB Research Denmark (Scantox), Copenhagen, Denmark
- The Mini-Pig in Non-Clinical Toxicology—a Regulatory Perspective, Abigail Jacobs, U.S. FDA, Silver Spring, MD
Continuing Education (Continued)

Sunday, March 16
8:15 AM–12:00 NOON
Level 6 (See signage at CE Booth for room locations)

INTRODUCTION TO PATHOLOGY FOR TOXICOLOGISTS AND STUDY DIRECTORS

AM02  BASIC
Chairperson(s): Laurene M. Fomby, Battelle, Columbus, OH and Pat Haley, Incyte Corp, Wilmington, DE

Endorsed by:
Comparative and Veterinary Specialty Section*
Toxicologic and Exploratory Pathology Specialty Section

Today, even with the promise of ‘omic’ technologies, pathology plays a critical role in the evaluation of chemicals and drugs. Toxicological pathology uses specialized terms and methods and can generate complex interpretative problems. Effective communication between the toxicologist and the study pathologists will allow the toxicologist to better integrate pathology data into their reports and optimize the scientific content of the study. In this basic course, experienced toxicological pathologists will introduce important concepts in pathology to toxicologists as study directors in order to help the study director appreciate the role of pathology in toxicological studies. The course will begin with a discussion of basic concepts and the role of the toxicological pathologist followed by a discussion of global regulations as they relate to pathology endpoints. Later lectures will discuss the lesions and interpretation of pathology data in non-oncogenicity studies and oncogenicity studies. By the end of the session, the study director should have a better understanding of pathology and a basic background that will allow for effective communication with a study pathologist.

• Introduction, Pat Haley, Incyte Corp, Wilmington, DE
• Basic Concepts in Morphologic Pathology and the Roles of the Toxicological Pathologist, Sarah Hale, EPL, Raleigh, NC
• Important Induced Lesions, and Interpretation of Pathology Data in Non-Oncogenicity Studies, Paul Howroyd, MDS Pharma, Lyon, France
• Pathology Endpoints in Routine Repeated Dose Toxicology Studies: A Review of Global Regulations, Ken Schafer, Vet Path Services, Mason, OH
• An Introduction to Pathology in Carcinogenicity Studies, Dianne Creasy, Huntington Life Sciences, East Millstone, NJ

Sunday, March 16
8:15 AM–12:00 NOON
Level 6 (See signage at CE Booth for room locations)

STEM CELLS AND THEIR MULTI-POTENTIAL USES AND POTENTIAL DANGERS

AM03  BASIC
Chairperson(s): David Lawrence, Wadsworth Center, Albany, NY and Marc J. Pallardy, University of Paris, Chatenay Malabry, France

Endorsed by:
Immunotoxicology Specialty Section*
Mechanisms Specialty Section
Metals Specialty Section
Neurotoxicology Specialty Section

Stem cells can theoretically divide without limit to replenish cells and each daughter cell has the potential to remain a stem cell or develop into a fully functional differentiated cell. Therefore, stem cells have the potential to develop into many cell types that could benefit the health status of many individuals but the types of cells that could differentiate from stem cells must be considered in that certain growth and differentiation factors could give rise to conditions that could be harmful including development of a cancer stem cell. Additionally, environmental factors can skew the developmental patterns of stem cells leading to harmful deficiencies or expansions of certain types of progenitors. This course is designed as a basic level course to provide an overview of the field of stem cell biology, touch upon the differences of adult versus embryonic stem cells and provide a foundation for understanding the implications of the use of stem cells in toxicological research. Presentations will cover in vitro and in vivo proliferation and differentiation of stem cells and the influences of toxicants on these processes. Quantification of normal and aberrant immunophenotypic changes with development, mechanisms that influence proliferation, differentiation, and functional changes, and in vivo control of progenitors in their developmental niche will be discussed. The effect of environmental toxicants on a single molecular pathway controlling cell signaling and development of the CNS will be presented. Finally, the challenges in pharmacologically regulated cell therapy including the ability to regulate the fate of engineered cells will be deliberated.

• Analysis and Use of CD34+ Stem Cells from Human Cord Blood, David Lawrence, Wadsworth Center, Albany, NY
• Human Dendritic Cells Derived from Hematopoietic Progenitors for Detecting Sensitizing Molecules, Marc J. Pallardy, University of Paris, Chatenay Malabry, France
• Pharmacologically Regulated Cell Therapy, Anthony C. Blau, University of Washington, Seattle, WA
• The Critical Interaction between Hematopoietic Progenitor Cells (HPC) and the Bone Marrow Microenvironment in Normal Hematopoiesis and Hematopoietic Toxicology, David W. Pyatt, Summit Toxicology, LLP, Colorado and University of Colorado Health Sciences Center, Schools of Pharmacy and Medicine
• Redox Modulation of Neural Progenitor Cell Function by Environmental Toxicants, Mark Noble, University of Rochester, Rochester, NY

Sunday, March 16
8:15 AM–12:00 NOON
Level 6 (See signage at CE Booth for room locations)

DOSE-RESPONSE MODELING FOR OCCUPATIONAL AND ENVIRONMENTAL RISK ASSESSMENT

AM04  ADVANCED
Chairperson(s): David G. Dolan, Amgen Inc., Thousand Oaks, CA and Andrew Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH

Endorsed by:
Occupational and Public Health Specialty Section*
Risk Assessment Specialty Section

The development noncancer exposure guidance values—whether for environmental or occupational sources of exposure—is rooted in the ‘critical adverse effect’ concept. Thus, derivation of such guidance values requires understanding the methods and approaches for estimating thresholds for the onset of adverse effects. This course will describe the history of the development of methods to develop ‘safe’ exposure limits using adverse effect level estimation. The lecture will focus on current methods and issues for using dose-response modeling for developing potency and point of departure estimates for limit-setting. Each lecture will include presentations followed by hands-on application of key elements from the lectures as applied to model toxicological datasets. The participants are expected to obtain sufficient knowledge to estimate critical effect levels for risk

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assessments using a variety of modeling techniques and addressing key considerations of current interest.

- **Introduction to Identifying Critical Effects for Quantitative Risk Assessment**, Andrew Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH

Sunday, March 16
8:15 AM–12:00 NOON
Level 6 (See signage at CE Booth for room locations)

THE USE OF TRANSGENIC ANIMAL TECHNOLOGY IN TOXICOLOGICAL RESEARCH

**AM05**

**Chairperson(s):** Daniel K. Ness, Elan Pharmaceuticals, Inc., South San Francisco, CA and Roy Forster, CIT, Evreux, France

**Endorsed by:**
- Comparative and Veterinary Specialty Section*
- Drug Discovery Toxicology Specialty Section
- Mechanisms Specialty Section

The ability to direct genetic changes at the molecular level in vivo has resulted in a revolution in biology. Nowhere has this been more apparent than in the production of transgenic animals. A host of techniques has been used to effect change in gene expression and develop new toxicological testing paradigms. Genetically modified animals are commonly produced and often yield important information relevant to safety/toxicological assessment. This session will help guide the toxicologist in the use and interpretation of data derived from transgenic models. The first speaker will introduce this topic and set the stage for subsequent speakers. The second speaker will review the history of genetic engineering technologies leading to the development of loss-of-function, gain-of-function modeling technologies across mammalian platforms. Transgenic animals have provided us with powerful tools to explore cellular and physiological processes in vivo. Current technologies allow us to modify cell-, tissue- or organ-specific gene expression in controlled temporal and spatial fashion. Accordingly, experimental considerations including strain-specific variability impacting experimental outcomes will be explored. The third speaker will cover current practice and previous experience gained in the regulatory use of transgenic animals in testing new products. In the area of safety evaluation, transgenic models have been used in the testing of biotechnology products (homologous models), in carcinogenicity testing, and in early toxicology screening. The presentation will cover the use of transgenics from the point of view of theory, the concrete practical aspects of putting such studies in place and new developments in this area. From gene-targeting, gene-trapping, and conditional expression modeling, gene knockout technology in mice is employed as an integrated platform to study physiological and behavioral functions and pharmaceutical utility of targeted genes. The fourth speaker will present recent data comparing pharmacological inhibition of selected targets, with a focus on differentiating between mechanism and nonmechanism-based toxicity and in determining on-target versus off-target toxicity for drug candidates. The final speaker will discuss how the lack of practical methods for the study of mutagenesis using endogenous genes stimulated the development of alternative mutation assays. These mutation analytical systems, developed first in rodents, and subsequently in fish share a similar general approach. Transgenic mutation models provide opportunities for comparative studies of complex processes of mutagenesis simply not possible otherwise. The introduction of a mutation model based on a transgenic fish, here the transgenic medaka, builds upon the knowledge and experience gained from the rodent models, and expands opportunities for increasing the understanding of fundamental mechanisms of mutagenesis.

- **Introduction**, Daniel K. Ness, Elan Pharmaceuticals, Inc., South San Francisco, CA
- **Overview of Transgenic Animal Technology**, Carl A. Pinkert, Auburn University, Auburn, AL
- **Current Use of Transgenics in Screening and Regulatory Toxicology**, Roy Forster, CIT, Evreux, France
- **Using Mouse Knockouts to Predict Mechanism-Based Toxicity**, Brian P. Zambrowicz, Lexicon Pharmaceuticals, The Woodlands, TX
- **From Transgenic Rodent to Fish Modeling: Enhancing Insights into Shared Mechanisms of Mutagenesis**, Richard N. Winn, University of Georgia, Athens, GA

Sunday, March 16
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Level 6 (See signage at CE Booth for room locations)

**AM06**

**Chairperson(s):** Richard S. Pollenz, University of South Florida, Tampa, FL and Robert Tanguay, Oregon State University, Corvallis, OR

**Endorsed by:**
- Mechanisms Specialty Section
- Molecular Biology Specialty Section*

The mechanistic analysis of cellular responses to xenobiotics requires the ability to modulate important genes involved in specific pathways. Such genes include those that encode receptors that associate with xenobiotics as well as the enzymes involved in xenobiotic metabolism. The ability to modulate these genes and proteins in vitro and in vivo has become accessible to more laboratories with the refinement of techniques such RNA interference (RNAi), viral gene delivery, morpholino-mediated gene knock down and targeted gene disruption. However, the ability to utilize these techniques and generate reproducible results requires a detailed understanding of the advantages and applications of each procedure. Thus, the goal of this course is to provide the investigator with an overview of experimental design and the use of proper controls for four cutting-edge techniques. The first talk will focus on experimental design and analysis of RNAi to reduce endogenous target proteins in culture cells with emphasis on controls and endpoint analysis. The second presentation will move to the zebrafish model system and discuss the use of morpholino-mediated gene knock down to reduce the expression of specific proteins in embryos. The third presentation will discuss gene delivery utilizing the adenovirus system for reduction of gene expression in mice. The fourth presentation will detail the use of transgenic approaches in mouse models to modulate the expression of specific target genes or knock-in genes from other species. This course should be of broad interest to laboratories considering a mechanistic approach to understanding signal transduction pathways, gene expression and protein-protein interactions as well as those currently investigating these endpoints.

- **Use of siRNA Technology to Modulate Gene Expression in Culture Cells**, Richard S. Pollenz, University of South Florida, Tampa, FL
- **Use of Morpholinos to Modulate Gene Expression in Zebrafish**, Robert Tanguay, Oregon State University, Corvallis, OR

updated information at [www.toxicology.org](http://www.toxicology.org)
Continuing Education (Continued)

- Adenovirus-Mediated Gene Delivery to Modulate Protein Expression In Vivo, Cornelius Elferink, UTMB, Galveston, TX
- Transgenic Approaches to Modulate Gene Expression in Mouse Models, Frank Gonzalez, NCI, Bethesda, MD

Sunday, March 16
8:15 AM—12:00 NOON
Level 6 (See signage at CE Booth for room locations)

BASIC EMBRYOLOGY AND DEVELOPMENTAL TOXICOLOGY
AM07

Chairperson(s): Lori A. Dostal, Ann Arbor, MI and John M. Rogers U.S. EPA, Research Triangle Park, NC

Endorsed by:
Reproductive and Developmental Toxicology Specialty Section*

Embryonic and fetal prenatal development in mammalian species is a complex process which is sensitive to the effects of maternal and environmental factors. The timing of development of major organ systems varies between humans and various test species used in assessment of developmental toxicity of xenobiotics. This basic course will cover normal development from fertilization through early stages of implantation and embryogenesis, through development of the major organ systems (cardiovascular, central nervous system, craniofacial, skeletal, urogenital). The effects of known human and animal teratogens on fetal development will be presented as examples, including etiologies of abnormal development. Current requirements and study designs for developmental toxicology studies required for new chemicals and new drugs will be covered in the context of the biological concepts of organ systems described in the initial lectures.

- Introduction and Overview, Lori A. Dostal, Ann Arbor, MI
- Cardiovascular and Craniofacial/Pharyngeal Development, Kathleen K. Sulik, University of North Carolina, Chapel Hill, NC
- Developmental Toxicology Testing and Interpretation, Rochelle W.Tyl, RTI International, Research Triangle Park, NC

Sunday, March 16
1:15 PM—5:00 PM
Level 6 (See signage at CE Booth for room locations)

INTRODUCTION TO PATHOLOGY FOR TOXICOLOGISTS AND STUDY DIRECTORS
PM08

Chairperson(s): Laurene M. Fomby, Battelle, Columbus, OH and Pat Haley, Incyte Corp, Wilmington, DE

Endorsed by:
Comparative and Veterinary Specialty Section*
Toxicologic and Exploratory Pathology Specialty Section

Today, even with the promise of ‘omic’ technologies, pathology plays a critical role in the evaluation of chemicals and drugs. Toxicological pathology uses specialized terms and methods and can generates complex interpretative effects. Effective communication between the toxicologist and the study pathologists will allow the toxicologist to better integrate pathology data into their reports and optimize the scientific content of the study. In this basic course, experienced toxicological pathologists will introduce important concepts in pathology to toxicologists as study directors in order to help the study director appreciate the role of pathology in toxicological studies. The course will begin with a discussion of basic concepts and the role of the toxicological pathologist followed by a discussion of global regulations as they relate to pathology endpoints. Later lectures will discuss the lesions and interpretation of pathology data in non-oncogenicity studies and oncogenicity studies. By the end of the session, the study director should have a better understanding of pathology and a basic background that will allow for effective communication with a study pathologist.

- Introduction, Pat Haley, Incyte Corp, Wilmington, DE
- Basic Concepts in Morphologic Pathology and the Roles of the Toxicological Pathologist, Sarah Hale, EPL, Raleigh, NC
- Important Induced Lesions, and Interpretation of Pathology Data in Non-Oncogenicity Studies, Paul Howroyd, MDS Pharma, Lyon, France
- Pathology Endpoints in Routine Repeated Dose Toxicology Studies: A Review of Global Regulations, Ken Schafer, Vet Path Services, Mason, OH
- An Introduction to Pathology in Carcinogenicity Studies, Dianne Creasy, Huntingdon Life Sciences, East Millstone, NJ

Sunday, March 16
1:15 PM—5:00 PM
Level 6 (See signage at CE Booth for room locations)

NANOTOXICOLOGY: THE SCIENCE OF DEVELOPING A SAFE TECHNOLOGY
PM09

Chairperson(s): Justin G. Teeguarden, Pacific Northwest National Laboratory, Richland, WA and Christie M. Sayes, DuPont Haskell Labs, Newark, DE

Endorsed by:
Inhalation and Respiratory Specialty Section
Nanotoxicology Specialty Section*
Occupational and Public Health Specialty Section
Risk Assessment Specialty Section

The objective of this course is to prepare toxicologists and risk assessors to meet the rapidly growing need to understand and evaluate the risks that engineered nanomaterials may pose to human health. Toxicological and risk assessment of nanomaterials requires an understanding of the unique differences between these ‘new’ materials and their chemical and large-particle predecessors. Few currently have the multidisciplinary understanding (toxicology, nanoscience, applied physics, dosimetry) to effectively approach the problem of risk and safety assessment of these materials. This basic course will provide an overview of the state of the science of the field of nanotoxicology and develop the scientific basis for evaluating and characterizing exposure, toxicity and the risks associated with engineered nanomaterials. Nanoscience and nanomaterials will be described with a focus on how they may be different than chemicals and previous studied particulates. A summary of current evidence regarding important routes of exposure and materials humans are exposed to will be presented. Current methods for, and challenges to toxicological testing of nanomaterials will be covered with specific examples relating the toxicity of nanoscale TiO2 to more well characterized particulates (e.g. crystaline silica). Guidelines for testing have been proposed by several groups and will be summarized. Finally, the dosimetric basis for extrapolating the results of toxicology studies to humans will then be developed and presented. This course promotes the application of best scientific practices
Continuing Education (Continued)

in the toxicological evaluation and risk assessment of this rapidly growing family of new materials.

• **Introduction and Course Overview**, Justin G. Teeguarden, Pacific Northwest National Laboratory, Richland, WA

• **Nanomaterials and Nanomaterial Properties**, Christie M. Sayes, DuPont Haskell Labs, Newark, DE

• **Consumer and Occupational Exposure to Nanomaterials**, Annette Santamaria, ENVIRON, Houston, TX

• **Nanomaterial Toxicology and Hazard Testing**, David B. Warheit, DuPont Haskell Labs, Newark, DE

• **Nanomaterial Dosimetry and Risk Assessment**, Justin G. Teeguarden, Pacific Northwest National Laboratory, Richland, WA

Sunday, March 16
1:15 PM—5:00 PM
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**CLINICAL DOSE SETTING FOR BIOtherAPEUTICS**

**PM10 BASIC**

Chairperson(s): James D. Green, Biogen Idec, Inc., Cambridge, MA and Shawn M. Heidel, Eli Lilly and Company, Indianapolis, IN

Endorsed by:

**Regulatory and Safety Evaluation Specialty Section**

Women in Toxicology Special Interest Group

Preclinical development programs that are designed to support the safe clinical use of biopharmaceuticals have considerations that are very different from programs designed to support the development of small molecule drugs. The International Conference of Harmonization ICH S6 document provides guidance regarding scientific and regulatory consensus for key preclinical study design elements. Since the adoption of ICH S6 considerable experience has been developed across a wide variety of biological drug and antibody constructs. This experience has indicated that if ICH S6 guidance is followed and expert assessment of data sets is provided, the safety considerations for first in human and later stage clinical trials has been assured. However, the recent experience involving the humanized monoclonal antibody TGN1412 has raised questions regarding the adequacy of current nonclinical approaches. This session will review the following: 1. current and proposed regulatory guidance documents that determine safe starting doses, 2. basic and advanced concepts in PK and PD that support preclinical and clinical dosimetry, 3. basic and advanced concepts of toxicology that are involved in the assessment of safety of biotherapeutics and 4. the current approaches will be illustrated by several case studies across a wide range of product classes. The course attendee will learn key concepts and design considerations for successful preclinical programs that support the initiation of safe human clinical trials.

• **Introduction**, James D. Green, Biogen Idec, Inc., Cambridge, MA

• **Review of Current Regulatory Guidelines That Determine First Dose in Human**, Mark C. Rogge, Biogen Idec, Inc., Cambridge, MA

• **PK and PD Principles Supporting the Determination of First in Human Dosing**, Jenn Visich, Genetech, South San Francisco, CA

• **Toxicology Considerations Supporting Safe Clinical Development**, Shawn M. Heidel, Eli Lilly and Company, Indianapolis, IN

• **Application of PK/PD and Toxicology Principles to Support the Determination of Safe Clinical Dosing: Case Studies**, Laura Andrews, Genzyme, Framingham, MA

Sunday, March 16
1:15 PM—5:00 PM
Level 6 (See signage at CE Booth for room locations)

**USE OF DATA FOR DEVELOPMENT OF UNCERTAINTY FACTORS IN NON-CANCER RISK ASSESSMENT**

**PM11 ADVANCED**

Chairperson(s): John C. Lipscomb, U.S. EPA, Cincinnati, OH and Lynne T. Haber, Toxicology Excellence for Risk Assessment, Cincinnati, OH

Endorsed by:

**Biological Modeling Specialty Section**

Occupational and Public Health Specialty Section

Risk Assessment Specialty Section*

Promoting clarity and objectivity is a primary concern when advancing the technical basis for human health risk assessment. Default values for uncertainty factors are intended to serve as place-holders, to be replaced when relevant data become available. The default values for the uncertainty factors for inter and intraspecies extrapolation were established before many toxicologists were born, and methods for incorporation of chemical-specific or categorical data continue to evolve. To understand the rationale for these uncertainty factors and methods for their replacement, this course will present a continuum of approaches to develop non-default values for uncertainty factors, culminating in the application of advanced toxicokinetic methods to quantify differences in internal dosimetry. The course will describe the history of the development of default values for uncertainty factors, including their recent subdivision into toxicokinetic and toxicodynamic components; methods that make use of generally-applicable species differences in anatomy and physiology and allometric scaling; specific instruction in the Chemical Specific Adjustment Factor (CSAF) methodology developed by the International Programme on Chemical Safety (IPCS); and the application of physiologically based pharmacokinetic (PBPK) modeling to develop quantitative data for use in replacing default assumptions for inter and intraspecies differences in tissue dosimetry. The concluding lecture will present a series of examples to illustrate how the various approaches introduced in the course can be applied to derive non-default uncertainty factors for environmental contaminants and pharmaceutical compounds.

• **Introduction**, John C. Lipscomb, U.S. EPA, Cincinnati, OH

• **Overview and History of Default Values for Uncertainty Factors**, Lynne T. Haber, Toxicology Excellence for Risk Assessment, Cincinnati, OH

• **Categorical Default Approaches to Uncertainty Factor Development**, John C. Lipscomb, U.S. EPA, Cincinnati, OH

• **Development of Chemical Specific Adjustment Factors (CSAF): Guidance from the International Programme on Chemical Safety**, Bette Meek, Health Canada, Ottawa, Ontario, Canada

• **PBPK Models for Developing Chemical-Specific Adjustment Factors**, Kannan Krishnan, University of Montreal, Montreal, Quebec, Canada

• **Examples Illustrating the Use of Data to Replace Default Uncertainty Factors**, Bruce D. Naumann, Merck & Company, Inc., Whitehouse Station, NJ

Promoting clarity and objectivity is a primary concern when advancing the technical basis for human health risk assessment. Default values for uncertainty factors are intended to serve as place-holders, to be replaced when relevant data become available. The default values for the uncertainty factors for inter and intraspecies extrapolation were established before many toxicologists were born, and methods for incorporation of chemical-specific or categorical data continue to evolve. To understand the rationale for these uncertainty factors and methods for their replacement, this course will present a continuum of approaches to develop non-default values for uncertainty factors, culminating in the application of advanced toxicokinetic methods to quantify differences in internal dosimetry. The course will describe the history of the development of default values for uncertainty factors, including their recent subdivision into toxicokinetic and toxicodynamic components; methods that make use of generally-applicable species differences in anatomy and physiology and allometric scaling; specific instruction in the Chemical Specific Adjustment Factor (CSAF) methodology developed by the International Programme on Chemical Safety (IPCS); and the application of physiologically based pharmacokinetic (PBPK) modeling to develop quantitative data for use in replacing default assumptions for inter and intraspecies differences in tissue dosimetry. The concluding lecture will present a series of examples to illustrate how the various approaches introduced in the course can be applied to derive non-default uncertainty factors for environmental contaminants and pharmaceutical compounds.

• **Introduction**, John C. Lipscomb, U.S. EPA, Cincinnati, OH

• **Overview and History of Default Values for Uncertainty Factors**, Lynne T. Haber, Toxicology Excellence for Risk Assessment, Cincinnati, OH

• **Categorical Default Approaches to Uncertainty Factor Development**, John C. Lipscomb, U.S. EPA, Cincinnati, OH

• **Development of Chemical Specific Adjustment Factors (CSAF): Guidance from the International Programme on Chemical Safety**, Bette Meek, Health Canada, Ottawa, Ontario, Canada

• **PBPK Models for Developing Chemical-Specific Adjustment Factors**, Kannan Krishnan, University of Montreal, Montreal, Quebec, Canada

• **Examples Illustrating the Use of Data to Replace Default Uncertainty Factors**, Bruce D. Naumann, Merck & Company, Inc., Whitehouse Station, NJ
Continuing Education (Continued)

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ESSENTIAL INFORMATICS FOR TOXICOLOGISTS:
KNOWLEDGE MANAGEMENT END-TO-END

PM12 BASIC
Chairperson(s): William B. Mattes, The Critical Path Institute, Rockville, MD and Lyle D. Burgoon, Toxicogenomic Informatics and Solutions, LLC, Lansing, MI

Endorsed by:
Drug Discovery Toxicology Specialty Section
Molecular Biology Specialty Section*

The combination of the Internet, automated data acquisition, and genomic information has transformed the role of the computer in the modern scientist’s life. A familiarity with word processing and simple spreadsheets is simply not adequate preparation for dealing with large datasets such as those generated by large toxicology studies, toxicogenomics or high-throughput screens. Increasingly, the software tools used to deal with such data require an understanding of basic concepts in computer science, database design, bioinformatics and statistics. This ‘basic’ level course hopes to provide the beginnings of such an understanding. Thus the first lecture will cover some of the essential concepts of operating systems, file and data concepts and programming concepts. This will be followed by a talk discussing the essentials of database design and use, contrasting flat-file and relational databases. A third lecture will provide an overview of the information necessary so that data may be integrated, e.g. pathology with genomics. The final lecture will cover concepts of visual analysis of large data sets, and contrast some of the various approaches used. Hopefully after this course the student will be conversant in informatics to the level of effectively interacting with computer scientists, as well as collecting and manipulating datasets with reasonable skill.

- Basics of Operating Systems, Data, and Data Handling, William B. Mattes, The Critical Path Institute, Rockville, MD
- Database Essentials for Toxicologists, Lyle D. Burgoon, Toxicogenomic Informatics and Solutions, LLC, Lansing, MI
- Annotating Data With Study and Subject Details—How, Why, What to Include, Jennifer Fostel, NIEHS, Research Triangle Park, NC
- What Do I Do with All This Data? Joseph F. Sina, Merck & Co Inc, West Point, PA

Sunday, March 16
1:15 PM—5:00 PM
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EPIDEMIOLOGY FOR TOXICOLOGISTS: INTRODUCTION

PM13 BASIC
Chairperson(s): Richard A. Parent, Consultox Ltd, Damariscotta, ME and Geary Olsen, 3M Corporation, St. Paul, MN

Endorsed by:
Carcinogenesis Specialty Section
Regulatory and Safety Evaluation Specialty Section
Risk Assessment Specialty Section

This course is intended to provide participants with insight into epidemiology, a critical component of the discipline of toxicology. This course will be presented by accomplished epidemiologists from government and industry.

Over the course of the last 50 years, epidemiology has gained respect as an established scientific discipline. Whereas epidemiologic results were once greeted with scorn and skepticism they are now accorded some degree of respect and in some instances perhaps too much respect. This course will begin by providing an overview of the terminology used to describe the techniques used to measure and quantify disease in populations. Toxicologist will become familiar with the various study designs used in epidemiologic research to generate and evaluate hypotheses regarding disease occurrence. Next, the distinction between experiments and observational studies will be made with an overview on epidemiologic study designs, and bias in epidemiologic data. We will cover the types of observational study designs characterized according to whether the unit of observation is a group, the individual, or some hybrid of the two. A summary will provide the audience with some general guidelines regarding the tendency of the different types of epidemiologic studies to provide unbiased results.

Both toxicologists and epidemiologists contribute to the answers, and confusion, by providing information for use in hazard identification and dose response which is then cited in the risk characterization process. Toxicologists provide data through experimental descriptive and mechanistic studies with relevancy sometimes becoming an issue (e.g., PPAR mediated liver tumors in rats). Epidemiologists identify opportunistic areas to address the study question but have historically provided answers with exposure disappointingly defined. Many questions arise from toxicologists when trying to understand epidemiology including confusion about study bias, statistical inference, representativeness, and generalization. In this era of biomonitoring, can both disciplines be more effectively understood by each other, let alone others? Our objective is to compare and contrast methodologic strengths and weaknesses of the two disciplines as they attempt to address the public’s question, ‘is it safe?’ At the conclusion of this course, the presenters will reference presentations and discuss examples of a number of areas where epidemiology is misused, misinterpreted, and over-interpreted. The panelists will include examples of the misapplication of biomarkers in assessing risk ratios, the use of a minimum risk ratio of two to establish causation in the Texas court system, and the misuse of statistical analyses by both epidemiologists and toxicologists, among others.

- Setting the Stage, Richard A. Parent, Consultox Ltd, Damariscotta, ME
- Overview and Terminology, J. Michael Sprafka, Procter & Gamble Company, Cincinnati, OH
- Epidemiology Study Designs and Bias in Epidemiologic Data, Matthew P. Longnecker, NIEHS, Research Triangle Park, NC
- Toxicology and Epidemiology—Improving our Mutual Understanding, Geary W. Olsen, 3M Corporation, St. Paul, MN
- Uses and Misuses of Epidemiology, All panel members will participate
### General Scientific Sessions

(Listed by type, then date and time)

#### Monday

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*Attended 1:00 PM–2:45 PM; otherwise attended 2:45 PM–4:30 PM.*

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- Neurotoxicant-Induced Alterations in Developmental and Adult Neurogenesis: Structure-Function Studies and Clinical Relevance #1259–1263 Room 611 Page 196
- Novel Biomarkers of Drug-Induced Toxicity: Outcomes of Predtox and the Predictive Safety Testing Consortium #1264–1271 Room 602 Page 197

**Tuesday 1:30 PM**
- Dermal Toxicological Assessment of Nanomaterials and Nanodevices #1272–1277 Room 6C Page 197
- Molecular Mechanisms and Molecular Biology of Metal Carcinogenesis #1284–1289 Room 6B Page 198
- Strategies for Assessing Developmental and Reproductive Toxicology of Bio-Pharmaceuticals #1290–1295 Room 6A Page 199
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<td>Tuesday 1:30 PM</td>
<td>Arsenic Toxicity #1302–1309</td>
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<td>Tuesday 1:30 PM</td>
<td>Mechanisms of Hypersensitivity #1310–1316</td>
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<td>Tuesday 1:30 PM</td>
<td>Mechanisms of Pesticide Toxicity #1317–1325</td>
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#### Workshop Sessions

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<tr>
<td>Wednesday 9:00 AM</td>
<td>Unusual Manifestations of On-Target and Off-Target Toxicity: Toxicity of Kinase Inhibitors #1338–1343</td>
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#### Informational Session

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<tr>
<td>Wednesday 9:00 AM</td>
<td>Globally Harmonized System of Classification and Labelling of Chemicals (GHS): A New Language for Toxicologists #1367–1372</td>
<td>602</td>
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<tr>
<td>Wednesday 9:00 AM</td>
<td>Developmental Basis of Health and Disease: Persistent Effects of Tobacco Smoke Exposure #1331–1337</td>
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<tr>
<td>Wednesday 7:30 AM</td>
<td>Cross-Cultural Understanding of Asian and Western Cultural Values in the Workplace #1329</td>
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<tr>
<td>Wednesday 7:30 AM</td>
<td>Toxicological and Public Health Challenges in Africa #1330</td>
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#### Platform Sessions

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<tr>
<td>Wednesday 9:00 AM</td>
<td>Advances in Biological Modeling #1373–1381</td>
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<td>Wednesday 9:00 AM</td>
<td>Mechanisms of Reproductive Toxicity #1382–1389</td>
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<tr>
<td>Wednesday 9:00 AM</td>
<td>Modulating Apoptosis for Beneficial Outcomes #1390–1397</td>
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<tr>
<td>Wednesday 9:00 AM</td>
<td>Nanoparticles: Cellular and Organ Disposition #1398–1406</td>
<td>6E</td>
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*up-to-date information at www.toxicology.org*
### Scientific Session Index (Continued)

#### Poster Sessions

*Attended 9:00 AM–11:00 AM; otherwise attended 11:00 AM–12:30 PM.

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<tr>
<td>Wednesday 9:00 AM *</td>
<td>Mechanisms of Carcinogenesis #1407–1419 Poster Boards 101–113</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 9:00 AM</td>
<td>Gene Regulation and Genomic Approaches #1420–1433 Poster Boards 114–127</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 9:00 AM *</td>
<td>Respiratory and Skin Hypersensitivity #1434–1457 Poster Boards 128–140 and 201–211</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 9:00 AM</td>
<td>Epidemiology and Exposure Assessment #1458–1484 Poster Boards 214–240</td>
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<tr>
<td>Wednesday 9:00 AM *</td>
<td>Nanoparticles: Inhalation and Respiratory Cell Injury #1485–1514 Poster Boards 301–330</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 9:00 AM</td>
<td>Developmental Toxicology #1515–1542 Poster Boards 331–340 and 401–418</td>
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<tr>
<td>Wednesday 9:00 AM *</td>
<td>Skin Penetration and Toxicity #1543–1563 Poster Board 420–440</td>
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<tr>
<td>Wednesday 9:00 AM</td>
<td>Application of 'Omics Research Tools in Toxicology #1564–1606 Poster Boards 501–543</td>
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<tr>
<td>Wednesday 9:00 AM *</td>
<td>Metals I #1607–1644 Poster Boards 546–562 and 601–621</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 9:00 AM</td>
<td>Cardiovascular System: Cardiac Effects #1645–1667 Poster Boards 627–649</td>
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<tr>
<td>Wednesday 9:00 AM *</td>
<td>DNA Damage and Repair: Mechanisms and Agents #1668–1689 Poster Boards 650–662 and 701–709</td>
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#### Informational Session

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<tr>
<td>Wednesday 12:00 NOON</td>
<td>Mentoring 101—How to Mentor, and How to be Mentored #1690</td>
<td>Room 615</td>
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#### Poster Sessions

*Attended 1:00 PM–2:45 PM; otherwise attended 2:45 PM–4:30 PM.

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<tr>
<td>Wednesday 1:00 PM *</td>
<td>Developmental Neurotoxicity #1691–1729 Poster Boards 101–113</td>
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<tr>
<td>Wednesday 1:00 PM</td>
<td>Human Biomarkers #1730–1746 Poster Boards 201–217</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 1:00 PM *</td>
<td>Biomarkers: Methods #1747–1764 Poster Boards 221–238</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 1:00 PM</td>
<td>Juvenile Toxicity #1765–1775 Poster Boards 301–311</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 1:00 PM *</td>
<td>Risk Assessment Applications #1776–1803 Poster Boards 313–340</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 1:00 PM</td>
<td>Neurotoxicity: Miscellaneous Compounds, Models, and Mechanisms #1804–1843 Poster Boards 401–440</td>
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<tr>
<td>Wednesday 1:00 PM *</td>
<td>Metal Neurotoxicology: Experimental Models and Mechanisms #1844–1889 Poster Boards 501–546</td>
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<tr>
<td>Wednesday 1:00 PM</td>
<td>Pharmaceuticals #1890–1915 Poster Boards 550–562 and 601–613</td>
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<tr>
<td>Wednesday 1:00 PM *</td>
<td>Safety Assessment, Pharmaceutical—Liver, Kidney, Immune System #1916–1943 Poster Boards 614–641</td>
<td>Exhibit Hall</td>
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<tr>
<td>Wednesday 1:00 PM</td>
<td>Oxidative Injury and Redox Biology I: In Vivo #1944–1964 Poster Boards 642–662</td>
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<tr>
<td>Wednesday 1:30 PM</td>
<td>Arsenic and Cardiovascular Disease #1965–1969</td>
<td>Room 6B</td>
<td>257</td>
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<tr>
<td>Wednesday 1:30 PM</td>
<td>Nanomaterial Pharmacokinetics: Where We Are and Where We Need to Go #1970–1975</td>
<td>Room 6C</td>
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### Workshop Sessions

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<tr>
<td>Wednesday 1:30 PM</td>
<td>Advances in Technology and Increasing Acceptance for Zebrafish Use in Drug Discovery #1976–1980</td>
<td>Room 608</td>
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<td>Wednesday 1:30 PM</td>
<td>Chlorotriazine Herbicides and their Common Degradation Products of Concern: Disposition and Potential Health Effects #1981–1986</td>
<td>Room 611</td>
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<tr>
<td>Wednesday 1:30 PM</td>
<td>Interdisciplinary Approaches for Improving Chemical Hazard Testing Paradigms #1987–1992</td>
<td>Room 6A</td>
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### Platform Sessions

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<tr>
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<td>Apoptosis: Cardiorespiratory Targets #1993–2001</td>
<td>Room 6E</td>
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<tr>
<td>Wednesday 1:30 PM</td>
<td>Immunotoxicology: T Cells #2002–2007</td>
<td>Room 602</td>
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<td>Wednesday 1:30 PM</td>
<td>Issues in Regulatory Risk Assessment #2008–2016</td>
<td>Room 605</td>
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<tr>
<td>Wednesday 1:30 PM</td>
<td>New Insights for Developing Toxicological Paradigms #2017–2025</td>
<td>Room 618</td>
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<tr>
<td>Wednesday 1:30 PM</td>
<td>Nrf2 Induced Gene Regulation #2026–2033</td>
<td>Room 615</td>
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<tr>
<td>Wednesday 1:30 PM</td>
<td>Selective Dopaminergic Neurotoxicity: Genetics and Mechanisms #2034–2040</td>
<td>Room 2A</td>
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### Roundtable Session

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<tr>
<td>Wednesday 4:30 PM</td>
<td>A Case Study on the Risks and Benefits of Deca-BDE—a Major Brominated Flame Retardant #2041</td>
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### Roundtable Session

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<tr>
<td>Thursday 7:30 AM</td>
<td>Biofuel Combustion: An Emerging Health Problem? #2044</td>
<td>Room 608</td>
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### Poster Sessions

*Attended 8:30 AM–10:15 AM; otherwise attended 10:15 AM–12:00 Noon.

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<tr>
<td>Thursday 8:30 AM</td>
<td>Oxidative Injury and Redox Biology II: In Vitro #2045–2084</td>
<td>Ballroom 6C &amp; E</td>
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<tr>
<td>Thursday 8:30 AM</td>
<td>Metals II #2085–2122</td>
<td>Ballroom 6C &amp; E</td>
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<td>Thursday 8:30 AM</td>
<td>Method Development, Autoimmunity, and Diseases Mechanisms in Immunotoxicology #2123–2155</td>
<td>Ballroom 6C &amp; E</td>
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<td>Thursday 8:30 AM</td>
<td>AHR Mechanisms #2156–2171</td>
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<tr>
<td>Thursday 8:30 AM</td>
<td>Chemoprevention #2172–2183</td>
<td>Ballroom 6C &amp; E</td>
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<tr>
<td>Thursday 8:30 AM</td>
<td>Fish Alternative Models of Toxicity #2184–2199</td>
<td>Ballroom 6C &amp; E</td>
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<tr>
<td>Thursday 8:30 AM</td>
<td>Cardiovascular System: Vascular Effects #2200–2220</td>
<td>Ballroom 6C &amp; E</td>
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<td>Food Safety II #2221–2241</td>
<td>Ballroom 6C &amp; E</td>
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<td>Thursday 8:30 AM</td>
<td>High-Throughput, High Content Approaches to Assessing Genotoxicity #2242–2259</td>
<td>Ballroom 6C &amp; E</td>
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<tr>
<td>Thursday 8:30 AM</td>
<td>Pesticide Neurotoxicity #2260–2292</td>
<td>Ballroom 6C &amp; E</td>
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<td>Safety Assessment, Pharmaceutical—Techniques, Pulmonary, Cardiovascular #2293–2326</td>
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<td>Cellular Redox Status and Zinc Signaling #2327–2331</td>
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<td>9:00 AM</td>
<td>Perinatal Exposure to Nucleoside Reverse Transcriptase Inhibitors (NRTIs) Induces Transplacental Genotoxicity and Mitochondrial Toxicity #2332–2336</td>
<td>Room 605</td>
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<tr>
<td>Thursday</td>
<td>Stem Cells in Developmental and Reproductive Biology and Toxicology #2337–2341</td>
<td>Room 611</td>
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### Workshop Sessions

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<tr>
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<td>Genotoxicity Testing from Early Discovery through Regulatory Submission: A Comprehensive Primer #2342–2347</td>
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<td>9:00 AM</td>
<td>Incorporation of Mode-of-Action into Mechanistically-Based Quantitative Models #2348–2353</td>
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<tr>
<td>Thursday</td>
<td>Pulmonary Toxicity Testing of Nanoparticles #2354–2358</td>
<td>Room 6B</td>
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<td>REACH: Implementation, Chemical Safety, and Information Requirements #2359–2363</td>
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Program Description

All scientific and special events will be held in the Washington State Convention and Trade Center unless otherwise noted. * Indicates the Primary Endorser.

**SCIENTIFIC SESSION TYPES**

- **FS** Featured Sessions
- **S** Symposium Sessions
- **W** Workshop Sessions
- **R** Roundtable
- **PL** Platform Sessions
- **P** Poster Sessions
- **IS** Informational Sessions
- **HH** Historical Highlights
- **TS** Thematic Session

*Exhibitor Hosted Sessions are not approved by the SOT Program Committee.*

---

**SATURDAY**

Saturday, March 15
2:00 PM to 5:00 PM
Sheraton
Willow A Room

**SOT COMMITTEE CHAIR ORIENTATION**

If you will be a Committee Chairperson in 2008–2009, please make plans to attend the Committee Chairperson Meeting scheduled for 2:00 PM–5:00 PM, Saturday, March 15. With new committee assignments taking effect on May 1, 2008, the meeting is intended to provide new (and current, if desired) chairpersons with a basic tutorial on the SOT structure, operation, and strategic direction. For additional information, please contact SOT Headquarters.

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Saturday, March 15
5:30 PM to 9:00 PM
Room 305

**UNDERGRADUATE EDUCATION PROGRAM**

Chairperson(s): Vicente Santa Cruz, CDI Chair, Chevron Phillips Chemical Company LP, The Woodlands, TX, and Charles Miller, III, Tulane University, New Orleans, LA

Sponsored by:
Committee for Diversity Initiatives

This event is for undergraduate students and advisors receiving MARC and SOT travel funding, and the SOT program volunteers.

All Participants:

8:00 AM–8:15 AM Introductions
8:15 AM–8:50 AM Maternal Smoking and Cancer: Are your Children Paying the Price? Judy Zelikoff, New York University School of Medicine, Tuxedo, NY
8:50 AM–9:10 AM Questions and Discussion
9:10 AM–9:20 AM Break
9:20 AM–9:55 AM nano-a-nano: the Good, the Bad, and the Ugly, Martin Philbert, University of Michigan, Ann Arbor, MI
9:55 AM–10:20 AM Questions and Discussion
10:20 AM–10:35 AM Undergraduates and Research: development of Breast cancer in Hamsters as a Model to Test Oncolytic Virotherapy, (Room 3A), Malari Coburn, Centenary College of Louisiana, Shreveport, LA
10:35 AM–11:30 AM Interactive Session: Receptor-Mediated Toxicity, Charles Miller, III, Tulane University, New Orleans, LA
11:30 AM–12:30 PM Lunch and Networking

For Students: Breakout Sessions (Rooms 307, 308, 309)

12:30 PM–1:55 PM 40 minutes concurrent sessions, each offered at 12:30 PM–1:10 PM and 1:15 PM–1:55 PM
A. What is Graduate School and What Can I Expect? TBA
B. How to Get into Graduate School: An Academic Advisor’s Perspective, TBA

Advisors Sessions: (Room 305)

12:30 PM–1:15 PM Tips for Advising Prospective Graduate Students, TBA
1:15 PM–1:55 PM Best Practices: Idea Sharing about Keeping Students on a Science Path, TBA

---

**SUNDAY**

Sunday, March 16
8:00 AM to 5:00 PM
Room 2A

**UNDERGRADUATE EDUCATION PROGRAM**

Chairperson(s): Vicente Santa Cruz, CDI Chair, Chevron Phillips Chemical Company LP, The Woodlands, TX, and Charles Miller, III, Tulane University, New Orleans, LA

Sponsored by:
Committee for Diversity Initiatives

The Sunday program is open to undergraduate students who registered for this event on the Annual Meeting Registration Form, the undergraduate students and advisors receiving MARC, SOT, and Pfizer travel funding, and the SOT program volunteers.

All Participants:

8:00 AM–8:15 AM Maternal Smoking and Cancer: Are your Children Paying the Price? Judy Zelikoff, New York University School of Medicine, Tuxedo, NY
8:50 AM–9:10 AM Questions and Discussion
9:10 AM–9:20 AM Break
9:20 AM–9:55 AM nano-a-nano: the Good, the Bad, and the Ugly, Martin Philbert, University of Michigan, Ann Arbor, MI
9:55 AM–10:20 AM Questions and Discussion
10:20 AM–10:35 AM Undergraduates and Research: development of Breast cancer in Hamsters as a Model to Test Oncolytic Virotherapy, (Room 3A), Malari Coburn, Centenary College of Louisiana, Shreveport, LA
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12:30 PM–1:15 PM Tips for Advising Prospective Graduate Students, TBA
1:15 PM–1:55 PM Best Practices: Idea Sharing about Keeping Students on a Science Path, TBA

---

**EXHIBITOR HOSTED SESSIONS**

Exhibitor Hosted Sessions are not approved by the SOT Program Committee.
Program Description (Continued)

All Participants: (Room 3A)
2:00 PM–2:40 PM  Career Opportunities in Toxicology—Panel Discussion
Academia: Alice Villalobos, Texas A&M University, College Station, TX
Industry: Vanessa Silva, Procter & Gamble, Cincinnati, OH
2:40 PM–3:00 PM  Break

Sunday, March 16
3:00 PM to 5:00 PM
Room 2A

ACADEMIC PROGRAM SESSION FOR UNDERGRADUATE STUDENTS
Open time with Academic Toxicology Program Directors and Internship Sponsors

Sunday, March 16
4:45 PM to 5:15 PM
Ballroom 6A

AWARD CEREMONY MUSIC PRELUDE
KALEY EATON, PIANIST

Sunday, March 16
5:15 PM to 6:30 PM
Ballroom 6A

AWARDS CEREMONY
Join us as SOT honors our prestigious award winners at the SOT Awards Ceremony. Please refer to the Awards and Fellowships section of the SOT Web site for complete details and the nominating form for next year. (All Attendees Welcome)

Sunday, March 16
6:30 PM to 7:30 PM
Exhibit Hall 4F

WELCOMING RECEPTION
Continue the celebration by attending the Welcoming Reception following the Awards Ceremony. The Welcoming Reception is a great opportunity to renew old friendships and to make new acquaintances. Please join the Society in this kick-off of the Annual Meeting. (All Attendees Welcome)

Sunday, March 16
7:00 PM–8:00 PM
Room 601

25–YEAR (OR MORE) MEMBER RECEPTION
Have you been a member of the Society of Toxicology for 25 years (or more)? If so, please join your colleagues in celebration and recognition of the scientists who established the Society. (By Invitation Only)

Sunday, March 16
7:30 PM to 8:30 PM
Sheraton Seattle Hotel
Grand Ballroom C

STUDENT/POSTDOCTORAL FELLOW MIXER
All students and postdoctoral fellows are invited to attend this reception. Refreshments will be provided by SOT and sponsors. A cash bar will also be available. Ticket and Meeting Badge are required.
Monday Morning, March 17
8:15 AM to 9:15 AM
Exhibit Hall 4F

PLENARY OPENING LECTURE: PERSPECTIVES ON SCIENCE IN THE 21ST CENTURY

Lecturer: Nobel Laureate Lee Hartwell, Fred Hutchinson Cancer Research Center, Seattle, WA

Dr. Lee Hartwell didn’t realize as a boy that his youthful predilection for chasing butterflies hinted at his future as a geneticist. Nor did his teen-age tinkering on auto engines give him a clue that he would win a Nobel Prize. But today, his career’s work in cell genetics has changed the way we think about life itself.

Early in his research career, Hartwell set out to find an organism simple enough to experiment on, yet complex enough to provide insight into humans. He made a risky choice: to use yeast, the same single-celled fungus that makes bread dough rise. At the time, most scientists thought yeast was not a good model for understanding the complexity of human cells.

Hartwell persisted, and a series of experiments over several years led to a landmark discovery. He discovered the genes that control cell division—genes that turned out to be the universal machinery for cell growth in organisms from fungi to frogs to humans.

This discovery in yeast not only showed the unity of all life, it also had practical applications for human health.

By identifying “checkpoint” genes that determine whether a cell is dividing normally, Hartwell provided important clues to cancer, which arises from abnormal, uncontrolled cell growth. Hartwell’s discoveries have led him and other scientists to explore ways to stop abnormal cells from dividing. Researchers hope this work will lead to new and better ways to prevent, diagnose, and treat cancer.

For his insightful discoveries, Hartwell received the 2001 Nobel Prize in Physiology or Medicine.

Monday Morning, March 17
9:30 AM to 11:15 AM
Exhibit Hall

POSTER SESSION FOR VISITING STUDENTS

Chairperson(s): Vicente Santa Cruz, CDI Chair, Chevron Phillips Chemicals International N.V., Brussels, Belgium, and Mari Stavanja, R.J.R. Tobacco Company, Winston-Salem, NC

Sponsored by:
Committee for Diversity Initiatives

This poster session is part of the Undergraduate Education Program. All are welcome to view the specially selected presentations which provide an overview of research in toxicology and demonstrate the diversity within the discipline.
neuronal degeneration will be discussed. The various neuroimmune cells have not been fully delineated. The various neuroimmune cells have been implicated in the neuroinflammation and neurodegeneration, but their elevated production of potential cytotoxicants. Numerous cytokines have been shown to induce neuronal damage, which subsequently activates the immune cells. The major immune cell that permanently resides within the brain parenchyma is the microglial cell. Current consensus suggests that microglia are derived from the hematopoietic monocyte lineage and that blood monocytes differentiate into perivascular macrophages which develop into microglia as they traffic into multiple brain regions. Another hematopoietic cell residing in the brain is the mast cell. Most other immune cells only transiently migrate through the brain. A major question that continues to be debated is whether neurotoxic metals directly activated immune cells within the brain that subsequently induce neuronal damage or whether metal toxicants induce neuronal damage, which subsequently activates the immune cells (mainly microglia) leading to exacerbated neuronal damage. An alternative hypothesis is that microglia are neuroprotective but metals cause loss of microglial protective factors because of microglial degeneration and/or elevated production of potential cytokotxicants. Numerous cytokines have been implicated in the neuroinflammation and neurodegeneration, but their cellular sources have not been fully delineated. The various neuroimmune mechanisms posited to regulate neuroinflammation, neuroprotection, and neuronal degeneration will be discussed.

The completion of the Human Genome Project in 2003, and more recently, the first phase of the International HapMap project, have provided valuable tools which we are still learning how to use effectively in our goal to improve human health and prevent disease. For example, the cost-effective and rigorous ability to perform whole genome association studies for complex diseases has only been achieved within this past year. Although exciting and of clear utility in identifying multiple genetic loci whose variability will contribute to disease risk, such association studies still must be followed-up with more detailed analyses to understand the causative variants that contribute to differential susceptibility. Further, there now is widespread acceptance that most if not all complex disease arises because of an interaction between our genome and the environment. Thus, a careful assessment and definition of phenotype, including environmental exposure, is critical. We also now have clear examples wherein epigenetic changes caused by environmental factors, including transgenerational epigenetic changes, can also have a significant impact on disease risk. This symposium will provide state-of-the-art updates on our understanding of the molecular basis for individual differences in susceptibility to chemical toxicity and disease. Topics to be covered include how regulatory polymorphisms resulting in variation in gene expression can impact risk, chemical-induced epigenetic changes and their impact on susceptibility, the use of genetic variation to predict risk and efficacy during drug development and the use of pathway analyses to understand complex disease risk using Parkinson’s disease as an example. Thus, this symposium will span from fundamental, mechanistic studies, to translational investigations and clinical applications, demonstrating the strengths of an interdisciplinary approach to environmental health issues.
The liver is one of the most widely studied organs in cancer biology since it provides a flexible model for analysis of tumor biology that is amenable to in vitro and in vivo correlative approaches. Because of this, many other fields of cancer biology have been informed by data emerging from studies of the liver. Over the last decade, the inter-related roles between the pathways of apoptosis, cell survival and cell proliferation and their relevance to toxicology have been more rigorously described. Key to this is the interplay between ligand-activated transcription factors such as the peroxisome proliferators activated receptor α (PPARα) and the constitutively active/androstane receptor (CAR) and the networks that initiate and execute apoptosis. Against this background of knowledge, several new findings are particularly resonant. Specifically, increasing evidence suggests a pivotal role for epigenetic modification of DNA and its impact on survival and proliferation. Also of great relevance is the role played by the WNT-signalling pathway in cell signalling and tumorigenesis. Another recent and informative approach involves the use of comparative genomics of human and model organism hepatocellular carcinoma to identify aberrant phenotypes, reflecting molecular pathways that are evolutionarily conserved. This is further illustrated by use of a systems toxicology approach to analysis of liver tumors. This symposium brings together leading experts in human molecular biology and will be of interest both to non-experts looking to gain a greater understanding of tumor biology and those with a specific interest in the liver and mechanisms of carcinogenesis.

**Abstract #23**

**NEW DEVELOPMENTS IN LIVER TUMOR BIOLOGY**

R. Roberts1 and Y. Dragan2. 1R&D Safety Assessment, AstraZeneca, Macclesfield, United Kingdom and 2R&D Safety Assessment, AstraZeneca, Wilmington, DE.

**Abstract #24**

**THE ROLE OF CELL SURVIVAL SIGNALLING IN NORMAL AND TUMOR CELL BIOLOGY: LESSONS FROM LIVER**

R. Roberts. Safety Assessment, AstraZeneca, Macclesfield, United Kingdom.

**Abstract #25**

**THE ROLE OF THE WNT PATHWAY AND β-CATENIN IN NORMAL AND TUMOR CELL BIOLOGY**

S. A. Aaronson. Department of Oncological Sciences, Mount Sinai School of Medicine, New York. Sponsor: R. Roberts.

**Abstract #26**

**ORPHAN NUCLEAR RECEPTOR CONSTITUTIVE ACTIVE/ANDROSTANE RECEPTOR (CAR)-MEDIATED ALTERATIONS IN DNA METHYLATION DURING PHENOBARBITAL (PB) PROMOTION OF LIVER TUMORIGENESIS**

J. I. Goodman1 and J. M. Phillips2. 1Pharmacology and Toxicology, Michigan State University, East Lansing, MI and 2Biochemistry and Molecular Biology, Michigan State University, East Lansing, MI.

**Program Description (Continued)**

Monday Morning, March 17
9:30 AM to 12:15 PM
Room 6C

**SYMPOSIUM SESSION: NEW DEVELOPMENTS IN LIVER TUMOR BIOLOGY**

Chairperson(s): Ruth Roberts, AstraZeneca, UK, Macclesfield, United Kingdom and Yvonne Dragan, AstraZeneca Pharmaceuticals LP, Wilmington, DE.

Endorsed by:
- Carcinogenesis Specialty Section*
- Mechanisms Specialty Section
- Molecular Biology Specialty Section

The liver is one of the most widely studied organs in cancer biology since it provides a flexible model for analysis of tumor biology that is amenable to in vitro and in vivo correlative approaches. Because of this, many other fields of cancer biology have been informed by data emerging from studies of the liver. Over the last decade, the inter-related roles between the pathways of apoptosis, cell survival and cell proliferation and their relevance to toxicology have been more rigorously described. Key to this is the interplay between ligand-activated transcription factors such as the peroxisome proliferators activated receptor α (PPARα) and the constitutively active/androstane receptor (CAR) and the networks that initiate and execute apoptosis. Against this background of knowledge, several new findings are particularly resonant. Specifically, increasing evidence suggests a pivotal role for epigenetic modification of DNA and its impact on survival and proliferation. Also of great relevance is the role played by the WNT-signalling pathway in cell signalling and tumorigenesis. Another recent and informative approach involves the use of comparative genomics of human and model organism hepatocellular carcinoma to identify aberrant phenotypes, reflecting molecular pathways that are evolutionarily conserved. This is further illustrated by use of a systems toxicology approach to analysis of liver tumors. This symposium brings together leading experts in human molecular biology and will be of interest both to non-experts looking to gain a greater understanding of tumor biology and those with a specific interest in the liver and mechanisms of carcinogenesis.

**Abstract #27**

**GENOMIC DECODING OF HUMAN LIVER CANCER**

S. S. Thorgerisson. Laboratory of Experimental Carcinogenesis, NCI, Bethesda, MD. Sponsor: R. Roberts.

**Abstract #28**

**SYSTEMS TOXICOLOGY: APPLICATIONS TO RAT MODELS OF CARCINOGENESIS**

Y. Dragan1, R. Beger2, R. Edmondson2, J. Fuscoe2, H. Fang1 and W. Tong1. 1Safety Assessment-U.S., AstraZeneca, Wilmington, DE and 2Systems Toxicology, NCTR/FDA, Jefferson, AR.

Monday Morning, March 17
9:30 AM to 12:15 PM
Room 6B

**SYMPOSIUM SESSION: PARTICLE INTERACTIONS WITH BIOMATERIALS: BEYOND OPSONIZATION**

Chairperson(s): JeanClare Seagrave, Lovelace Respiratory Research Institute, Albuquerque, NM and David Barber, University of Florida, Gainesville, FL.

Endorsed by:
- Inhalation and Respiratory Specialty Section*
- Nanotoxicology Specialty Section

Concern is increasing regarding the potential adverse health effects of materials in the nanoscale range, including both ambient air pollutants and manufactured nanoparticles. The extremely high surface area of these materials relative to their mass suggests the potential for interactions with biological materials. Nanomaterial surface properties, including charge, reactivity, hydrophobicity, and granularity, vary as a function of the source and chemical composition. There is, therefore, potential for some degree of selectivity in the interactions with biological materials, which may influence subsequent responses to the particles. This symposium focuses on recent investigations into these interactions and their biological implications.

**Abstract #29**

**INTRODUCTION**


**Abstract #30**

**THE ADSORPTION OF BIOLOGICAL MACROMOLECULES BY COMBUSTION-DERIVED NANO PARTICLES**

K. Bérubé1 and T. Jones2. 1School of Biosciences, Cardiff University, Cardiff, United Kingdom and 2School of Earth, Ocean and Planetary Sciences, Cardiff University, Cardiff, United Kingdom. Sponsor: J. Seagrave.

**Abstract #31**

**USING PROTEOMIC ANALYSIS TO DETERMINE COMPETITIVE BINDING OF PROTEINS TO NANO PARTICLES**


**Abstract #32**

**SURFACE PROPERTIES CONTROL INTERACTIONS WITH CYTOSKELETAL ELEMENTS**

J. L. McGrath. Biomedical Engineering, University of Rochester, Rochester, NY. Sponsor: D. Barber.

**Abstract #33**

**MECHANISMS AND IMPLICATIONS OF PARTICLE/CHIMERIC INTERACTIONS**

J. Seagrave. Lovelace Respiratory Research Institute, Albuquerque, NM.
Program Description (Continued)

Abstract #
#34 11:45 ROLE OF IRON SEQUESTRATION IN HOST RESPONSE TO PARTICLES AND FIBERS. A. J. Ghio. Human Studies Division, National Health and Environmental Effects Research Laboratory, U.S. Environmental Protection Agency, Research Triangle Park, NC.

Monday Morning, March 17
9:30 AM to 12:15 PM
Room 611

WORKSHOP SESSION: CURRENT PERSPECTIVES ON OCULAR AND SYSTEMIC SAFETY RISKS OF THERAPEUTICS

Chairperson(s): Michael Aleo, Pfizer Global Research & Development, Groton, CT and Christopher Somps, Pfizer Global Research & Development, Groton, CT.

Endorsed by:
Mechanisms Specialty Section
Regulatory and Safety Evaluation Specialty Section*

Ophthalmic safety risks can occur from systemically administered therapeutics while systemic safety risks can occur from ophthalmic therapeutics. Such adverse safety effects identified during the research, development, and marketing phase of a new therapeutic agent may drastically limit further progression or marketing depending upon: the nature and severity of the finding, the stage of development, the proposed indication for the new drug, therapeutic index, and relevance of the lesion to humans based on mechanistic elucidation. The goal of this symposium is to present the Yin and Yang of managing ocular safety risks of systemic therapeutics and systemic/ocular safety risks of ophthalmic therapeutics in the pharmaceutical industry and potential methods for managing risks through mechanistic evaluation.

Specific emphasis will be placed on the following concepts: 1) unexpected lenticular toxicity associated with therapeutic agents intended for systemic administration along with ways to screen potential back-up candidates and risk assessment strategies, 2) unintended systemic toxicity associated with therapeutic agents intended for ophthalmic administration, 3) newest concepts and challenges associated with the development of antisense, nanotechnology, and biologic-based therapeutics for ophthalmic indications, implantable ophthalmic delivery devices and special formulations for ophthalmic delivery and 4) a perspective on how such cases may be viewed by medical reviewers for regulatory agencies. As a workshop this course will promote interaction with the audience to share experiences in managing ocular/systemic safety risks in a pharmaceutical setting.

#35 9:30 CURRENT PERSPECTIVES ON OCULAR AND SAFETY RISKS OF THERAPEUTICS. M. D. Aleo and C. A. Sopns. Drug Safety R&D, Pfizer Global R&D, Groton, CT.

#36 9:40 LENTICULAR TOXICITY OF SYSTEMIC THERAPEUTICS IN THE RAT: CASE STUDY AND MECHANISM-BASED SCREENING APPROACHES. M. D. Aleo. Drug Safety R&D, Pfizer Global R&D, Groton, CT.

#37 10:10 LENTICULAR TOXICITY OF SYSTEMIC THERAPEUTICS IN THE DOG: CASE STUDY AND MECHANISM-BASED SCREENING APPLICATIONS. C. J. Somps. Drug Safety R&D, Pfizer, Groton, CT.


#39 11:10 NONCLINICAL STUDIES FOR OPTHALMIC DRUG DEVELOPMENT. Z. Chen. U.S. FDA, Silver Spring, MD. Sponsor: M. Aleo.

Abstract #
#40 11:40 STRATEGIES FOR NONCLINICAL SAFETY ASSESSMENT OF NOVEL OCULAR PRODUCTS. D. J. Kornbrust. Preclinsight, Reno, NV. Sponsor: M. Aleo.

Monday Morning, March 17
9:30 AM to 12:15 PM
Room 608

WORKSHOP SESSION: LLNA: FALSE POSITIVES, FALSE NEGATIVES, AND ALTERNATIVE ENDPOINTS

Chairperson(s): David Basketter, DABMEB Consultancy, Bedford, United Kingdom and Ian Kimber, The University of Manchester, Manchester, United Kingdom.

Endorsed by:
Dermal Toxicology Specialty Section*
Immunotoxicology Specialty Section

The local lymph node assay (LLNA) is being used increasingly in the identification of skin sensitising chemicals for regulatory purposes. In the context of new chemicals legislation (REACH) in Europe, it is the preferred assay, as it is for an increasing number of regulations and regulatory agencies. An important part of the rationale for this is that the LLNA offers a quantitative and objective approach to skin sensitisation testing allied with the important animal welfare benefits. However, as with certain guinea pig sensitisation tests before it, this increasing use also brings experience with an increasingly diverse range of industrial and non-industrial chemicals where the outcome of the assay does not always necessarily meet with the expectations of those conducting it. Sometimes, the result appears to be a false negative, but recently more common has been the suggestion that some chemicals represent false positives. Typically, this situation can arise when the chemistry and guinea pig test history with similar materials suggests possible overestimation of the hazard. Against this background this session aims to review instances where false positive and false negative results have been described and will attempt to reconcile science with expectation. The consequences of confusion surrounding this subject will be considered in relation to efforts to produce valid non-radioactive endpoints for the LLNA as well as in the context of integrating potency measurement and risk assessments into classification and labelling schemes whose aim is to manage potential risks to human health.

#41 9:30 THE LLNA, FALSE POSITIVES, FALSE NEGATIVES AND ALTERNATIVE ENDPOINTS. D. Basketter. St John’s Institute of Dermatology, St Thomas’ Hospital, London, United Kingdom.

#42 9:45 THE LOCAL LYMPH NODE ASSAY: INTRODUCTION, CONDUCT AND PERFORMANCE. I. Kimber. Central Toxicology Laboratory, Syngenta, Cheshire, United Kingdom.


Abstract # 10:42 VINCLLOZOL (V) INDUCES REPRODUCTIVE MALFORMATIONS AND INFERTILITY WHEN ADMINISTERED DURING SEXUAL BUT NOT GONADAL DIFFERENTIATION, L. E. Gray and J. Furr. ENDOCRINOLOGY BRANCH, NHEERL, ORD, U.S. EPA, Research Triangle Par, NC.

Abstract # 11:06 THE EFFECTS OF SUBACUTE ORAL EXPOSURE TO VINCLLOZOL AND SEXUAL MATURITY ON 11β-HYDOXYSTEROID DEHYDROGENASE 2 ACTIVITY IN THE PORCINE TESTIS, T. J. Evans1, S. Talatum2, E. Walters1, Y. Agea1 and V. Ganjam2. Veterinary Pathobiology, University of Missouri, Columbia, MO and ‘Biomedical Sciences, University of Missouri, Columbia, MO.


Abstract # 11:52 PRENATAL AND LACTATIONAL EXPOSURE TO ETHINYLESTRADIOL, BUT NOT BISPHENOL A, ADVERSELY AFFECTS REPRODUCTIVE MORPHOLOGY AND SPERM PRODUCTION IN THE MALE LONG EVANS HOODED RAT, K. L. Howdeshell, J. Furr1, C. R. Lambright1, V. S. Wilso1, B. C. Ryan1,2, A. K. Hotchkiss1,2 and L. Gray2. Reproductive Toxicology Division, U.S. EPA, Research Triangle Park, NC and North Carolina State University/U.S. EPA Coop. #CT826512010, Raleigh, NC.


Monday Morning, March 17
9:30 AM to 12:15 PM
Room 6E

DEVELOPMENTAL BASIS OF DISEASE

PLATFORM SESSION: DEVELOPMENTAL IMMUNOTOXICOLOGY, HOST RESISTANCE AND GENOMICS

Chairperson(s): Kathleen Gilbert, ACRHI/University of Arkansas for Medical Sciences, Little Rock, AR and WimsInnstt Atttaochat, Virginia Commonwealth University, Richmond, VA.

Abstract # 9:30 IMMUNOSUPPRESSION BY TBT REVEALED BY GENE EXPRESSION PROFILING IN VIVO AND IN VITRO, K. Baken1,2, J. Penning1, H. van Steeg3 and H. van Loveren1,2. 1Health Risk Analysis and Toxicology (GRAT), Maastricht University, Maastricht, Netherlands, 2Laboratory for Health Protection Research, National Institute for Public Health and the Environment (RIVM), Biltbven, Netherlands, and 3Toxicogenetics, Leiden University Medical Center (LUMC), Leiden, Netherlands.

Abstract # 9:54 OVERLAPPING GENE EXPRESSION PROFILES OF IMMUNOTOXIC MODEL COMPOUNDS, H. Van Loveren1,2, K. Baken1,2, J. Penning1, H. Van Steeg3 and T. Breit4. Laboratory for Health Protection Research, National Institute for Public Health and the Environment (RIVM), Biltbven, Netherlands, 2Health Risk Analysis and Toxicology (GRAT), Maastricht University, Maastricht, Netherlands, 3Toxicogenetics, Leiden University Medical Center (LUMC), Leiden, Netherlands and 4MicroArray Department (MAD), University of Amsterdam, Amsterdam, Netherlands.

Abstract # 10:18 COMBINING TRANSCRIPTOMIC AND METABOLOMIC TO DEDLINEATE IMMUNOTOXICITY OF TRICHLOROETHYLENE, K. Gilbert1, B. Przybyla2, J. Fuscoe, T. Han3, L. Schnackenberg4, N. Panf1, J. Doss5, L. Macmillian-Crow1 and S. Blossom7. 1Arkansas Children’s Hospital Research Institute/ University of Arkansas for Medical Sciences, Little Rock, AR, 2FDA-National Center for Toxico logical Research, Jefferson, AR, University of Arkansas for Medical Sciences, Little Rock, AR and 4University of Arkansas, Fayetteville, AR.

Abstract # 10:42 JUVENILE DEVELOPMENTAL IMMUNOTOXICITY TESTING (BIT) IN SD RATS: EFFECT OF DEXAMETHASONE ON INFLUENZA VIRAL CLEARANCE, NK ACTIVITY, CTL ACTIVITY AND T-DEPENDENT VIRAL-SPECIFIC IGM AND IGG ANTIBODY PRODUCTION (TDAR), G. R. Burleson1, F. G. Burleson1 and R. R. Dieters1,2. 1BRT-Burleson Research Technologies, Inc., Morrisville, NC and Cornell University, Ithaca, NY.

Abstract # 10:53 DEVELOPMENTAL AND EARLY LIFE EXPOSURE TO TRICHLOROETHYLENE PROMOTES AN AUTISTIC PHENOTYPE IN MRL+/+ MICE: POTENTIAL ROLE OF OXIDATIVE STRESS IN NEUROIMMUNE DYSFUNCTION, S. Blossom, S. James3, S. L. Jernigan1 and S. Melnyk1. Pediatrics, Arkansas Children’s Hospital Research Institute, Little Rock, AR and 1Pediatrics, Autism Metabolic and Genomics Laboratory at Arkansas Children’s Hospital Research Institute, Little Rock, AR.

Abstract # 11:30 BETA-NAPHTHOFLAVONE CAUSES AN AHR-DEPENDENT INHIBITION OF INVASION AND INTRACELLULAR MULTIPLICATION OF LISTERIA MONOCYTOGENES IN MURINE HEPATOCYTES, L. Z. Shi, C. R. Fecocota2 and C. J. Czyruski3. 1Pathological Sciences, University of Wisconsin-Madison, Madison, WI and 2Pharmacology, University of Wisconsin-Madison, Madison, WI.


Program Description (Continued)

Abstract #
Monday Morning, March 17
9:30 AM to 12:15 PM
Room 2A

PLATFORM SESSION: ECOTOXICITY AND CHEMICAL EXPOSURE

Chairperson(s): Chris Pritsos, University of Nevada, Reno, NV and Louis Trombetta, St. Johns University, New York, NY.

#71 9:30  CHEMICAL TOXICITY DISTRIBUTIONS OF TRADITIONAL AND ALTERNATIVE ENDPOINTS: PARABEN EFFECTS TO AQUATIC ORGANISMS. L. Dobbins, T. W. Valenti, Jr., S. Usenako and B. W. Brooks. Baylor University, Waco, TX.

#72 9:51  SYNERGY OF MALATHION AND DIAZINON MIXTURES IN RAINBOW TROUT. M. Hooper1, K. A. King2 and C. E. Grue1. ‘Texas Tech University, Lubbock, TX and University of Washington, Seattle, WA.

#73 10:12  CHOLESTERASE INHIBITOR PESTICIDE EFFECTS ON REPRODUCTION AND NEONATAL DEVELOPMENT IN NON-TARGET AVIAN SPECIES. J. K. Moy1 and C. A. Pritsos2.1, 2 ‘Nutrition, University of Nevada, Reno, NV and 2 ‘Environmental Sciences and Health Graduate Program, University of Nevada, Reno, NV.

#74 10:33  MALE RAINBOW TROUT EXPOSED IN VIVO TO 17α-ETHYNYLESTRASTRODIOL PRODUCE ANEUPLOID OFFSPRING. K. H. Brown1, J. G. Cloud2,1, R. L. Schultz1,2 and J. J. Nagler1. 1 ‘Biological Sciences, University of Idaho, Moscow, ID and 2 ‘Center for Reproductive Biology, University of Idaho, Moscow, ID.

#75 10:54  CONGENER DISTRIBUTION OF POLYBROMINATED DIPHENYL ETHERS IN CHINOOK SALMON, LAKE TROUT, AND LAKE WHITEFISH FROM LAKE MICHIGAN. Y. Kuo1, M. Sepulveda2,1, T. Sutton2, H. Ochoa-Acuña2 and I. Hua3. 1 ‘School of Civil Engineering, Purdue University, West Lafayette, IN; 2 ‘Department of Forestry and Natural Resources, Purdue University, West Lafayette, IN; 3 ‘School of Fisheries and Ocean Sciences, University of Alaska Fairbanks, Fairbanks, AK and 4 ‘Department of Comparative Pathobiology, Purdue University, West Lafayette, IN. Sponsor: G. Carlson.


#77 11:35  PARENTAL AND TRANSGENERATIONAL EFFECTS OF EXPOSURE TO ENVIRONMENTAL STEROIDS IN TROUT. J. R. Schultz1, K. Brown1 and J. Nagler1. ‘Battelle PND, Sequim, WA and 2 ‘Biological Sciences, University of Idaho, Moscow, ID.

#78 11:55  PHYSICO-CHEMICAL CHARACTERIZATION METHODS RELEVANT FOR TOXICOLOGICAL AND ECO-TOXICOLOGICAL EVALUATIONS OF NANOMATERIALS. C. M. Sayes, R. A. Hoke and D. R. Warheit. DuPont Haskell Laboratory, Newark, DE.

#79 9:30  OXIDATIVE DNA DAMAGE AND ITS REPAIR IN THE SPLLENS OF RATS EXPOSED TO ANILINE. H. Ma1, J. Wang1. 2 ‘Pathology, University of Texas Medical Branch, Galveston, TX and 3 ‘Preventive Medicine and Community Health, University of Texas Medical Branch, Galveston, TX.

#80 9:58  CYTOTOXICITY, OXIDATIVE STRESS, AND GENOTOXICITY IN HUMAN LIVER CARCINOMA (HEPG2) CELLS EXPOSED TO DINITROTOLUENES. K. Y. Glass1 and P. B. Tchounwou2. Biology, Jackson State University, Greenwood, MS.

#81 10:26  3-METHYLINDOLE-INDUCED DNA DAMAGE IN PRIMARY NORMAL HUMAN BRONCHIAL EPITHELIAL CELLS. J. M. Weems and G. S. Iost. University of Utah, Salt Lake City, UT.

#82 10:54  ASSESSMENT OF DNA DOUBLE-STRAND BREAKS AND H2AX INDUCED BY THE TOPOISOMERASE II POISONS ETOPOSIDE AND MITOXANTRONE IN V79 CELLS. D. J. Smart1, K. Brunnemann2, D. Halicka1, Z. Durynekiewicz2, G. Schmuck3 and G. M. Williams4. 1 ‘Department of Pathology, New York Medical College, Valhalla, NY and 2 ‘Bayer HealthCare, Wuppertal, Germany.

#83 11:21  DETECTION OF SINGLE STRAND BREAKS BY AN IMPROVED HYDROXYLAMINE COUPLED ALKALINE GEL ELECTROPHORESIS ASSAY. A. M. Luke1, A. S. Swenberg2,3 and J. Nakamura1. 1 ‘Curriculum in Toxicology, University of North Carolina Chapel Hill, Chapel Hill, NC and 2 ‘Department of Environmental Science and Engineering, University of North Carolina, Chapel Hill, NC.

### Program Description (Continued)

**Abstract #**
Monday Morning, March 17
9:30 AM to 12:30 PM
Exhibit Hall

**POSTER SESSION: ENDOCRINE MECHANISMS OF TOXICITY**

**Chairperson(s):** Tammy Stoker, U.S. EPA, Research Triangle Park, NC and Karen Porter, U.S. Army, Frederick, MD.

**Displayed:** 9:30 AM – 11:00 AM

**Attended:** 9:30 AM – 12:30 PM

**Poster Board Number #85**

**Poster Board Number #88**

**Poster Board Number #86**

**Poster Board Number #87**

**Poster Board Number #89**

**Poster Board Number #89**

**Poster Board Number #90**

**Poster Board Number #90**

**Poster Board Number #91**

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**Poster Board Number #103**

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**Poster Board Number #105**

**Poster Board Number #106**

**Poster Board Number #107**

**Poster Board Number #108**

**Poster Board Number #109**

**Poster Board Number #110**

**Poster Board Number #111**

**Poster Board Number #112**

**Poster Board Number #113**

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**#90** MICROPLATE EDGE EFFECTS IN RANGE FINDING STUDIES USING THE LUMICELL® ER BIOASSAY: INCREASING ASSAY THROUGHPUT. J. D. Gordon¹, M. S. Denison², A. C. Chu¹, M. D. Chu¹, C. M. Matherly¹ and G. C. Clark¹. 'Xenobiotic Detection Systems, Inc., Durham, NC. ²Department of Environmental Toxicology, University of California Davis, Davis, CA and ³Analytical Perspectives, Wilmington, NC.

**#91** EVALUATING DRUG-INDUCED THYROID EFFECTS AND SPECIES DIFFERENCES USING IN VITRO THYROID CULTURE MODELS IN RAT AND HUMAN. J. R. Sinclair¹, S. R. Morris², J. T. Heagle¹, W. Way¹, R. J. Fisher² and A. E. Vickers¹. 'Allergan, Inc., Irvine, CA and ²Vitrion Inc., Tucson, AZ.

**#92** TRICLOSAN ALTERS THYROID HORMONE HOMEOSTASIS VIA UP-REGULATION OF HEPATIC CATABOLISM. K. B. Paul¹, J. M. Hedge², K. M. Crofton³ and M. J. DeVito². ¹Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC, ²Neurotoxicology Division, NHEERL, ORD, U.S. EPA, RTP, NC and ³Experimental Toxicology Division, NHEERL, ORD, U.S. EPA, RTP, NC.


**#94** EFFECT OF A PERI-JUVENILE EXPOSURE OF 2, 4-DICHLOROPHENOXACETIC ACID (2, 4-D) ON THYROID FUNCTION AND REPRODUCTIVE DEVELOPMENT IN THE MALE WISTAR RAT. T. Stoker¹, L. Zorrilla²¹, S. Jeffay¹, R. Cooper¹ and E. Gibson¹. Endocrinology Branch, U.S. EPA, Research Triangle Park, NC and ²North Carolina State University, Raleigh, NC.


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Monday Morning, March 17
9:30 AM to 12:30 PM
Exhibit Hall

**OXIDATIVE SIGNALING AND REDOX BIOLOGY**

**POSTER SESSION: OXIDATIVE STRESS MECHANISMS IN CHEMICAL CARCINOGENESIS**

**Chairperson(s):** Jill Harvilchuck, Purdue University, West Lafayette, IN.

**Displayed:** 9:30 AM–12:30 PM

**Attended:** 11:00 AM–12:30 PM

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**Poster Board Number #98**


**Poster Board Number #99**


**Poster Board Number #100**

**IN VITRO METABOLISM OF THYROID HORMONES BY RECOMBINANT HUMAN UDP-GLOUCORONOSYLTRANSFERASES AND SULFOTRANSFERASES, V. Richardson and M. DeVito. U.S. EPA, RTP, NC.**

**Poster Board Number #101**

**EFFECTS ON HEPATIC DEIODINASE I AND THYROID HORMONE LEVELS IN PERINATALLY EXPOSED RATS TO A PBDE COMMERCIAL MIXTURE, D. T. Szabo1,2, V. M. Richardson1, J. J. Diliberto1, D. Ross2, J. J. Korte2, A. Lindberg-Livingston2 and S. J. Degitz2. 1Bridge Global Pharmaceutical Services, Inc., Minneapolis, MN and 2Pace Analytical Services, Inc., Minneapolis, MN.**

**Poster Board Number #102**


**Poster Board Number #103**

**EFFECTS OF 4-TERT-OCYLPHENOL ON XENOPUS TROPICALIS IN A LONG TERM EXPOSURE. K. Porter1, A. W. Olmstead2, D. M. Kunsher3, W. E. Dennis4, G. W. Holcombe5, J. J. Korte6, A. Lindberg-Livingston7 and S. J. Degitz8. 1U.S. Army Center for Environmental Health Research, Fort Detrick, MD and 2U.S. EPA National Health and Environmental Effects Research Laboratory, Mid-Continent Ecology Division, Duluth, MN.**

**Poster Board Number #104**

**EFFECT OF ARSENIC ON ESTROGEN STIMULATED PROLIFERATION IN HUMAN BREAST TUMOR-DERIVED T47D CELLS, Y. Zang, W. H. Watson and J. D. Yager. Department of Environmental Health Sciences, Division of Toxicology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD.**

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**Poster Board Number #105**

**MEASUREMENT OF MULTIPLE TYPES OF ENDOCRINE ACTIVITIES IN WATER, M. Hering1, S. van der Linden2, B. van der Burg3 and L. Puijker4. 1Kiwa Water Research, Nieuwegein, Netherlands and 2BioDetection Systems, Amsterdam, Netherlands.**

**Poster Board Number #106**


**Poster Board Number #107**

**USE OF A NOVEL MICROPLATE READER-BASED HIGH-THROUGHPUT ESTROGEN RECEPTOR BINDING ASSAY IN PREDICTING COMBINATION EFFECTS. H. Guer-Orhan1, T. Backhaus2 and J. N. Meerman3. 1Toxicology, Ege University, Faculty of Pharmacy, Izmir, Turkey. 2Toxicology, Aachen University of Applied Sciences, Germany and 3Pharmacochemistry, LACDR, Division of Molecular Toxicology, Vrije Universiteit, Amsterdam, Netherlands. Sponsor: A. Karakaya.**

**Poster Board Number #108**

**IN VITRO EFFECTS OF ESTRADIOl PRESENT IN COW’S MILK DETERMINED WITH MICROARRAYS AND A CO-CULTURE SYSTEM OF CACO-2 AND MCF-7 CELLS. D. Scholten1, M. Heneweer2, V. J. Schulz3, M. van den Berg4, A. A. Bergwerff5 and M. B. van Duursen6. 1Toxicology division, Institute for Risk Assessment Sciences, Utrecht, Netherlands and 2Rikilt Institute of Food Safety, Wageningen, Netherlands.**

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**Program Description (Continued)**
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Poster Board Number .....................................127

EXPRESSION OF CYCLINS AND CYCLIN-DEPENDENT KINASES IN RAT SPLEEN FOLLOWING ANILINE EXPOSURE. J. Wang, G. Wang and M. Khan. Pathology, University of Texas Medical Branch, Galveston, TX.

#112

Poster Board Number .....................................128

PROPICONAZOLE-INDUCED CARCINOGENESIS: ROLE OF OXIDATIVE STRESS. M. E. Bruno, P. Chen, T. Moore, S. Nesnow and Y. Ge. EPA, Research Triangle Park, NC.

#113

Poster Board Number .....................................129

MECHANISTIC STUDY ON HEPATOCARCINOGENESIS OF PIPERONYLBUTOXIDE IN MICE. M. Kawai, Y. Saegusa, M. Jin, J. Nishimura, Y. Dewa, M. Shihutani and K. Mitsumori. Laboratory of veterinary pathology, Tohoku University of agriculture and technology, Fuchu city, Tokyo, Japan. Sponsor: M. Takahashi.

#114

Poster Board Number .....................................130

PROTEIN DAMAGE FROM OXIDATIVE STRESS ACCUMULATES IN LUNGS OF MICE EXPOSED TO ELECTROPHILIC TUMOR PROMOTERS DERIVED FROM BHT. C. T. Shearn and J. Thompson. Pharmaceutical Sciences, UCHSC, Denver, CO.

#115

Poster Board Number .....................................131

ALTERATION OF AIRWAY EPITHELIAL HOMEOSTASIS BY VANADIUM PENTOXIDE (VO), Y. Zhao1, L. Zhu1, D. M. Walters2, S. Kleeberger3 and Y. Chen. 1Translational biology, Institutes for Health Sciences, Research Triangle Park, NC and 2National Institute of Environmental Health Sciences, RTP, NC.

#116

Poster Board Number .....................................132

LUNG TUMOR PROMOTION BY CURCUMIN. M. S. Miller, S. T. Dance, N. D. Kock, J. E. Moore, R. B. D’Agostino, Jr., L. J. Mosley and A. J. Townsend. Wake Forest University School of Medicine, Winston-Salem, NC.

#117

Poster Board Number .....................................133

CC10 mRNA AND PROTEIN EXPRESSION IN CLARA CELLS OF CD-1 MICE FOLLOWING EXPOSURE TO STYRENE OR ITS METABOLITES STYRENE OXIDE OR 4-VINYLPHENOL. J. Harvichuck, R. Zurbrugg and G. Carlson. Health Sciences, Purdue University, West Lafayette, IN.

#118

Poster Board Number .....................................134

EFFECTS OF ESTRADIOL ON TCDD-INDUCED OXIDATIVE STRESS IN LIVER CELLS. M. Goettel1, M. Chagnon1 and D. Schreier2. 1Food Chemistry and Toxicology, University of Kaiserslautern, Kaiserslautern, Germany and 2Food Toxicology, ENSBANA, University of Burgundy, Dijon, France.

Abstract #

Poster Board Number .....................................135

CHEMOPREVENTION OF GASTROESOPHAGEAL REFLUX-INDUCED ESOPHAGEAL ADENOCARCINOMA BY α-TOCOPHEROL, N-ACETYLECYSSTEINE, AND OMEPRAZOLE IN RAT MODEL. J. Hao1, B. Zhang2, B. Liu3, M. Li4, X. Chen5 and C. Yang. 1Joint Graduate Program in Toxicology, Department of Chemical Biology, Ernest Mario School of Pharmacy, Rutgers, the State University of New Jersey, Piscataway, NJ and 2Cancer Research Program, L. Chambers Biomedical/Biotechnology Research Institute, North Carolina Central University, Durham, NC.

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#120

Poster Board Number .....................................137

THE ROLE OF KUPFFER CELLS IN ETHANOL-INDUCED HEPATOCARCINOMA GROWTH. S. M. Cortals, S. E. Owumi, Z. Wang, J. E. Klaunig and L. M. Kamendulis. Pharmacology and Toxicology, Indiana University School of Medicine, Indianapolis, IN.

#121

Poster Board Number .....................................138

LONG-TERM, LOW-LEVEL EXPOSURE OF URATOSA CELLS TO MONOMETHYLARSONOUS ACID PRODUCES PROTEIN CARBONYL MODIFICATIONS AND OXIDATIVE DAMAGE TO DNA. S. M. Wnek, K. E. Eblin, D. W. Cromey and A. J. Gandolfi. Pharmacology and Toxicology, University of Arizona, Tucson, AZ.

#122

Poster Board Number .....................................139

CHRONIC EXPOSURE TO MONOMETHYLARSONOUS ACID INDUCES CHANGES IN HUMAN URATOSA CELLS CONSISTENT WITH UROTHELIAL TUMORIGENESIS. S. Bogfjell, K. Eblin, X. Zheng and A. Gandolfi. University of Arizona, Tucson, AZ.

#123

Poster Board Number .....................................140

PROTECTIVE EFFECTS OF BLACK TEA ON OXIDATIVE DAMAGE IN HUMAN UROTHELIAL EPITHELIAL CELLS. Z. Wang, J. Meng, Z. Jiao, Y. Xu, L. M. Kamendulis and J. E. Klaunig. Pharmacology and Toxicology, Indiana University School of Medicine, Indianapolis, IN.
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**Poster Board Number #131**

**Poster Board Number #132**

**Poster Board Number #133**
EFFICACY OF NOVEL PYRIDINIUM OXIMES TO REACTIVATE RAT BRAIN AND RED BLOOD CELL ACETYLCHOLINESTERASE INHIBITED BY ORGANOPHOSPHATES. E. C. Meek1, H. W. Chambers2, J. S. Manion1 and J. E. Chambers1. 1Center for Environmental Health Sciences, Mississippi State University, Mississippi State, MS and 2Department of Entomology, Mississippi State University, Mississippi State, MS.

**Poster Board Number #134**
A SULFUR MUSTARD AND THERMAL SUPERFICIAL DERMAL INJURY PIG MODEL. F. M. Reid1, R. C. Kiser1, W. E. Hart1, E. E. McGuinness1, J. Mann1 and J. S. Graham1. 1Biomedical Research Center, Battelle, West Jefferson, OH and 2Medical Toxicology Branch, U.S. Army Medical Research Institute of Chemical Defense, APG, MD.

**Poster Board Number #135**
MECHANISM OF INHIBITION OF THIOREDOXIN REDUCTASE IN LUNG EPITHELIAL CELLS BY THE VESICANT 2-CHLOROETHYL ETHYL SULFIDE. Y. Jan1, J. P. Gray1, A. T. Black1, D. R. Gerecke1, R. P. Casillas2, D. L. Laskin1 and J. D. Laskin1. 1Pharmacology & Toxicology, Rutgers University, Piscataway, NJ. 2Biomedical Science and Technology, Battelle Biomedical Research Center, Columbus, OH and 'Environmental & Occupational Medicine, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ.

**Poster Board Number #136**
RADIATION PROTECTION AGAINST EARLY AND LATE EFFECTS OF IONIZING RADIATION BY GENISTEIN. M. R. Landauer1, M. Barshishat-Kupper1, S. R. Mog1, E. A. McCall1, P. G. Prassanna1, T. A. Davis2 and R. M. Day2. 1Armed Forces Radiobiology Research Institute, Bethesda, MD and 2Uniformed Services University, Bethesda, MD and 'Naval Medical Research Center, Bethesda, MD.
Program Description (Continued)

Abstract #

#137
Poster Board Number .......................#144
ACUTE TOXIC EFFECTS OF VX VAPOR
IN RATS—INTERACTIONS OF EXPOSURE
CONCENTRATION AND DURATION. L. Foo,
W. Sew, M. Ho and W. Loke. Defence Medical &
Environmental Research Institute, DSO National

#138
Poster Board Number .......................#145
QUANTITATION OF THE
BIOMARKER ETHYL
METHYLPHOSPHONOFOSFATE IN
RED BLOOD CELLS FOLLOWING AN
ACCIDENTAL EXPOSURE TO THE NERVE
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M. Jakubowski and S. Thomson. U.S. Army ECBC,
APG, MD.

#139
Poster Board Number .......................#146
EFFICACY COMPARISON OF RSDL
M291 SDK, 0.5% BLEACH AND 1% SOAPY
WATER CHALLENGED WITH SOMAN,
CYCLOSARIN, VX, AND RUSSIAN VX. E. H.
Braue, B. F. Dorzon, K. A. Hansen, H. L. Lumpkin,
M. A. Sigler and E. Clarkson, Analytical Toxicology
Division, U.S. Army Medical Research Institute of
Chemical Defense, Aberdeen Proving Ground, MD.
Sponsor: A. Sciuto.

#140
Poster Board Number .......................#147
DEVELOPMENT OF SELECTIVE
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W. Yantasee, R. S. Addleman, G. E. Fryxell and C.
Timchalk. Pacific Northwest National Laboratory,
Richland, WA.

#141
Poster Board Number .......................#148
SUB-ACUTE SARIN EXPOSURE
TRIGGERS NEUROCHEMICAL AND
NEUROPATHOLOGICAL CHANGES IN THE
RAT BRAIN. M. B. Abou-Donia1, A. K. Shetty2 and
A. A. Abdel-Rahman1. 1Pharmacology and Cancer
Biology, Duke University Medical Center, Durham,
NC and 2Department of Surgery, Duke University
Medical Center, Durham, NC.

#142
Poster Board Number .......................#149
EFFECTIVENESS OF RSDL TOPICAL
SKIN DECONTAMINANT AT REDUCING
MORTALITY IN RATS WHOLE-BODY
EXPOSED TO VX VAPOR. B. J. Benton1, D.
R. Sommerville1, R. J. Mioduszewski1 and S. A.
Thomson1. 1Operational Toxicology, Edgewood
Chemical and Biological Center, Aberdeen Proving
Ground, MD and 2Modeling Simulation and
Analysis, Edgewood Chemical and Biological
Center, Aberdeen Proving Ground, MD.

#143
Poster Board Number .......................#150
RICIN STABILITY AND BIO-ACTIVITY
AFTER TREATMENT AS DETERMINED
BY A NEUTRAL RED UPTAKE ASSAY. J. S.
Madren-Whalley1, V. H. Bevilacqua1, J. S. Rice1,
A. M. Schenning2 and L. M. Reilly2. 1Molecular
Engineering Team, Edgewood Chemical Biological
Center, Aberdeen Proving Ground, MD, 2Chemical
Methodology Team, Edgewood Chemical Biological
Center, Aberdeen Proving Ground, MD and 3SAIC,
Gunpowder, MD. Sponsor: J. Weeks-Sekowski.

#144
Poster Board Number .......................#222
STUDIES ON THE EFFECT AND
MECHANISM OF LONG-TERM EXPOSURE
TO DEPLETED URANIUM ON BONE
METABOLISM AND BONE MINERAL
INJURY. Z. Guo-ying, W. Jin-hai, X. Xi-qiao and
C. Xiao. Institute of Radiation Medicine, Fudan
University, Shanghai, China. Sponsor: G. Nordberg.

#145
Poster Board Number .......................#223
MACHINE LEARNING ALGORITHMS
IDENTIFY EXPOSURE AND POTENTIAL
MECHANISMS OF GF VX TOXICITY
IN RAT BRAIN. J. W. Sekowski1, A. Jensenius2, A.
Brodzik1, C. Whalley1, J. Horson1, M. Horson1,
M. Orehek1, M. Valley1, M. Nau1, W. Muse1, D.
Miller1, R. Mioduszewski1, J. Valdes3 and O. Peters2.
1ECBC, U.S. Army, APG-EA, MD, 2MITRE,
McClean, VA and 3Gene Array Facility, WRAIR,
Rockville, MD.

#146
Poster Board Number .......................#224
UPREGULATION OF THE
5-LIPOXYGENASE LEUKOTRIENE
BIOSYNTHETIC PATHWAY BY THE
VESICANT 2-CHLOROETHYL ETHYL
SULFIDE IN MOUSE KERATINOCYTES. A.
T. Black1, L. B. Joseph1, J. P. Gray1, D. R. Gerecke1,
R. P. Cassilas1, D. L. Laskin1 and J. D. Laskin1.
1Pharmacology & Toxicology, Rutgers University,
Piscataway, NJ, 2Biomedical Science & Technology,
Battelle Biomedical Research Center, Columbus,
OH and 3Environmental & Occupational Medicine,
UMDNJ-Robert Wood Johnson Medical School,
Piscataway, NJ.

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Poster Board Number .......................#225
THIOREDOXIN REDUCTASE REDUCES
SULFUR MUSTARD IN VITRO TO YIELD
CARBON-BASED FREE RADICALS.
A. A. Brinfield1 and S. Soni2. 1Pharmacology,
USAMRICD, Aberdeen Proving Ground, MD and
2Analytical Toxicology, USAMRICD, Aberdeen
Proving Ground, MD.

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Poster Board Number .......................#226
EFFECTS OF VX ON ACOUSTIC STARTLE
RESPONSE AND OPERANT BEHAVIOR IN
RATS. J. L. Langston, N. Connis, T. Shih and L. A.
Lumley. U.S. Army Medical Research Institute of
Chemical Defense, Aberdeen Proving Ground, MD.

#149
Poster Board Number .......................#227
NITRITE-MEDIATED ANTAGONISM OF
CYANIDE INHIBITION OF CYTOCHROME
C OXIDASE. H. B. Leavesley, L. Li, K.
Prabhakaran, L. Zhang, X. Zhang, J. L. Borowitz,
and G. E. Isom. Medicinal Chemistry and Molecular
Pharmacology, Purdue University, West Lafayette,
IN.

#150
Poster Board Number .......................#228
TREATMENT WITH TERTIARY OXIMES
PREVENTS SEIZURES AND IMPROVES
SURVIVAL FOLLOWING SARIN
INTOXICATION. T. Shih, A. G. Yahyavi, M.
Pharmacology Branch, U.S. Army Med Res Inst
Chem Defn, Aberdeen Proving Ground, MD.
Program Description (Continued)

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#151  
**Poster Board Number: 229**  
SULFUR MUSTARD ANALOG-CAUSED ACTIVATION OF SIGNALING CASCADES IN SKI-1 HAIRLESS MOUSE SKIN. A. Pall1, C. Agarwal1, S. Rana2, M. Gu3, N. Tewari-Singh1, C. W. White4 and R. Agarwal1. 1Pharmaceutical Sciences, UCDHSC, Denver, CO and 2National Jewish Medical and Research Center, Denver, CO. Sponsor: V. Vasilion.

#152  
**Poster Board Number: 230**  

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**Poster Board Number: 233**  
SULFUR MUSTARD INDUCED CHANGES IN LAMININ-332 IN THE MOUSE EAR VESICANT MODEL (MEVM). D. R. Greep2, C. L. Sabourin1, K. K. Svoboda1, S. Lou1, M. K. Gordon1, R. P. Casillas1 and Y. Chang1. 1Pharmacology & Toxicology, Rutgers University, Piscataway, NJ, 2Battelle Biomedical Research Institute of Chemical Defense, APG, MD.

#156  
**Poster Board Number: 234**  
DEVELOPMENT OF HUMAN IN VITRO 3D LUNG MODELS TO ASSESS LUNG INJURY AND EVALUATE THERAPEUTICS AGAINST SOMAN AND SOMAN SIMULANT EXPOSURE. P. Dhosean1, B. F. Culp1, X. Shi1, A. M. Scuito2, R. K. Gordon1 and M. P. Namibi1. 1Pharmacology & Toxicology, Rutgers University, Piscataway, NJ, 2Battelle Biomedical Research Institute of Chemical Defense, APG, MD.

#157  
**Poster Board Number: 235**  
POST-EXPOSURE PROPHYLAXIS WITH A COMBINATION VACCINE-ANTIBIOTIC REGIMEN INCREASES SURVIVAL OF RABBITS CHALLENGED WITH AEROSOLIZED B. ANTHRACIS SPORES. P. Sabourin, D. S. Read, J. M. Mott, K. H. Clement and G. V. Stark. Battelle, Columbus, OH.

#158  
**Poster Board Number: 236**  
RAPID ASSESSMENT OF THE EFFECTS OF RADIATION EXPOSURE VIA FLOW CYTOMETRIC ANALYSIS OF WHOLE BLOOD. J. C. Bemis1, Y. Chen1, S. M. Bryce1, O. Hyrien2, J. Palis2 and S. D. Dertinger1. 1Litron Laboratories, Rochester, NY and 2University of Rochester Medical Center, Rochester, NY.

#159  
**Poster Board Number: 237**  
SIMULTANEOUS DETERMINATION OF CYANIDE, THIOCYANATE AND 2-AMINOTHIAZOLE-4-CARBOXYLIC ACID (ATCA) BY HPLC. D. M. Hinkens and B. A. Logue. Chemistry and Biochemistry, South Dakota State University, Brookings, SD.

#160  
**Poster Board Number: 238**  
AEOL 10150 RESCUES THE LUNG FROM HALF-MUSTARD (2-CHLOROETHYL ETHYL SULFIDE)-INDUCED INJURY. N. Gould1,2, H. O’Neil1,2, R. Rancourt1, J. Loadert1, T. Hendry-Hofer4, C. W. White1,2 and B. J. Day1,2,3. 1Medicine, University of Colorado Health Sciences Center, Denver, CO, 2Pharmaceutical Sciences, University of Colorado Health Sciences Center, Denver, CO, 3Medicine, National Jewish Medical and Research Center, Denver, CO and 4Pediatrics, National Jewish Medical and Research Center, Denver, CO.

#161  
**Poster Board Number: 239**  
SURFACE ENHANCED RAMAN SPECTROSCOPY AS A FIELD SENSOR FOR THE DETECTION OF CYANIDE EXPOSURE. C. V. Vinnakota1 and B. Logue1. 1Chemistry, South Dakota State University, Brookings, SD and 2Chemistry, South Dakota State University, Brookings, SD.

#162  
**Poster Board Number: 240**  
STERICALLY STABILIZED LIPOSOMES ENCAPSULATING RHODANASE FOR CYANIDE ANTAGONISM. I. Petrovkic1,2, M. Budai1,2. 1Chemistry, University of Dayton, Dayton, OH and 2Chemistry, University of Dayton, Dayton, OH.

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Monday Morning, March 17
9:30 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: IMMUNOTOXICOLOGY

Chairperson(s): Courtney Sulentic, Wright State University, Dayton, OH and Timothy Pastor, Syngenta Crop Protection, Greensboro, NC.

Displayed: 9:30 AM–12:30 PM
Atended: 11:00 AM–12:30 PM

#163  
**Poster Board Number: 301**  
2, 3, 7, 8-TETRACHLORODIBENZO-P-DIOXIN-MEDIATED IMPAIRMENT OF B CELL DIFFERENTIATION THROUGH DEREGLULATION OF PAIRED BOX GENE 5 (PAX5), M. A. Manzan1, D. Schneider1,2 and N. E. Kaminiski1,2. 1Center for Integrative Toxicology, Michigan State University, East Lansing, MI and 2Pharmacology and Toxicology, Michigan State University, East Lansing, MI.
Program Description (Continued)

Abstract # Poster Board Number .................................................. 302
#164 A COX-2 METABOLITE OF 2-ARACHIDONYL GLYCEROL IS INVOLVED IN THE SUPPRESSION OF IL-2 SECRETION IN ACTIVATED JURKAT T CELLS. P. Raman1,2, C. E. Rockwell1, B. L. Kaplan1,2 and N. E. Kaminiski1,2. 1Pharmacology and Toxicology, Michigan State University, East Lansing, MI. 2Center for Integrative Toxicology, Michigan State University, East Lansing, MI and 3Pharmacology, Toxicology, & Therapeutics, University of Kansas Medical Center, Kansas City, KS.

Abstract # Poster Board Number .................................................. 303
#165 ROLE OF NF-κB/REL PROTEINS IN MEDIATING THE REPRESSIVE EFFECTS OF TCDD ON 3′IGHR ACTIVATION. R. Salisbury, E. J. Romer and C. E. Sulentic. Pharmacology & Toxicology, Wright State University, Dayton, OH.

Abstract # Poster Board Number .................................................. 304
#166 3,4-DICHLOROPROPANAMIDE ALTERS T CELL ACTIVATION BY INHIBITING THE Ca2+ INFUX PATHWAY. T. L. Lewis1,2, K. M. Brundage1,2, R. Brundage1,2 and J. B. Barnett1,2. 1Microbiology, Immunology and Cell Biology, West Virginia University, Morgantown, WV and 2Center for Immunopathology & Microbial Pathogenesis, West Virginia University, Morgantown, WV.

Abstract # Poster Board Number .................................................. 305
#167 TCDD-INDUCED MODULATION OF THE HUMAN POLYMORPHIC HSI, 2 ENHANCER WITHIN THE 3′IGH REGULATORY REGION. T. Fernando, R. Fecher and C. E. Sulentic. Pharmacology & Toxicology, Wright State University, Dayton, OH.

Abstract # Poster Board Number .................................................. 306
#168 EFFECT OF TCDD ON THE TRANSCRIPTIONAL ACTIVITY OF THE 3′IGHR ENHANCER ELEMENTS HS3 AND HSI, 2. T. Fernando and C. E. Sulentic. Pharmacology & Toxicology, Wright State University, Dayton, OH.

Abstract # Poster Board Number .................................................. 307
#169 EVALUATION OF POSSIBLE MODES OF ACTION FOR PFOS-INDUCED HUMORAL IMMUNOSUPPRESSION. M. Feden-Adams1,2, M. Mollenhauer1, E. Driscoll1, S. G. Bradshaw1, J. Berger1, P. A. Fair1 and D. E. Keil1. 1MUSC, Charleston, SC, 2College of Charleston, Charleston, SC, 3NOS/NOAA, Charleston, SC and 4UNLV, Las Vegas, NV.

Abstract # Poster Board Number .................................................. 308
#170 DRUG METABOLISM AND IMMUNE RESPONSE CROSSTALK: THE ROLE OF PREGNANE X RECEPTOR IN MIC-HI TRANSCRIPTIONAL REGULATION. E. Fuentes-Mattei1,2 and B. D. Jimenez1,2. 1Biochemistry, School of Medicine, UPR Medical Sciences Campus, San Juan, PR and 2Center for Environmental and Toxicalogical Research, UPR Medical Sciences Campus, San Juan, PR.

Abstract # Poster Board Number .................................................. 310
#172 MECHANISMS OF DITHIOCARBAMATE IMMUNOMODULATION: ALTERED CELLULAR RED-OX STATUS. S. B. Pruett1,2, R. Fan1 and B. Cheng1. 1Department Basic Sciences, College Vet. Med., Mississippi State U., Mississippi State, MS and 2Cellular Biology & Anatomy, LSU Health Sciences Center, Shreveport, LA.

Abstract # Poster Board Number .................................................. 311
#173 ALTERATIONS IN POLY I:C-INDUCED CYTOKINE PRODUCTION BY ACUTE ETHANOL ADMINISTRATION: ROLE OF NEUROENDOCRINE MEDIATORS, M. Glover1,2 and S. B. Pruett1,2. 1Department Basic Sciences, College Vet. Med., Mississippi State U., Mississippi State, MS and 2Cellular Biology & Anatomy, LSU Health Sciences Center, Shreveport, LA.

Abstract # Poster Board Number .................................................. 312
#174 IMMUNE FUNCTION IN INTACT AND PPARα KNOCKOUT MICE EXPOSED TO PFOSA, J. DeWitt1, C. B. Copeland1 and R. W. Luebke1. 1Curriculum in Toxicology, UNC-CH, RTP, NC and 2Immunotoxicology Branch/ETD/NHEERL/ORD, U.S. EPA, RTP, NC.

Abstract # Poster Board Number .................................................. 313
#175 HISTOLOGIC FEATURES OF THE DEVELOPING IMMUNE SYSTEM OF RATS. G. A. Parker1, C. A. Picut1, K. L. Scully1 and D. J. Veney2. 1Pathology, WIL Research-Biotechnics, Hillsborough, NC and 2Developmental & Reproductive Toxicology, WIL Research, Ashland, OH.

Abstract # Poster Board Number .................................................. 314
#176 EFFECTS OF GLUTATHIONE DEPLETION ON PULMONARY AND SPLENIC INFAMMATORY CELLS FOLLOWING EXPOSURE TO DIESEL EXHAUST. H. Neff-Lanford1, L. M. Corey1, C. C. White1, J. Stewart1, D. Kaufman, M. E. Rosenfeld and T. J. Kavanaugh. Environmental & Occupational Health Sciences, University of Washington, Seattle, WA.

Abstract # Poster Board Number .................................................. 315
#177 IMMUNOTOXIC EFFECTS AFTER UTERO AND LACRATIONAL EXPOSURE TO ENDOSULFAN IN LYMPH NODES, SPLEEN AND THYMUS OF IMMATURE RATS. A. Lafuente1, T. Cabaleiro1, A. Caride1, A. Romero1 and A. Anadon1. 1Toxicology Laboratory, Faculty of Sciences, Vigo University, Orense, Spain and 2Department of Toxicology and Pharmacology, Faculty of Veterinary Medicine, Universidad Complutense, Madrid, Spain.

Abstract # Poster Board Number .................................................. 316
#178 METALLOTHIONEIN EXPRESSION AFFECTS THE INNATE IMMUNE RESPONSE TO INFECTION. G. Marusov1, X. Yin1, R. Emeny1, D. A. Lawrence2 and M. Lynes1,3. 1Molecular and Cell Biology, University of Connecticut, Storrs, CT and 2Wadsworth Center, Albany, NY.
Program Description (Continued)

Abstract #
#179
Poster Board Number .........................................................317
EXPOSURE TO ENVIRONMENTAL BACTERIA IS ASSOCIATED WITH TNF-
ALPHA AND IL-6 PRODUCING CAPACITY IN INFANCY. M. H. Lappalainen1, M. Roponen1, A. Hyvärinen1, A. Nevalainen1, O. Laine1, J. Pekkanen1, T. Palonen1 and M. Hirvonen1, 2, 3. 1Department of Environmental Health, National Public Health Institute, Kuopio, Finland, 2School of Public Health and Clinical Nutrition, University of Kuopio, Kuopio, Finland and 3Department of Environmental Science, University of Kuopio, Kuopio, Finland. Sponsor: M. Viluksela.

#180
Poster Board Number .........................................................318

#181
Poster Board Number .........................................................319
PRENATAL EXPOSURE TO CIGARETTE SMOKE SUPPRESSES CYTOTOXIC T-LYMPHOCYTE (CTL) ACTIVITY IN THE OFFSPRING POSSIBLY VIA INCREASED NUMBERS OF T-REGULATORY CELLS. S. P. Ng, A. E. Silverstone, Z. Lai and J. T. Zelikoff. 1Department of Environmental Medicine, New York University School of Medicine, Tuxedo, NY and 2Department of Microbiology & Immunology, SUNY Upstate Medical University, Syracuse, NY.

#182
Poster Board Number .........................................................320
COMPARISON OF 28S rRNA CLEAVAGE BY RICIN AND TRICHTHOCYTHENE DEOXYNIVALENOL IN RAW 264.7 MACROPHAGES. M. Li1, 2 and J. Pesta1, 2, 3. 1Department of Food Science and Human Nutrition, Michigan State University, East Lansing, MI, 2Department of Microbiology & Immunology, Michigan State University, East Lansing, MI and 3Center for Integrative Toxicology, Michigina State University, East Lansing, MI.

#183
Poster Board Number .........................................................321
TOXICOLOGICAL EFFECTS OF NAPHTHALENE ON INNATE IMMUNITY OF FISH (Centropomus parallelus). EVALUATION BY FLOW CYTOMETRY. L. C. Sá-Rocha, V. M. Sá-Rocha, D. Kinoshita and S. F. Affonso. Pathology, School of Veterinary Medicine - São Paulo University, São Paulo, Brazil. Sponsor: S. Barros.

#184
Poster Board Number .........................................................322

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Abstract #
#186
Poster Board Number .........................................................317
ARSENITE EXPOSURE DECREASES FUNCTIONAL ACTIVATION RESPONSE AND BACTERICIDAL CAPABILITY OF LPS-STIMULATED J774A.1 MURINE MACROPHAGES. L. C. Acosta-Saaedra1, P. C. Conde1, J. Estrada1 and E. S. Calderon-Aranda1, 2. 1Toxicología, Cinvestav, Mexico, DF, Mexico and 2Departamento de Immunología, ENCB, IPN, Mexico, D.F, Mexico. Sponsor: L Del Razo.

#187
Poster Board Number .........................................................318

#188
Poster Board Number .........................................................319
EXPOSURE TO CARBON BLACK NANOPARTICLES ACTIVATES ANTIGEN-PRESENTING CELLS IN VIVO AND IN VITRO. E. Koike1, H. Takano1, K. Inoue1, R. Yamasawa1, M. Sakurai1 and T. Kobayashi1. 1Environmental Health Sciences Division, National Institute for Environmental Studies, Tsukuba, Japan, Ibaraki, Japan and Integrated Research Institute, Tokyo Institute of Technology, Yokohama, Japan. Sponsor: J. Yonemoto.

#189
Poster Board Number .........................................................320
SUPPRESSION OF B CELL DIFFERENTIATION BY 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN. J. E. Suárez1 and N. E. Kaninski2. 1University of Puerto Rico at Cayey, Guayama, PR and 2Department of Pharmacology & Toxicology, Michigan State University, East Lansing, MI.

#190
Poster Board Number .........................................................321
SUBCELLULAR LOCALIZATION OF THE AMIDE CLASS HERBICIDE 3,4-DICHLOROPROPIONANILIDE (DCPA) IN T CELLS. M. L. Hanson1, C. J. Peer2, K. M. Brandage1, R. Schauer2, S. A. Eremin1 and J. B. Barrenet1. 1Microbiology, Immunology & Cell Biology, West Virginia University, Morgantown, WV, 2Basic Pharmaceutical Sciences, West Virginia University, Morgantown, WV and 3Chemical Enzymology, Moscow State University, Moscow, Russian Federation.

#191
Poster Board Number .........................................................322
EVALUATION OF VIRAL REACTIVATION BY MURINE INF AND AN α4 INTEGRIN MONOCLONAL ANTIBODY IN A MCMV HOST RESISTANCE MODEL. N. G. Wehner1, G. Burleson1, J. Clarke1 and C. Hurst1. Biogen Idec, Cambridge, MA; Elan, South San Francisco, CA and 2Burleson Research Technologies, Morrisville, NC.

#192
Poster Board Number .........................................................323
AUGMENTATION OF INFLAMMATORY MEDIATORS IN AQUEOUS HUMOR AND DIFFERENTIAL REMODELING OF THE CORNEAL STROMA IN RESPONSE TO SULFUR MUSTARD EXPOSURE. D. Milhorn1, M. R. Nelson1, K. A. Whitten1 and T. A. Hamilton1. 1Research, USAMRICD, Aberdeen Proving Grounds, MD and 2Comparative Medicine, USAMRICD, Aberdeen Proving Grounds, MD, Sponsor: W. Smith.
Program Description (Continued)

Abstract

#193

**Poster Board Number** ........................................... 331

**EF**ECT OF TARGETED ANTI-INFLAMMATORY AGENTS IN A RAT STREPTOCOCCAL HOST RESISTANCE MODEL: IL-1RA, ANTI-TNF, OR COMBINED IL-1RA AND ANTI-TNF. W. J. Komocsar1, F. G. Barleson2, P. S. Struve3 and D. Wierda4. Investigative Toxicology - Immunomodulation Group, Eli Lilly and Company, Greenfield, IN and 2Burleson Research Technologies, Inc., Morrisville, NC.

#194

**Poster Board Number** ........................................... 332


#195

**Poster Board Number** ........................................... 333

**DEVELOPMENT OF TOLERANCE TO δ9-THC-INDUCED SUPPRESSION OF IN VIVO AND IN VITRO HUMORAL IMMUNE RESPONSES, C. M. Sheeh and K. L. White. Pharmacology & Toxicology, Virginia Commonwealth University, Chesterfield, VA.

#196

**Poster Board Number** ........................................... 334

**A CONSTITUTIVELY ACTIVE AHR EXPRESSED IN T CELLS INCREASES PERCENTAGE OF CD25+CD4+ T CELLS BUT DOES NOT SUPPRESS ANTIBODY PRODUCTION UPON OVA-IMMUNIZATION OF MICE.** K. Nohara1,2, K. Ao3, Y. Miyamoto1, K. Inouye1, X. Pan1, H. Motohashi2, M. Yamamoto2 and C. Tohyama1. 1National Institute for Environmental Studies, Tsukuba, Japan; 2University of Tsukuba, Tsukuba, Japan and 3University of Tokyo, Tokyo, Japan.

#197

**Poster Board Number** ........................................... 335

**ENHANCED HOST RESISTANCE TO LISTERIA MONOCYTOGENES (LM) FOLLOWING EXPOSURE TO THE POTENT IMMUNOSUPPRESSIVE COMPOUNDS BENZOA/PYRENE AND DIBENZ(A, H)ANTHRACENE IN FEMALE B6C3F1 MICE.** W. Auttachao1, D. Roesh, R. D. Brown and K. L. White. Pharmacology & Toxicology, Virginia Commonwealth University, Richmond, VA.

#198

**Poster Board Number** ........................................... 336

**THE EFFECTS OF PERFLUOROOCTANE SULFONATE EXPOSURE ON INFLAMMATION IN B6C3F1 MICE.** M. Mollenhauer1, J. A. Cook2, P. A. Fair2 and M. Peden-Adams3. 1MUSC, Charleston, SC and 2NOS/NOAA, Charleston, SC.

#199

**Poster Board Number** ........................................... 337

**HPLC/DAD STUDY ON COVALENT BINDINGS OF SENSITIZING CHEMICAL SUBSTANCES TO SERUM ALBUMIN.** T. Isse, O. Tsunehiro, T. Pham and T. Kawamoto. Department of Environmental Health, School of Medicine, University of Occupational and Environmental Health, Kitakyushu, Japan.

Abstract

#200

**Poster Board Number** ........................................... 338

**AN ELECTROPHORETIC STUDY ON COVALENT BINDINGS OF SENSITIZING CHEMICAL SUBSTANCES TO ALBUMIN.** T. Kawamoto, T. Oyama, T. Isse and T. Pham. Department of Environmental Health, University of Occupational and Environmental Health, Kitakyushu, Japan.

Monday Morning, March 17

9:30 AM to 12:30 PM

Exhibit Hall

**POSTER SESSION: ANIMAL MODELS**

Chairperson(s): Joshua Gray, Rutgers University, Piscataway, NJ and Wei Zou, Michigan State University, East Lansing, MI.

Displayed: 9:30 AM–12:30 PM

Attended: 9:30 AM–11:00 AM

#201

**Poster Board Number** ........................................... 406


#202

**Poster Board Number** ........................................... 407

**OCULAR PHOTOTOXICITY: ROLE OF PIGMENTATION AND OBSERVED PHOTOTOXICITY INDUCED BY 8-METHOXYPSORALEN.** C. P. Sambuco1, D. B. Learn1, J. D. Wilson2, P. D. Forbes3, S. Bistner4, K. Frazier5 and A. M. Hoberman6. 1Center for Photobiology, Charles River Laboratories Preclinical Services, Horsham, PA and 2GlaxoSmithKline, King of Prussia, PA.

#203

**Poster Board Number** ........................................... 408

**CHRONIC INTERMITTENT EXPOSURE TO SOLAR-SIMULATED ULTRAVIOLET AND VISIBLE RADIATION INDUCES OCULAR CHANGES IN ALBINO BUT NOT PIGMENTED MICE, D. B. Learn1, J. D. Wilson2, C. P. Sambuco1, P. D. Forbes3, S. Bistner4, K. Frazier5, W. R. Brown6 and A. M. Hoberman6. 1Center for Photobiology, Charles River Laboratories Preclinical Services, Horsham, PA; 2GlaxoSmithKline, King of Prussia, PA and 3Research Pathology Services, New Britain, PA.

#204

**Poster Board Number** ........................................... 409

**DEVELOPING IN VIVO CEEs-INDUCED SKIN TOXICITY MOUSE MODELS.** S. Rana1, N. Tewari-Singh1, M. Gu1, D. J. Orlicky1, C. W. White2 and R. Agarwal1. 1Pharmaceutical Sciences, UCDHSC, Denver, CO and 2National Jewish Medical and Research Center, Denver, CO. Sponsor: V. Vasiliou.

#205

**Poster Board Number** ........................................... 410

**DEVELOPMENT OF AN ANIMAL MODEL OF ABRASED SKIN.** P. Glerup, C. Skytte and A. Makin. LAB Research (Scantox), Lille Skensved, Denmark. Sponsor: G. Washers.
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<td><strong>TEMPORAL CHANGES IN MITOCHONDRIAL STRUCTURE, FUNCTION, AND MUTATIONS FOLLOWING IN UTERO EXPOSURE OF FEMALE CD-1 MICE TO AZT, 3TC, OR AZT/3TC.</strong> S. M. Torres¹, R. L. Division², C. L. McCash¹, T. Einem³, D. M. Walker¹, M. C. Poirier² and V. Walker¹. ¹Lovelace Respiratory Research Institute, Albuquerque, NM, ²National Cancer Institute, Bethesda, MD and ³BioMosaics, Burlington, VT.</td>
<td><strong>OPTIMIZATION OF ACCLIMATION AND EXPERIMENTAL PROCEDURES FOR HEAD-ONLY INHALATION EXPOSURE OF TRIAMCINOLONE ACETONIDE IN CYNOMOLGUS MONKEYS.</strong> J. T. Weinberg, D. T. Kirkpatrick, E. A. Anderson, B. M. Golas and M. S. Cockburn. Toxicology Department, WIL Research Laboratories, LLC, Ashland, OH.</td>
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<td><strong>OZONE EXPOSURE DYSREGULATES KEY ENDOTHELIAL TRANSCRIPTS IN THE APOE (±) MOUSE.</strong> J. Marsh¹, B. Johnson¹ and M. Dohm². ¹Medical University of Hawaii, Honolulu, HI and ²Chaminade University, Honolulu, HI. Sponsor: M. Campen.</td>
<td><strong>MICROARRAY ANALYSIS OF MURINE LUNGS FOLLOWING PULMONARY EXPOSURE TO DIESEL EXHAUST PARTICLES.</strong> R. Yanagisawa¹, H. Takano¹, K. Mizushima¹, K. Inoue¹, E. Koike¹ and T. Yoshikawa¹. ¹National Institute for Environmental Studies, Tsukuba, Japan and ²Kyoto Prefectural University of Medicine, Kyoto, Japan. Sponsor: J. Yonemoto.</td>
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<td><strong>CONTRIBUTION OF LOCUS COERULEUS DEGENERATION TO THE PARKINSONIAN SYMPTOMS IN VMAT2 DEFICIENT MICE.</strong> T. N. Taylor¹, W. M. Caudle¹, M. Z. Wang¹, J. R. Schank¹, H. A. Mitchell¹, D. Weinshenker¹ and G. W. Miller¹,². ¹Environmental and Occupational Health, Emory University, Atlanta, GA, ²Center for Neurodegenerative Disease, Emory University, Atlanta, GA and ³Department of Human Genetics, Emory University, Atlanta, GA.</td>
<td><strong>NOSE-ONLY INHALATION EXPOSURE CAN DEPLETE LIVER GLUTHATHIONE LEVELS.</strong> L. D. Fechter¹, A. Nelson-Miller, C. Gearhart and S. Fulton. Research (151), Loma Linda VA Medical Center, Loma Linda, CA.</td>
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<td><strong>OZONE DYSREGULATES CARDIAC AND PULMONARY TRANSCRIPTS IN THE APOE (±) MOUSE.</strong> M. Dohm¹, J. Marsh¹, B. Johnson¹ and A. Machado². ¹Medicine, University of Hawaii, Honolulu, HI and ²Biology, Chaminade University, Honolulu, HI. Sponsor: M. Campen.</td>
<td><strong>IS TOLUENE DIAMINE (TDA) A SENSITIZER AND IS THERE CROSS-REACTIVITY BETWEEN TOLUENE DIAMINE (TDA) AND TOLUENE DIISOCYANATE (TDI)?</strong> J. A. Vanourbeek, V. De Voogt, N. Synhaeve, B. Nemery and P. H. Hoet. Research Unit for Lung Toxicology, K.U.Leuven, Leuven, Belgium.</td>
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<td><strong>RESPIRATORY SAFETY PHARMACOLOGY: RELEVANT PARAMETERS.</strong> C. Petit-Turcotte¹, S. Authier¹,², M. Legaspi¹,² and E. Traynor¹. ¹Toxicology, LAB Research Inc., Laval, QC, Canada and ²Faculty of Veterinary Medicine, University of Montreal, St-Hyacinthe, QC, Canada. Sponsor: G. Washer.</td>
<td><strong>KNOCKDOWN OF GAMMA-GlutamylCysteine SYNTHETASE IN RAT CAUSES ACETAMINOPHEN-INDUCED HEPATOTOXICITY.</strong> T. Yokoi, S. Akai, H. Hosomi, K. Minami, M. Katoh and M. Nakajima. Graduate School of Medical Science, Kanazawa University, Kanazawa, Ishikawa, Japan.</td>
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<td><strong>RESPIRATORY SAFETY PHARMACOLOGY: COMPARISON OF CONSCIOUS BEAGLE DOGS, CYNOMOLGUS MONKEY AND SPRAGUE-DAWLEY RATS.</strong> S. Authier¹,², M. Legaspi¹,², S. Fournier¹ and E. Traynor¹. ¹Veterinary Services, LAB Preclinical Research, Laval, QC, Canada and ²Faculty of Veterinary Medicine, University of Montreal, St-Hyacinthe, QC, Canada. Sponsor: G. Washer.</td>
<td><strong>GENE EXPRESSION IN VARIOUS BIOLOGICAL PATHWAYS IN PLUTAMIDE-TREATED RATS AND CHIMERIC MICE WITH HUMANIZED LIVER.</strong> S. Nagatsuka¹, K. Matsunura¹, S. Ninomiya¹, M. Kakuni¹, R. Yanagisawa¹, H. Takano¹, K. Mizushima¹, K. Inoue¹, E. Koike¹ and T. Yoshikawa¹. ¹National Institute for Environmental Studies, Tsukuba, Japan and ²Kyoto Prefectural University of Medicine, Kyoto, Japan. Sponsor: J. Yonemoto.</td>
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**Society of Toxicology 2008**

up-to-date information at www.toxicology.org
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Abstract # Poster Board Number ........................................ 425
#220 INFLAMMATION-MEDIATED LIVER INJURY IN RATS COTREATED WITH SULINDAC AND LIPOPOLYSACCHARIDE. W. Zou1, S. S. Devi1, H. S. Younis2, R. A. Roth1 and P. E. Ganey1, 1Michigan State university, East Lansing, MI and 1Pfizer Global Research and Development, San Diego, CA.

Abstract # Poster Board Number ........................................ 426
#221 MODIFIED ALCOHOL LIQUID DIET MODEL FOR LIVER INJURY IN MICE. B. Bradford3, O. Kosyk1, H. Kono2, S. Shymonyak1, P. Ross1 and I. Rasum1, 1Environmental Sciences and Engineering, UNC Chapel Hill, Chapel Hill, NC and 2Surgery, U. Yamanashi, Yamanashi, Japan.

Abstract # Poster Board Number ........................................ 427
#222 A NOVEL “PATIENT-LIKE” MODEL OF CHOLANGIOCARCINOMA PROGRESSION BASED ON BILE DUCT INOCULATION OF TRANSFORMED RAT CHOLANGIOCYTES OVEREXPRESSING ERBB2. A. E. Strica, D. J. Campbell and Z. Zhang, Pathology, Virginia Commonwealth University School of Medicine, Richmond, VA.

Abstract # Poster Board Number ........................................ 428
#223 MONITORING A MOUSE WHICH EXPRESSES A YELLOW FLUORESCENT PROTEIN IN MONOCYTES WITH INTRAVITAL MICROSCOPY. T. Kampfrath, J. Anderson, Q. Sun, S. Parthasarathy, M. Ostrowski and S. Rajagopalan. Ohio State University, Columbus, OH.

Abstract # Poster Board Number ........................................ 429
#224 LIVER-SELECTIVE EXPRESSION OF FUNCTIONAL HUMAN ARYLMINE ACETYLTRANSFERASE NAT2 IN TRANSGENIC MICE. K. S. Sugamori, D. Brenneman and D. M. Grant. Pharmacology and Toxicology, University of Toronto, Toronto, ON, Canada.

Abstract # Poster Board Number ........................................ 430

Abstract # Poster Board Number ........................................ 431
#226 A NOVEL TRANSGENIC MOUSE MODEL EXPRESSING A HUMAN ENZYME FOR REPAIR OF OXIDATIVE DNA DAMAGE. S. L. Ondovcik1, T. J. Preston1, S. K. Ho2, J. T. Henderson1, K. Lam1 and P. G. Welzl2, 1Pharmaceutical Sciences, University of Toronto, Toronto, ON, Canada and 2Pharmacology and Toxicology, University of Toronto, Toronto, ON, Canada.

Abstract # Poster Board Number ........................................ 432

Abstract # Poster Board Number ........................................ 433
#228 A NOVEL PARADIGM FOR ASSESSING EFFICACIES OF POTENTIAL ANTIDOTES AGAINST NEUROTOXINS IN MICE. D. L. Crankshaw1,2,3, D. J. Goon12, J. E. Briggs1, D. DeLong1, M. Kuskowski1, S. E. Patterson1 and H. T. Nagasawa1,2, 1Center for Drug Design, University of Minnesota, Minneapolis, MN and 2VA Research Service 151, VA Medical Center, Minneapolis, MN and 3Department Food Science and Nutrition, University of Minnesota, St. Paul, MN. Sponsor: P. Hanna.

Abstract # Poster Board Number ........................................ 434
#229 NON-INVASIVE MOUSE GENOTYPING USING DNA ISOLATED FROM FECAL SAMPLES. M. M. Ralston, K. D. Bongiovanni and C. V. Smith. Seattle Children’s Hospital Research Institute, Center for Developmental Therapeutics, Seattle, WA.

Abstract # Poster Board Number ........................................ 435
#230 UNANTICIPATED ANTICOAGULANT RESPONSE TO UNFRACTIONATED HEPARIN IN CYMONOLGUS MONKEYS MEASURED BY ACTIVATED CLOTTING TIME. P. Beaumier, M. Bauman, T. Dawe, J. Tilton, R. Coxen and D. Hayward. Safety Assessment, SNBL USA, Everett, WA. Sponsor: M. Osier.

Abstract # Poster Board Number ........................................ 436
#231 INTRACELLULAR ACIDIFICATION PROMOTES ALLOXAN-INDUCED TOXICITY IN PANCREATIC ISLETS. J. P. Gray1, E. Heart2, K. Fassell3, S. Jamil1, P. J. Smith2 and J. D. Laskin1, 1Pharmacology & Toxicology, Rutgers University, Piscataway, NJ, 2Biocurrents Research Center, Marine Biological Laboratory, Woods hole, MA and 3Environment & Occupational Medicine, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ.

Abstract # Poster Board Number ........................................ 437
#232 THE QUANTIFICATION OF STRUCTURAL/ FUNCTIONAL IMPAIRMENT IN THE EXPERIMENTAL DOG OSTEoARTHRITIS MODEL IS A USEFUL TOOL FOR DRUG TESTING. E. Troncy1,2, M. Moreau1, M. D’Anjou1, F. Duguay2, S. Authier2, C. Boileau1, J. Martel-Pelletier1, E. Abram1, J. Raynauld1, J. Pelletier1,3, 1Université de Montréal, Saint-Hyacinthe, QC, Canada, 2LAB Research Inc., Laval, QC, Canada and 3ArthroLab Inc., Montreal, QC, Canada. Sponsor: G. Washier.

Abstract # Poster Board Number ........................................ 438
#233 TOXICITY OF INTRAVENOUSLY ADMINISTERED ACIDIC AND ALKALINE VEHICLE FORMULATIONS IN MICE. S. A. Shah, L. S. Krsmankovic, P. I. Atkins and E. A. Zauhalka. Mammalian Toxicology, BioReliance, Rockville, MD.


Program Description (Continued)

Abstract #

#234

Poster Board Number .................................................439

THE LOW DOSE EFFECTS OF PCB126 ON RAT LIVER CHOLESTEROL IN RATS GIVEN A CONTROLLED DIETARY LEVEL OF SELENIUM. B. Prather1, 2, B. Wang1, 2, M. Coleman1, D. Spitz1, 2, M. T. Martin1, Richard Judson, U.S. E.P.A, Research Triangle Park, NC, 3Occupational and Environmental Health, University of Iowa, Iowa City, IA, 4Free Radical and Radiation Biology, University of Iowa, Iowa City, IA and 5University Hygienic Laboratory, University of Iowa, Ankeny, IA.

#235

Poster Board Number ...............................................440

COMPARISON OF ELECTROCARDIOGRAPHIC EFFECTS IN NONHUMAN PRIMATES: CONSCIOUS UNRESTRAINED VERSUS PHYSICALLY OR CHEMICALLY RESTRAINED. A. C. Jenkins, A. Mitchell, C. Foley and R. Sarazan. Safety Pharmacology, Covance Laboratories Inc., Madison, WI.

#236

Poster Board Number ...............................................504


#237

Poster Board Number ...............................................505


#238

Poster Board Number ...............................................506

TOXREFDB: CLASSIFYING TOXCAST PHASE I CHEMICALS UTILIZING STRUCTURED TOXICITY INFORMATION. M. T. Martin1, R. Judson2, K. McLaunitr3, D. Rotroff2, V. Dellartor2, E. Mendez2, M. Reaves2, D. J. Dix2, I. Lai1,2, B. Prather1, 2, B. Wang1, 2, M. Coleman1, D. Spitz1, 2, M. T. Martin1, Richard Judson, U.S. E.P.A, Research Triangle Park, NC and Office of Pesticide Programs (OPP), U.S. EPA, Arlington, VA.

#239

Poster Board Number .................................................507


#240

Poster Board Number .................................................508

UNDERSTANDING TOXICITY THROUGH THE ANALYSES OF A WELL-DESIGNED TOXML DATABASES. A. Storuska1, K. Arvidson1, R. Benc1, R. Brown1, D. Bower1, E. Lee1, C. Marchant1, G. Sun1, J. Wood1 and C. Yang1. Leadscape, Inc., Columbus, OH, 2Center for Food Safety and Applied Nutrition, U.S. FDA, College Park, MD, 3Center for Drug Evaluation and Research, U.S. FDA, Silver Spring, MD, 4Lhasa, Ltd, Leeds, United Kingdom, 5University of Maryland, College Park, CA and 6University of California, Berkeley, CA.

#241

Poster Board Number .................................................509

USING THE COMPARATIVE TOXICOGENOMICS DATABASE TO IDENTIFY CHEMICAL-GENE-DISEASE ASSOCIATIONS: ARSENIC AS A CASE STUDY. C. Mattingly1, M. C. Rosensteim2, T. Wiegems2, C. Murphy1, J. L. Boyer1 and A. P. Davis1. 1MDIBL, Salisbury Cove, ME and 2Yale University, New Haven, CT. Sponsor: W. Toscano.

#242

Poster Board Number .................................................510

ADVERSE EFFECTS OF PHARMACEUTICALS: A CONSTRUCTION OF A RELATIONAL DATABASE OF ADVERSE CARDIOLOGICAL EFFECTS USING FDA ARCHIVES, PHARMAPENDIUM, AND PUBLIC SOURCES. A. A. Frid, E. J. Matthews, N. L. Knuthak, R. Benc and J. F. Contrera. CDER / OPS / ICSAS, Food and Drug Administration, Silver Spring, MD.

#243

Poster Board Number .................................................511

LEVERAGING HISTORICAL INFORMATION IN PRECLINICAL TOXICOLOGY STUDIES: THE HEPATOTOXICITY KNOWLEDGEBASE. S. Matis1, J. Dix2, M. Firth1, A. Ganguri1, S. Jagnanathan1, G. Kenna2, J. Kozlovsky2, Y. Li1, N. Mian1, E. Pichler4 and D. Cook2. Discovery Information, Astra Zeneca Pharmaceuticals, Wilmington, DE, 2Global Safety Assessment, Astra Zeneca Pharmaceuticals, Alderley Park, Cheshire, United Kingdom, 3Discovery Information, Astra Zeneca Pharmaceuticals, Alderley Park, Cheshire, United Kingdom and 4Discovery Information, Astra Zeneca Pharmaceuticals, Waltham, MA.

#244

Poster Board Number .................................................512

QSAR MODELING OF HUMAN LIVER ADVERSE EFFECTS DATABASE USING ANN METHOD. A. D. Rodgers1, H. Zhu1, I. Russyn1, 2 and A. Trophal2. 1Curriculum in Toxicology, University of North Carolina, Chapel Hill, Chapel Hill, NC, 2Division of Medicinal Chemistry and Natural Products, University of North Carolina, Chapel Hill, Chapel Hill, NC and 3Department of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, Chapel Hill, NC.
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Program Description

Abstract #

Poster Board Number ..................................... 528
IDENTIFICATION OF POSITIONALLY CONSERVED DIOXIN RESPONSE ELEMENTS IN ORTHOLOGOUS HUMAN, MOUSE, AND RAT GENES. A. Cabunoc1,2, L. D. Barger1 and T. R. Zacharewski1,2,3, 1Biochemistry & Molecular Biology, Michigan State University, East Lansing, MI; 2National Food Safety & Toxicology Center, Michigan State University, East Lansing, MI; and 3Center for Integrative Toxicology, Michigan State University, East Lansing, MI.

Poster Board Number ..................................... 529

Poster Board Number ..................................... 530
ANALYSIS OF TRANSCRIPTION FACTOR BINDING MOTIFS IN UPSTREAM REGIONS OF CO-REGULATED GENES: A METHOD FOR CREATING REGULATORY NETWORKS. L. M. Munsie1, S. Lewin-Koh2, J. J. Lowinger1 and M. A. Davis1, 1Investigative Toxicology, Eli Lilly and Company, Greenfield, IN and 2Toxicology/ADME Statistics, Eli Lilly and Company, Greenfield, IN.

Poster Board Number ..................................... 531
THE USE OF GENE EXPRESSION DATA FROM MULTIPLE EXPOSURE TIMES FOR THE DEVELOPMENT OF GENOMIC BIOMARKERS OF CARCINOGENIC POTENTIAL. R. R. Shahi1, S. S. Auerbach1 and R. D. Irwin1, 1National Toxicology Program, National Institute of Environmental Health Science, NIH, Durham, NC and 2Constella Group, Durham, NC.

Monday Morning, March 17
9:30 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: PESTICIDE METABOLISM AND TOXICITY

Chairperson(s): Lesley Mills, U.S. EPA, Narragansett, RI.

Displayed: 9:30 AM–12:30 PM

Attendees: 9:30 AM–11:00 AM

Poster Board Number ..................................... 532
STRUCTURAL REQUIREMENTS FOR ORGANOPHOSPHORUS INSECTICIDES TO INHIBIT IN VIVO KYNURENINE FORMAMIDASE IN CHICKEN EMBRYOS AND MICE. J. Seifer. PEPS, University of Hawaii, Honolulu, HI.

Poster Board Number ..................................... 533
PURIFICATION AND CHARACTERIZATION OF RECOMBINANT HUMAN PARAOXONASE FROM ESCHERICHIA COLI. R. C. Stevens1, S. M. Suzuki1, R. Richter1, T. B. Cole2 and C. Furtling1, 1Medical Genetics and Genome Sciences, University of Washington, Seattle, WA and 2Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.

#261

Poster Board Number ..................................... 529

#262

Poster Board Number ..................................... 530
ANALYSIS OF TRANSCRIPTION FACTOR BINDING MOTIFS IN UPSTREAM REGIONS OF CO-REGULATED GENES: A METHOD FOR CREATING REGULATORY NETWORKS. L. M. Munsie1, S. Lewin-Koh2, J. J. Lowinger1 and M. A. Davis1, 1Investigative Toxicology, Eli Lilly and Company, Greenfield, IN and 2Toxicology/ADME Statistics, Eli Lilly and Company, Greenfield, IN.

#263

Poster Board Number ..................................... 531
THE USE OF GENE EXPRESSION DATA FROM MULTIPLE EXPOSURE TIMES FOR THE DEVELOPMENT OF GENOMIC BIOMARKERS OF CARCINOGENIC POTENTIAL. R. R. Shahi1, S. S. Auerbach1 and R. D. Irwin1, 1National Toxicology Program, National Institute of Environmental Health Science, NIH, Durham, NC and 2Constella Group, Durham, NC.

#264

Poster Board Number ..................................... 532
STRUCTURAL REQUIREMENTS FOR ORGANOPHOSPHORUS INSECTICIDES TO INHIBIT IN VIVO KYNURENINE FORMAMIDASE IN CHICKEN EMBRYOS AND MICE. J. Seifer. PEPS, University of Hawaii, Honolulu, HI.

#265

Poster Board Number ..................................... 533
PURIFICATION AND CHARACTERIZATION OF RECOMBINANT HUMAN PARAOXONASE FROM ESCHERICHIA COLI. R. C. Stevens1, S. M. Suzuki1, R. Richter1, T. B. Cole2 and C. Furtling1, 1Medical Genetics and Genome Sciences, University of Washington, Seattle, WA and 2Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.

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up-to-date information at www.toxicology.org

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Monday Morning, March 17
9:30 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: PESTICIDE METABOLISM AND TOXICITY

Chairperson(s): Lesley Mills, U.S. EPA, Narragansett, RI.

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STRUCTURAL REQUIREMENTS FOR ORGANOPHOSPHORUS INSECTICIDES TO INHIBIT IN VIVO KYNURENINE FORMAMIDASE IN CHICKEN EMBRYOS AND MICE. J. Seifer. PEPS, University of Hawaii, Honolulu, HI.

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PURIFICATION AND CHARACTERIZATION OF RECOMBINANT HUMAN PARAOXONASE FROM ESCHERICHIA COLI. R. C. Stevens1, S. M. Suzuki1, R. Richter1, T. B. Cole2 and C. Furtling1, 1Medical Genetics and Genome Sciences, University of Washington, Seattle, WA and 2Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.

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Monday Morning, March 17
9:30 AM to 12:30 PM
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PURIFICATION AND CHARACTERIZATION OF RECOMBINANT HUMAN PARAOXONASE FROM ESCHERICHIA COLI. R. C. Stevens1, S. M. Suzuki1, R. Richter1, T. B. Cole2 and C. Furtling1, 1Medical Genetics and Genome Sciences, University of Washington, Seattle, WA and 2Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.
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<td>ENANTIOSELECTIVE ESTROGEN ACTIVITY OF PYRETHROID INSECTICIDES. D. Schlenk, M. Nillos and J. Gan, Environmental Sciences, University California-Riverside, Riverside, CA.</td>
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<td>ESFENVALERATE ACTS AT THE HYPOTHALAMUS TO SUPPRESS THE AFTERNOON RISE OF LUTEINIZING HORMONE IN PREPUBERTAL FEMALE RATS. M. Pine and J. K. Hiney, Veterinary Integrative Biosciences, Texas A&amp;M University, College Station, TX.</td>
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<td>PYRETHROID EXPOSURE OF ZEBRAFISH (DANIO RERIO) EMBRYOS RESULTS IN ABNORMAL DEVELOPMENT. A. Green1, A. DeMicco1, K. R. Cooper1, J. R. Richardson1 and L. A. White1, 1Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ and 2Toxicology Division, EOHS, Piscataway, NJ.</td>
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<td>EVALUATION OF VASCULAR TOXICITY OF PERMETHRIN IN HUMAN ENDOTHELIAL CELL AND MOUSE ES CELL. S. Imanishi, J. Yonemoto and H. Sone, National Institute for Environmental Studies, Tsukuba, Japan.</td>
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<td>EVIDENCE FOR LACK OF GENOTOXICITY OF ZETA-CYPERMETHRIN. W. Luo, J. D. McCurry, M. L. Weiner and M. S. Maynard, Toxicology, FMC Corporation, Princeton, NJ.</td>
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<td>EFFECTS OF ATRAZINE ON BLOOD PHYSIOLOGY IN ADULT FEMALE WISTAR RATS. R. R. Brown2, C. D. Foradori2, L. R. Hinds2, G. Dooley1, W. H. Hanneman1 and R. J. Hand2, 1Environmental and Radiological Health Sciences, Colorado State University, Fort Collins, CO and 2Biomedical Sciences, Colorado State University, Fort Collins, CO.</td>
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<td>REVERSAL OF ATRAZINE DEPENDENT EFFECTS ON GNRH NEUROENDOCRINE FUNCTION IN WISTAR RATS. C. D. Foradori2, L. R. Hinds2, W. H. Hanneman1 and R. J. Hand2, 1Environmental Health, Colorado State University, Fort Collins, CO and 2Biomedical Sciences, Colorado State University, Fort Collins, CO.</td>
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<td>ATRAZINE INHIBITS THE PULSATILE LH RELEASE WITHOUT ALTERING PITUITARY SENSITIVITY TO A GNRH RECEPTOR ANTAGONIST IN FEMALE WISTAR RATS. R. J. Hand2, L. R. Hinds2, W. H. Hanneman1, M. E. Legare1, C. M. Clay1 and C. D. Foradori2, 1Environmental Health, Colorado State University, Fort Collins, CO and 2Biomedical Sciences, Colorado State University, Fort Collins, CO.</td>
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<td>#281</td>
<td>DIFFERENCES IN METABOLISM AND AROMATASE ACTIVITY IN A FISH AND A RAT SPECIES TREATED WITH ATRAZINE. L. J. Mills1, R. Gutjahr-Gobell1, S. Jayaraman1, G. Zarcoogan1 and S. Laws1, 1NHEERL, Atlantic Ecology Division, U.S. EPA, Narragansett, RI and 2NHEERL, Reproductive Toxicology Division, U.S. EPA, Research Triangle Park, NC.</td>
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<td>CHARACTERIZATION OF CYPS IN THE METABOLISM OF ALL TRANS RETINOIC ACID BY LIVER MICROSOMES FROM MICE TREATED WITH CONAZOLES. P. Chen2, W. T. Padgett1, M. Tanya1, W. Winnik1, S. Thai1, S. D. Hester1 and S. Nesnow1, 1Environmental Carcinogenesis Division, U.S. EPA, Research Triangle Park, NC and 2Department of Agricultural Chemistry, National Taiwan University, Taipei, Taiwan.</td>
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<td>GENDER- AND SPECIES-MEDIATED DIFFERENCES IN THE IN VITRO METABOLISM OF TRIADIMEFON BY RODENT HEPATIC MICROSOMES. S. Ritger1, M. Henderson1, J. F. Kenneke1, C. S. Mauzer1 and J. W. Fisher1, 1Interdisciplinary Toxicology Program, College of Public Health, University of Georgia, Athens, GA and 2Ecosystems Research Division, United States Environmental Protection Agency, Athens, GA.</td>
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<td>RISK TO HUMANS FROM DIETARY EXPOSURE TO THE NEONICOTINOID INSECTICIDE IMIDACLOPRID. S. E. Koshikulova, N. R. Reed, K. Pfeifer and J. Gee, Pesticide Regulation, CalEPA, Sacramento, CA.</td>
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<td>DETERMINANTS OF HUMAN EXPOSURE TO PEST PEST PRODUCTS: FIPRONIL. M. M. Bigelow, Y. Li, Z. Chen, H. Vega and R. I. Krieger, Environmental Toxicology Graduate Program/Entomology, PCEP, University of California-Riverside, Riverside, CA.</td>
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<td>CHLORPYRYLIFOS ALTERS METHYLATION STATUS OF PROMOTER-CPG ISLANDS IN PLACENTAL CHORIOCARCINOMA CELLS. M. D. Saulsbury, S. O. Heyliger, Q. Chen, K. Wang, J. Morse and D. J. Johnson, Pharmaceutical Sciences, Hampton University, Hampton, VA.</td>
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Monday Morning, March 17
9:30 AM to 12:30 PM
Exhibit Hall

**OXIDATIVE SIGNALING AND REDOX BIOLOGY**

**POSTER SESSION: INHALANTS: OXIDATIVE AND REDOX MECHANISMS**

Chairperson(s): Nabil Elsayed, Celgene Corporation, Summit, NJ and Rodney Rouse, Louisiana State University, Baton Rouge, LA.

**Displayed:** 9:30 AM–12:30 PM

**Attendee:** 11:00 AM–12:30 PM

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#287 **Poster Board Number: 555**


Environmental and Occupational Health, University of WA, Seattle, WA.

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#288 **Poster Board Number: 556**

**UPREGULATION OF POLYAMINE BIOSYNTHESIS IN RAT LUNG FOLLOWING BLEOMYCIN ADMINISTRATION, N. M. Elsayed and D. F. Tierney.**

Early Drug Development, Toxicology, Celgene Corp, Summit, NJ.

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#289 **Poster Board Number: 557**

**INTERMEDIATE FILAMENT PROTEINS AS TARGETS FOR REACTIVE CARBONYL COMPOUNDS, A. Y. Saik.**

Pharmacology and Anaesthesiology Unit, University of Western Australia, Nedlands, WA, Australia. Sponsor: P. Burcham.

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#290 **Poster Board Number: 558**

**CARBONYL SCAVENGERS SUPPRESS THE TOXICITY OF POLYETHYLENE PYROLYSIS PRODUCTS, P. C. Burcham.**

Pharmacology Unit, University of Western Australia, Nedlands, WA, Australia.

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#291 **Poster Board Number: 559**

**A GENETIC BASIS FOR THE HEIGHTENED SENSITIVITY OF THE NEONATAL MOUSE LUNG TO OZONE, E. M. Vancza, K. Galdanes and T. Gordon.**

New York University School of Medicine, Tuxedo, NY.

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#292 **Poster Board Number: 604**


Toxicology, CINVESTAV-IPN, Mexico D.F., Mexico.

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#293 **Poster Board Number: 605**

**AIRBORNE PARTICULATE MATTER DEPLETES GLUTATHIONE AND INDUCES CELL DEATH ON HUMAN ALVEOLAR CELLS, G. Alvarez-Labastida, M. Uribe-Ramirez, A. Osornio-Vargas and A. De Vizcaya-Ruiz.**

Toxicology, CINVESTAV-IPN, Mexico D.F., Mexico.

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#294 **Poster Board Number: 606**

**GENE PROFILING OF LIBBY AMPHIBOLE ASBESTOS COMPARED TO CROCODILITE ASBESTOS IN HUMAN MESOTHELIAL CELLS, J. M. Hillegas, A. Shukla, M. MacPherson, V. Alexeeva, A. van der Vliet, M. E. Gunter and B. T. Mossman.**

Department of Pathology, University of Vermont, Burlington, VT and Department of Geological Sciences, University of Idaho, Moscow, ID.

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#295 **Poster Board Number: 607**

**MITOCHONDRIAL OXIDATIVE AND ENZYMIC DAMAGE IN ACUTE CARBON MONOXIDE POISONING: LIPID PEROXIDATION AND COMPLEX IV ACTIVITY IN LYMPHOCYTES AND ITS MODIFICATION AFTER OXYGEN THERAPY, F. Cardellach, G. Garrabou, M. M. Heras, J. Martí, G. Oliu and O. Miro.**

Hospital Clinica de Barcelona, IDIBAPS, University of Barcelona, Barcelona, Spain and Hospital of Palamos, Palamos, Spain. Sponsor: J. Domingo.

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#296 **Poster Board Number: 608**


Lovelace Respiratory Research Institute, Albuquerque, NM.

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#297 **Poster Board Number: 609**

**GAS-PARTICLE PARTITIONING IN URBAN AIR MIXTURES AND ITS EFFECT ON HUMAN EPITHELIAL LUNG CELLS, S. Ebersviller, K. G. Sexton, K. de Bruijne, R. Woodside, C. Olencik, J. Jasper and H. Jeffries.**

Environmental Sciences and Engineering, UNC Chapel Hill, Chapel Hill, NC and CEMALB, UNC Chapel Hill, Chapel Hill, NC.

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#298 **Poster Board Number: 610**

**INHALATION OF COMBUSTION-DERIVED NANOPARTICLES STIMULATES EXPRESSION OF NRF2 MEDIATED OXIDATIVE STRESS RESPONSE GENES IN MURINE LUNG, R. Rouse, G. Murphy and A. Penn.**

CBS, SVM, LSU, Baton Rouge, LA.

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#299 **Poster Board Number: 611**

**IMPAIRMENT OF MACROPHAGE FUNCTION UNDER MODERATE CONCENTRATIONS OF OXYGEN, L. Mantell, E. T. Entezari-Zaher, E. J. Miller, K. Degenhardt and A. Pathak.**

Pharmaceutical Sciences, St. John’s University College of Pharmacy, Queens, NY and Cardiopulmonary Research, The Feinstein Institute for Medical Research, Manhasset, NY.

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**MONDAY**
# Program Description (Continued)

**Abstract #**

#300  
**Poster Board Number** ..........................612  
**DOES SANDBLASTED METAL ATTENUATE OR ENHANCE THE TOXICITY OF FRESHLY FRACTURED SILICA?** M. Pacurari, V. Robinson, V. Castranova, S. S. Leonard, F. Chen, V. Vallyathan and M. Barger. CDC/NIOSH/HELD, Morgantown, WV.

**Monday Morning, March 17**

9:30 AM to 12:30 PM

Exhibit Hall

**POSTER SESSION: XENOBIOTIC BIOTRANSFORMATION II**

**Chairperson(s):** David Williams, Oregon State University, Corvallis, OR.

**Displayed:** 9:30 AM–12:30 PM

**Attendees:** 9:30 AM–11:00 AM

#301  
**Poster Board Number** ..........................614  
**FROM XENOBIOTICS TO ENDOBIOCTS: EFFICIENT HYDROLYSIS OF THE ENDOCANNABINOID 2-ARACHIDONYLGLYCEROL BY HUMAN CARBOXYLESTERASES 1 AND 2.** M. Ross1, A. Borazjani1, S. Xie1 and P. M. Potter2. 1Center for Environ Health Sci, Mississippi State University, Mississippi State, MS and 2St. Jude Children’s Research Hospital, Memphis, TN.

#302  
**Poster Board Number** ..........................615  
** METHYLATION OF DIMETHYLTIN IN MICE AND RATS.** K. Furushashi1, M. Ogawa1, Y. Suzuki1, Y. Endo1, Y. Kim1 and G. Ichihara1. 1Occupational and Environmental Health, Nagoya University Graduate School of Medicine, Nagoya, Japan, 2Clinical Research Center for Occupational Poisoning, Tokyo Rosai Hospital, Tokyo, Japan and 3Occupational and Environmental Medicine, Ulsan University Hospital, University of Ulsan Colledge of Medicine, Ulsan, South Korea.

#303  
**Poster Board Number** ..........................616  
** EFFECT OF OSMOTIC STRESS ON THE EXPRESSION OF FLAVIN-CONTAINING MONOOXYGENASE mRNA, PROTEIN AND CATALYTIC ACTIVITY IN RAT KIDNEY.** D. Schlenk1, G. Rodriguez-Fuentes1, C. Coburn1 and M. Curra-Collazo2. 1UC- Riverside, Riverside, CA and 2Cell Biology & Neuroscience, University Cal. Riverside, Riverside, CA.

#304  
**Poster Board Number** ..........................617  
**MECHANISM OF METHYL-MERCURY BIOTRANSFORMATION IN HUMAN CELL LINES.** M. Nagano1, A. Yasutake1 and K. Miura2. 1National Institute for Minamata Disease, Minamata, Kumamoto, Japan and 2Wako University, Machida, Tokyo, Japan. Sponsor: M. Yamamoto.

#305  
**Poster Board Number** ..........................618  
**PURIFICATION AND CHARACTERIZATION OF FLAVIN-CONTAINING MONOOXYGENASE ISOFORM 3 (FM03) FROM MALE RAT KIDNEYS.** R. Novick and A. A. Elfarra. University of Wisconsin-Madison, Madison, WI.

**Abstract #**

#306  
**Poster Board Number** ..........................619  

#307  
**Poster Board Number** ..........................620  
**BIOTRANSFORMATION OF 2, 3, 3-TETRAFLUOROPROPENE IN RATS.** P. Schuster1, R. Bertermann1, G. M. Rusch1 and W. Dekant1. 1Department of Toxicology, University of Würzburg, Würzburg, Germany, 2Department of Inorganic Chemistry, University of Würzburg, Würzburg, Germany and 3Honeywell Inc., Morristown, NJ.

#308  
**Poster Board Number** ..........................621  
**IDENTIFICATION OF A TRYPTANTHRIN METABOLITE IN RAT LIVER MICROSOMES BY LC-ESI MS.** Y. Seo1, S. Lee2, G. Kim1, D. Kim1, M. Kang1, Y. Jahng1 and T. Jeong1. 1College of Pharmacy, Yeungnam University, Gyeongsan, South Korea and 2Bioanalysis and Biotransformation Research Center, KIST, Seoul, South Korea.

#309  
**Poster Board Number** ..........................622  
**EFFECTS OF RUTACEARPINE ON PHARMACOKINETICS OF ACETAMINOPHEN IN RATS.** J. Kim1, S. Lee2, S. R. Bista1, M. Kang1, Y. Jahng1 and T. Jeong2. 1College of Pharmacy, Yeungnam University, Gyeongsan, South Korea and 2BBRC, KIST, Seoul, South Korea.

#310  
**Poster Board Number** ..........................623  
**METABOLISM OF FPP-3, AN ANTI-INFLAMMATORY PROPENE COMPOUND, IN RATS.** T. Jeong1, S. Lee2, J. Kim1, Y. Seo1, H. Jeong3, M. Kang1 and E. Lee1. 1College of Pharmacy, Yeungnam University, Gyeongsan, South Korea, 2BBRC, KIST, Seoul, South Korea and 3College of Pharmacy, Chosun University, Gwangju, South Korea.

#311  
**Poster Board Number** ..........................624  

#312  
**Poster Board Number** ..........................625  
**SPECIFICITY OF RAT SULFOTRANSFERASES FOR HYDROXYLATED POLYCHLORINATED BIPHENYLS AND ITS MODIFICATION BY OXIDIZED GLUTATHIONE.** Y. Liu1, H. Lehmler1, L. W. Robertson1 and M. W. Duffel1. 1Division of Medicinal and Natural Products Chemistry, College of Pharmacy, University of Iowa, Iowa City, IA and 2Department of Occupational and Environmental Health, College of Public Health, University of Iowa, Iowa City, IA.
Program Description (Continued)

Abstract #

#313  Poster Board Number ...........................................626
Determination of the Sites of Hydrolysis and In Vitro Rate Constants for Metabolic and Non-
Metabolic Cleavage Mechanisms of Sulfuryl Fluoride in the Rat.

#314  Poster Board Number ...........................................627
Reactions of Singlet Oxygen with Furosemide: Possible Formation of Reactive Electrophilic Intermediates. B. M. King¹, R. M. Uppu² and M. O. Fletcher Chaville²,³. Environmental Toxicology, Southern University and A&M College, Baton Rouge, LA and ³Chemistry, Southern University and A & M College, Baton Rouge, LA.

#315  Poster Board Number ...........................................628
Characterization of Cytochrome P450 Isoforms Involved in Vinclozolin Biotransformation in Rat Liver. A. Sierra-Santoyo, L. Lopez-Gonzalez and E. Angeles-Soto. Toxicology Section, CINVESTAV-IPN, Mexico City, D.F., Mexico.

#316  Poster Board Number ...........................................629

#317  Poster Board Number ...........................................630

#318  Poster Board Number ...........................................631
Hesperetin Induction of Sulfoxtransferases in Hep G2 Cells and Rat Tissues. C. Huang and G. Chen. Physiological Sciences, Oklahoma State University, Stillwater, OK.

#319  Poster Board Number ...........................................632

#320  Poster Board Number ...........................................633
Potential Roles of NF-KAPPAB and NFE2L2 in Regulation of Human Hepatic MRP4 Gene Expression. S. Campion, X. Gu and J. E. Manautou. Department of Pharmaceutical Sciences, University of Connecticut, Storrs, CT.
Program Description (Continued)

Monday Morning, March 17
11:00 AM to 12:00 NOON
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: MULTIPLEXING LUMINESCENT ADMETOX CELL-BASED ASSAYS INCLUDING APPLICATIONS WITH PRIMARY CELLS AND STEM CELLS

Presented by: Promega Corporation

Combining luminescent assay sensitivity with the ability to multiplex increases experimental efficiency and reduces the number of cells required for ADMET studies with primary cells or stem cells. Requirements for multiplexing luminogenic viability assay chemistries will be presented along with examples including: multiplexing CYP450 activity and hepatocyte viability, and GSH levels and cytotoxicity.

MONTDAY AFTERNOON

Monday Afternoon, March 17
12:00 noon to 1:30 PM
See Daily Pocket Calendar on page 6 for room listings

SPECIALTY SECTION MEETINGS/LUNCHEONS:
NANOTOXICOLOGY, NEUROTOXICOLOGY, TOXICOLOGY AND EXPLORATORY PATHOLOGY

Monday Afternoon, March 17
12:15 PM to 1:20 PM
Sheraton Hotel
Grand Ballroom A

IN VITRO TOXICOLOGY LECTURE AND LUNCHEON FOR STUDENTS

Lecturer: Yvonne Will, Pfizer, Inc., San Diego, CA

DEVELOPMENT OF IN VITRO SCREENING TOOLS TO TEST FOR DRUG-INDUCED MITOCHONDRIAL TOXICITIES
(ticket required)

Sponsored by: The Colgate-Palmolive Company
Organized by: The Animals in Research Committee

It is estimated that only 50% of the animal studies predict human efficacy and more importantly human toxicity. In addition, the use of animals should be minimized as much as possible for ethical reasons. Today, there are vigorous, ongoing national and international research and policy efforts to develop alternatives to animal testing. The efforts focus on both in vitro and in silico approaches and methods. For example, the National Toxicology Program (NTP) at the National Institute of Environmental Health Sciences (NIEHS) created the NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM) in 1998.

Mitochondrial dysfunction is a common mechanism of drug-induced toxicity for a variety of therapeutics, such as certain antiviral drugs, lipid-lowering drugs, NSAIDs and certain cancer chemotherapeutics. Therefore, the early identification of drug candidates that potentially disrupt mitochondrial function is of significant importance in drug discovery. In the past few years we have developed organelle and cell based in vitro screens to detect potential mitochondrial toxicities. These include oxygen sensors to measure mitochondrial respiration in isolated mitochondria and cells, immuno-capture of individual electron transport chain proteins that can identify inhibitors of mitochondrial electron transport, and metabolic profiling using oxygen and pH measurements. We discuss the strength and limitations of new applicable high throughput screens and provide recommendations of where to position these assays within the drug development process.
The evaluation of nonclinical safety of potential new drugs underpins the design and execution of their clinical development plans. Nonclinical safety evaluation for biotherapeutics is similar in principle to that for small molecules; however, the very nature of these molecules requires special considerations that are likely to be unique for each new entity. To make the nonclinical assessment even more challenging, newer biotherapeutics are becoming much more refined (species specific and potent) and diverse in nature. Additionally, with the merger of certain aspects of CBER into CDER, and in the aftermath of TeGenero and the report from Professor Duff’s Expert Working Group, it is clear that regulatory expectations are changing. Specifically, at the writing of this abstract FDA is drafting a guidance document intended to supplement ICH S6 in the nonclinical assessment of biotherapeutics. EMEA has released draft guidance on the requirements to support first in human dosing (including a recommendation for dose setting in FIH studies), and ICH is considering whether to open the ICH S6 guidance for biologics for maintenance. These evolutions in science and regulatory policy present ever increasing challenges in the safety assessment of biotherapeutics. This roundtable will present information and raise questions for discussions related to increasing confidence in safety during development of biotherapeutics. This roundtable will consider the future directions in toxicological research and highlight some of the examples of how fundamental science can be used successfully to address applied issues of toxicological relevance. For example, cell death research can serve as an important link between basic science and toxicology and as an area of cross-fertilization between disciplines. Cell death is the result of toxicity, and analysis of signaling pathways is essential for verification of the targets and mechanisms of toxins action. Furthermore, novel molecular, biochemical, genetic and genomics approaches are increasingly used to understand the mechanisms of environmental toxicants. New data which combines knowledge of the toxicity mechanisms, gene expression profiling and the information on the genetic diversity in the mammals makes it possible to determine what genetic variants correlate with susceptibility or resistance to toxicity and disease, thus potentially helping to identify a susceptible population for each exposure. In addition, uncovering the mechanisms by which agents cause adverse effects allows for a more refined assessment of dose-response, and therefore better predictions regarding thresholds for toxicity. Such information is critical for medical practice, drug development and setting environmental and occupational exposure limits. Finally, the public expects that the time frame from fundamental toxicological research to practical application must shorten commensurably with the urgency to deliver adequate risk assessment on issues relevant to public health and safety. Hence, tight interactions between fundamental and applied research is the future of toxicology.
Program Description (Continued)

Monday Afternoon, March 17
12:15 PM to 1:15 PM
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: FISH FIRST: ZEBRAFISH ARE INCREASINGLY USED FOR EARLY STAGE ASSESSMENT OF DRUG EFFICACY, TOXICITY, AND SAFETY

Presented by: Phylonix Pharmaceuticals, Inc.

We have developed in vivo zebrafish assays for assessing drug toxicity and safety. Conventional sample handling instrumentation can be used to perform quantitative assays. Models for most major diseases, including: heart, neuronal, liver and other organs, eye, and cancers have been generated and studies show a striking correlation between results in zebrafish and results in mammals.

Monday Afternoon, March 17
12:15 PM to 1:15 PM
Exhibit Hall 4C-3

EXHIBITOR HOSTED SESSION: INNOVATIONS IN INFUSION AND SAMPLING

Presented by: Strategic Applications, Inc. (SAI)

This session will address the integration of Wi Fi and infusion pump technology and its potential impact on pharmaceutical research and development. We will also discuss the products designed to enhance the quality and efficiency of preclinical infusion and sampling procedures and technological advancements in catheter design and customization.

Monday Afternoon, March 17
12:30 PM to 1:20 PM
Ballroom 6B

MERIT AWARD LECTURE: THE DOSE MAKES THE TOXICOLOGIST—PARACELSIUS AS SEEN FROM SWITZERLAND

Lecturer: Hanspeter Witschi, University of California Davis, Emeritus, Bandon, OR

Theophrastus Bombastus von Hohenheim—as he called himself throughout his life—was born in Switzerland (1493) where he died in 1541. He is best remembered for the saying “the dose makes the poison”, but his impact on contemporary and later medicine was much broader. Joseph F. Borzelleca gives a vivid description of Paracelsus’ accomplishment in his most readable: “Paracelsus—Head of Modern Toxicology” (ToxSci. 53, 2–4, 2000). In 1993, the Swiss historian Pirmin Meier wrote a book never translated into English “Paracelsus—Arzt und Prophet”, highlighting Paracelsus’ activity in Switzerland. It served as primary source material for adding some details to the work and life of Paracelsus, such as interesting information on his name, on how he looked at disease in a new and holistic manner, his preoccupation with the “invisible diseases”, his “Hippocratic oath” and why he was banned from publishing by the City of Nuremberg in 1530 (most of his voluminous writing was published only after his death in 1541). A few personal reflections on Paracelsus and his role in toxicology will be added.

Abstract #

Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: ALTERNATIVE OCULAR AND DERMAL MODELS

Chairperson(s): Frank Barile, Saint Johns University, Queens, NY.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

#323

Poster Board Number ..................101

THE UTILIZATION OF THE EPIOCULAR™
HUMAN TISSUE MODEL TO ASSESS AND
COMPARE THE IRRITATION POTENTIAL
OF MULTIPLE SURFACANT SYSTEMS
USED IN SHAMPOOS AND FACIAL
CLEANSERS. P. Vavilikolanu1, C. Lazaro1, G.
Mun2, A. Hilberer2, M. Hyder2, H. Raabe2 and R.
D. Current1. 1Alberto-Culver Company, Melrose
Park, IL and 2Institute for In Vitro Sciences, Inc.,
Gaithersburg, MD.

#324

Poster Board Number ..................102

COMPARISON OF THE EPIOCULAR ASSAY
WITH HUMAN CLINICAL USE STUDIES
AND POST-MARKET CONSUMER DATA. C.
Gomez1, A. Deng1, S. Steele Fisher1 and J.
Harbells. 1Product Safety, Mary Kay Inc., Dallas, TX.

#325

Poster Board Number ..................103

THE DEVELOPMENT AND UTILIZATION
OF AN IN VITRO SAFETY TESTING
PROGRAM FOR HAIR CONDITIONERS.
C. Lazaro1, P. Vavilikolanu1, G. Mun2, A. Hilberer2,
M. Hyder2, H. Raabe2 and R. D. Current1. 1Alberto-
Culver Company, Melrose Park, IL and 2Institute for
In Vitro Sciences, Inc., Gaithersburg, MD.

#326

Poster Board Number ..................104

EXPANDED UTILIZATION OF THE
EPIOCULAR™ HUMAN CORNEAL TISSUE
MODEL FOR OCULAR IRRITATION
TESTING. M. Klaussner, L. d’Argembeau-Thornton,
H. Kandarova, P. Hayden and Y. Kaluzhny. MatTek
Corporation, Ashland, MA.

#327

Poster Board Number ..................105

THE PORCINE CORNEAL OPACITY
AND REVERSIBILITY ASSAY IS AN
ALTERNATIVE ASSAY THAT PROVIDES
EVIDENCE OF REVERSIBLE EYE
IRRITANCY. A. C. Gilotti, M. Piehl, A. L. Ball
and D. R. Cerven. MB Research Laboratories,
Spinnerstown, PA.

#328

Poster Board Number ..................106

CONFOCAL MICROSCOPY OF
REVERSIBILITY IN EXCISED PORCINE
CORNEAS. M. Piehl, A. C. Gilotti, A. Ball
and D. R. Cerven. MB Research Laboratories,
Spinnerstown, PA.
Program Description (Continued)

Abstract #  

#329 Poster Board Number ...................................... 107  
AN INTER-LABORATORY STUDY OF SHORT TIME EXPOSURE (STE) TEST FOR PREDICTING EYE IRRITATION POTENTIAL OF COSMETIC PRODUCTS AND FINAL PRODUCTS. Y. Takahashi1, T. Hayashi1, S. Watanebe1, M. Koike1, H. Sakaguchi1, S. Ehata1, H. Kuwahara2, T. Nakamura3 and N. Nishiyama3. 1Kao Corporation, Tochigi, Japan, 2Kanebo Cosmetics INC., Kanagawa, Japan and 3Lion Corporation, Kanagawa, Japan. Sponsors: J. Avulas.

#330 Poster Board Number ...................................... 108  

#331 Poster Board Number ...................................... 109  
IN VITRO EVALUATION OF PHOTOREACTIONS IN THE SKIN USING EPIDERMAL SKIN TEST 1000 (EST-1000). J. Hoffmann1, E. Heiser1, S. Weimans2, A. Thiemann2, A. Schnurstein2 and H. Fuchs1. 1CellSystems Biotechnologie Vertrieb GmbH, St. Katharinen, Germany and 2EVONIK Stockhausen GmbH, Krefeld, Germany. Sponsor: R. Curren.

#332 Poster Board Number ...................................... 110  
MICROFLUIDIC HEK CULTURES AS ALTERNATIVES TO MAMMALIAN MODELS. A. O’Neill1, N. Monteiro-Riviere1,2 and G. Walker1. 1Biomedical Engineering, North Carolina State University, Raleigh, NC and 2Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.

#333 Poster Board Number ...................................... 111  
PREDICTING SKIN IRRITATION: IN VIVO RABBIT TEST VS. 4H HUMAN PATCH TEST AND IN VITRO HUMAN SKIN MODEL TEST. H. Bendová1, D. Basketter2, H. Kandarova3, D. Jirová4, M. Marriot4, K. Kojlová5, E. Spiller1 and M. Liebsch1. 1National Institute of Public Health, Prague, Czech Republic, 2St. John’s Inst of Dermatology, St.Thomas Hospital, London, United Kingdom, 3MatTek Corporation, Ashland, MA, 4Unilever Colworth Laboratory, Safety and Environmental Assurance Center, Bedford, United Kingdom and 5Federal Institute for Risk Assessment, ZEJBET, Berlin, Germany.

#334 Poster Board Number ...................................... 112  
PERFORMANCE STANDARDS FOR THE USE OF IN VITRO TISSUES IN A REGULATED ENVIRONMENT. M. Klauser, P. Hoyden, Y. Katsuyama, H. Kandarova, J. Kubilus and J. Sheasgreen. MatTek Corp., Ashland, MA.

#335 Poster Board Number ...................................... 113  
EVALUATION OF EPIDERMAL FULL THICKNESS-300 (EFT-300) AS AN IN VITRO MODEL FOR SKIN IRRITATION. M. S. Sachdeva1, R. Mallapati1, P. Hayden2, M. Klausner2, R. R. Patilolla1 and R. J. Babu1. 1College of Pharmacy, Florida A&M University, Tallahassee, FL, 2MatTek Corporation, Ashland, MD and 3Harrison School of Pharmacy, Auburn University, Auburn, AL.

#336 Poster Board Number ...................................... 114  
DEVELOPMENT AND USE OF AN IN VITRO SAFETY TESTING PROGRAM FOR BATH AND BODY WASH PRODUCTS. D. Onak1, N. Barnes1, H. Raabe1, N. Wille2 and T. A. Re. 1Safety Evaluation, L’Oreal USA, Clark, NJ and 2Institute for In Vitro Sciences, Inc., Gaithersburg, MD.

#337 Poster Board Number ...................................... 115  
IN VITRO MODEL WITH DISCRIMINATIVE POWER FOR SKIN SENSITIZERS BASED ON GENE EXPRESSION PROFILES OF HUMAN DENDRITIC CELLS. J. Hooybergha, N. Lambrecht1,2, E. Schoetere, K. Hollanderb, I. Nelisena, R. Van Den Heuvel1, H. Witters2 and G. Schoeters2. 1Environmental Toxicology, VITO N.V., Mol, Belgium and 2Department Biomedical Sciences, University of Antwerp, Antwerp, Belgium. Sponsor: R. Pieters.

#338 Poster Board Number ...................................... 116  
DEVELOPMENT OF AN ORAL PHOTO-LLNA TO IDENTIFY PHOTOALLERGENS. M. Kik1, Y. Broomhead1, G. L. DeGeorge1, J. R. Piccotti1 and T. T. Kawabata2. 1MB Research Laboratories, Spinnerstown, PA and 2Pfizer Global Research & Development, Ann Arbor, MI.

#339 Poster Board Number ...................................... 117  
EFFECT OF GROWTH FACTORS AND EXTRACELLULAR MATRIX COMPONENTS ON GENE EXPRESSION AND DIFFERENTIATION OF MOUSE EMBRYONIC STEM CELLS. A. R. Calabro and F. A. Barile. Pharmaceutical Sciences, St. John’s University College of Pharmacy, Queens, NY.

#340 Poster Board Number ...................................... 118  

#341 Poster Board Number ...................................... 119  
HEALING OF DERMAL BURN WOUNDS IN THE EPIDERM-FT IN VITRO HUMAN SKIN MODEL. P. J. Hayden, G. Stolper, C. Cooney and M. Klausner. MatTek Corp., Ashland, MA.
Program Description (Continued)

Abstract #

Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: APOPTOSIS: MECHANISMS AND METHODS

Chairperson(s): Alvaro Puga, University of Cincinnati, Cincinnati, OH and Rachel Murrell, North Carolina State University, Greenville, NC.

Displayed: 1:00 PM – 4:30 PM

Attended: 2:45 PM – 4:30 PM

#342 Poster Board Number ...............................121 HIGH THROUGHPUT, MULTI-PARAMETRIC MONITORING OF APOPTOSIS IN CELLS USING HIGH CONTENT SCREENING CELL BASED ASSAYS. R. N. Ghosh and B. S. Mandavilli. Research and Development, Thermo fisher scientific, Rockford, IL. Sponsor: A. Barchowsky.

#343 Poster Board Number ...............................122 AH RECEPTOR INTERACTION WITH E2F1 BLOCKS E2F1-INDUCED APOPTOSIS. A. Puga1, J. Marlowe1, Y. Fan1, C. Ma1, C. Mayhew2 and E. Knudsen2. Department of Environmental Health, University of Cincinnati, Cincinnati, OH and Molecular Toxicology, University of Cincinnati, Cincinnati, OH.

#344 Poster Board Number ...............................123 1-NITROPYRENE (1-NP) INDUCES APOPTOSIS, NECROSIS AND PARAPOTICT LIKE CELL DEATH IN HEPAClC7 CELLS. J. A. Holme1, N. Asare2, N. Landvik1, D. Lagadic-Gossmann1, M. Risef2, X. Tekpil1, P. E. Schwarz1 and M. Låg1. Division of Environmental Medicine, Norwegian Institute of Public Health, Oslo, Norway and Inserm U620, Université Rennes 1, Rennes, France. Sponsor: E. Dybing.

#345 Poster Board Number ...............................124 1, 3-BUTADIENE INDUCED APOPTOSIS IN LNCAP CELLS IS MEDIATED IN PART BY REGULATION OF BCL2/BAX EXPRESSION LEVELS. S. Koppula1, R. Soliparam1, A. Hurst1 and W. Gray2, 2Environmental Toxicology, Southern University, Baton Rouge, LA and 1Chemistry, Southern University, Baton Rouge, LA.

#346 Poster Board Number ...............................125 ENHANCEMENT OF CYTOKINE-INDUCED APOPTOSIS BY BENZENE METABOLITES IS UNIQUE TO TNFa. P. Kerzie1,2, S. Gross1, A. Le1 and R. Irons1,2, 1Cinnaphagen, Inc, Boulder, CO and 2School of Public Health, Fudan University, Shanghai, China and Molecular Toxicology Program, University of Colorado Health Sciences Center, Denver, CO.

#347 Poster Board Number ...............................126 BREVTOKIN 2 ALTERS JURKAFT E6-1 APOPTOSIS RELATED GENE EXPRESSION. R. N. Murrell1,2, W. G. Beden1,2, A. J. Bourdelais1,2 and J. E. Gibson3. 1Department of Environmental and Molecular Toxicology, NCSU, Raleigh, NC, 2Center for Marine Science, UNCW, Wilmington, NC and 3Pharmacology and Toxicology, ECU, Greenville, NC.

#348 Poster Board Number ...............................127 TNF-α-MEDIATED DISRUPTION OF SPERMATOGENESIS IN RESPONSE TO SERTOLI CELL INJURY IS PARTIALLY REGULATED BY MMP-2, P. Yao1, Y. Lin1, J. Cobbett1 and J. H. Richburg1. 1Institute for Cellular and Molecular Biology, the University of Texas at Austin, Austin, TX and 2Division of Pharmacology and Toxicology, College of Pharmacy, the University of Texas at Austin, Austin, TX.

#349 Poster Board Number ...............................128 APOPTOSIS PRECEDES MULTI-ORGAN INFLAMMATION IN MRL-lpr MICE CHRONICALLY EXPOSED TO TCE. S. Kondraganti1, P. J. Boor2, P. M. Kraw2, R. Konig1, B. S. Kappahl1 and G. A. Ansari2. 1biochemistry and Molecular Biology, UTMB, Galveston, TX, 2pathology, UTMB, Galveston, TX and 3microbiology and immunology, UTMB, Galveston, TX.

#350 Poster Board Number ...............................129 ETHANOL IS APOPTOTIC TO NEURAL CREST BECAUSE IT ABBERRANTLY ACTIVATES SIGNALS THAT NORMALLY GOVERN NEURAL CREST APOPTOSIS. S. M. Smith1, A. Garic-Stankovic1, M. Hernandez2 and G. Flenke1. 1Department of Nutritional Sciences, University of Wisconsin-Madison, Madison, WI and 2Waismann Center, University of Wisconsin-Madison, Madison, WI. Sponsor: C. Jefcoate.

#351 Poster Board Number ...............................130 MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN 1, MRPL, MEDIATES GLUTATHIONE RELEASE DURING APOPTOSIS. R. Marchan, C. L. Hammond and N. Ballatori. Environmental Medicine, University of Rochester, Rochester, NY.

#352 Poster Board Number ...............................131 P38 MAP KINASE MEDIATES APOPTOSIS THROUGH ACTIVATION OF FOXO3A AND INDUCTION OF BIM TRANSCRIPTION. B. Cai and Z. Xia. University of Washington, Seattle, WA.

#353 Poster Board Number ...............................132 ARSENIC INDUCES DIFFERENT CELL SIGNALING PATHWAYS LEADING TO APOPTOSIS AND CELL CYCLE ARREST IN PS3 +/- AND PS3-/- CELLS. Z. Guerette, X. Yu, S. Hong, E. Kim and E. M. Faustman. Department of Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.

#354 Poster Board Number ...............................133 TITANIUM DIOXIDE NANOPARTICLES INDUCE JB6 CELL APOPTOSIS THROUGH ACTIVATION OF THE CASPASE-8/BID PATHWAY. J. Zhao1, L. Bowman1, X. Zhang2 and M. Ding1. Pathology and Physiology Research Branch, National Institute for Occupational Safety and Health, Morgantown, WV and 2Graduate Center for Toxicology, University of Kentucky, Lexington, KY. Sponsor: V. Castranova.

#355 Poster Board Number ...............................134 A COMPARATIVE EFFECT OF CADMIUM ON NON-TUMOR AND TUMOR DERIVED OSTEOSTATIC CELLS. A. E. McCartney, W. A. Harvey, L. E. Delana and S. J. Hegland. Biology, Albertson College of Idaho, Caldwell, ID.
Abstract #

#356  
Poster Board Number ..............................135  
LEAD INDUCES APOPTOSIS IN HUMAN  
LEUKEMIA (HL-60) CELLS VIA OXIDATIVE  
STRESS. C. G. Yedjou and P. B. Tchounwou.  
Biology, Jackson State University, Jackson, MS.

#357  
Poster Board Number ..............................136  
MECHANISMS OF CHEMICALLY-INDUCED  
DNA DAMAGE BY CHLORPYRIFOS IN  
THE ETIOLOGY OF INFANT LEUKEMIA.  
S. C. Tilton1, J. S. Shao1, C. C. White2,3, T. J.  
Kavanaugh2,3 and E. P. Gallagher2,3. 1Environmental  
and Occupational Health Sciences, University  
of Washington, Seattle, WA and 2Center for  
Eco genetics and Environmental Health, University  
of Washington, Seattle, WA.

#358  
Poster Board Number ..............................137  
INHIBITION OF CA\(^{2+}\)-INDEPENDENT  
PHOSPHOLIPASE A\(_2\), INDUCES P53-  
DEPENDENT PROSTATE CANCER  
CELL DEATH. B. Sun and B. S. Cummings.  
Pharmaceutical and Biomedical Sciences, University  
of Georgia, Athens, GA.

#359  
Poster Board Number ..............................138  
ROLE OF CALCIUM-INDEPENDENT  
PHOSPHOLIPASE A\(_2\), IN SIGNAL  
TRANSDUCTION DURING CYTOSIS  
AND CELL DEATH IN PROSTATE CANCER  
CELLS. X. Zhang, S. Talathi, J. H. Hurst, S. B.  
Hooks and B. S. Cummings. Pharmaceutical and  
Biomedical Sciences, University of Georgia, Athens,  
GA.

#360  
Poster Board Number ..............................139  
CHRONIC EXPOSURE OF CADMIUM  
RESULTS IN AN INCREASED CELL  
SURVIVAL AND ACQUISITION OF  
APOPTOTIC RESISTANCE OF TM3 CELLS.  
C. L. Pevey, K. Singh and J. W. DuMond. Texas  
Southern University, Houston, TX.

Abstract #

Monday Afternoon, March 17  
1:00 PM to 4:30 PM  
Exhibit Hall

STEM CELL BIOLOGY AND TOXICOLOGY  
POSTER SESSION: STEM CELL BIOLOGY AND TOXICOLOGY

Chairperson(s): Fanny Casado-Pena, University of Rochester,  
Rochester, NY.

Displayed: 1:00 PM–4:30 PM  
Attended: 1:00 PM–2:45 PM

#361  
Poster Board Number ..............................201  
ROLE OF CX32 IN STEADY-STATE HEMATOPOIESIS AND  
LEUKEMOGENESIS: STUDY IN THE  
CX32-KNOCKOUT MICE. Y. Hirabayashi1,  
B. Yoon1, I. Tsuboi1, Y. Kodama1, J. Kanno1, J.  
E. Trosko2 and T. Inoue3. 1Cellular & Molecular  
Toxicology Division, Center for Biological Safety &  
Research, National Institute of Health Sciences,  
Tokyo, Japan, 2Department of Pediatrics and Human  
Development, Michigan State University, College of  
Human Medicine, East Lansing, MI and 3Center for  
Biological Safety & Research, National Institute of  
Health Sciences, Tokyo, Japan.

#362  
Poster Board Number ..............................202  
EFFECT OF METHYLMERCUry ON  
NEURAL STEM CELLS DIFFERENTIATION  
DERIVED FROM CYNOMOLGUS MONKEY  
EMBRYONIC STEM CELLS. M. Yamamoto1,  
T. Okuno2 and Y. Kondo2. 1Department of Basic  
Medical Sciences, National Institute for Minamata  
Disease, Minamata City, Japan and 2Advanced  
Medical Research Laboratory, Mitsubishi Tanabe  
Pharmacology Corporation, Osaka City, Japan.

#363  
Poster Board Number ..............................203  
BIological EFFECTS OF BENZo[A]PYRene  
AND CHLORINATED BENZo[A]PYRene IN MOUSE EMBRYONIC STEM  
CELLS. T. Nishimura1, K. Shimizu1, R. Kubota1,  
M. Tahara1, M. Emu2 and H. Tokunaga1. 1Division of  
Environmental Chemistry, National Institute of  
Health Sciences, Tokyo, Japan and 2Division of Risk  
Assessment, Biological Safety Research Center,  
National Institute of Health Sciences, Tokyo, Japan.

#364  
Poster Board Number ..............................204  
HUMAN EMBRYONIC STEM CELLS  
AS A MODEL OF DEVELOPMENTAL  
TOXICITY—A TOXICOGENOMICS  
APPROACH. M. Jergil1, R. Strohi1, R. Soderlund1,  
M. Fernandez1, H. Naev1, J. Hyllner1, L. Dencker1  
and M. Stigson1. 1Pharmaceutical Biosciences,  
Uppsala University, Uppsala, Sweden, 2Cellartis AB,  
Goteborg, Sweden and 3Food toxicology, Veterinary  
Medical University, Hannover, Germany.

#365  
Poster Board Number ..............................205  
ARYL HYDROCARBON RECEPTOR  
ROLE IN HEMATOPOIETIC STEM CELL  
FUNCTION. F. L. Casado, K. P. Singh and T. A.  
Gastiewicz. Environmental Medicine, University of  
Rochester, Rochester, NY.
Program Description (Continued)

Abstract 

#366
Poster Board Number ...........................................206
DIFFERENTIAL INFLAMMATORY GENE EXPRESSION IN YOUNG AND AGED MICE DURING CHEMICAL INJURY-INDUCED HIPPOCAMPAL NEUROGENESIS. C. A. McPherson1,2, M. Aoyama1,2, S. F. Grissom1, J. Gohlke1 and G. J. Harry.1 Laboratory of Neurobiology, National Institute of Environmental Health Sciences, Research Triangle Park, NC, 1Curriculum in Toxicology, University of North Carolina at Chapel Hill, Chapel Hill, NC and 2Department of Molecular Neuroscience, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan. Sponsor: H. Tilson.

#367
Poster Board Number ...........................................207
PERSISTENT ARYL HYDROCARBON RECEPTOR ACTIVATION RESULTS IN ALTERED NUMBERS AND FUNCTION OF HEMATOPOIETIC STEM/PROGENITOR CELLS. K. P. Singh1, A. Wyman1, F. Casado1, R. Garrett1 and T. A. Gasiewicz2,1 Environmental Medicine, University of Rochester, School of Medicine and Dentistry, Rochester, NY, 1Mathematics and Science. Seattle Community College District, Seattle, WA and 2Department of Medicine, University of Pennsylvania, School of medicine, Philadelphia, PA.

#368
Poster Board Number ...........................................208

#369
Poster Board Number ...........................................209

#370
Poster Board Number ...........................................210
QUANTITATIVE MICROARRAY ANALYSIS BY “PERCELLOME” METHOD OF MURINE EMBRYONIC STEM CELLS AND EMBRYOID BODIES. A. Takagi1, S. Kitajima1, N. Nakatsu1, K. Igarashi1, K. Asai1, M. Emi1 and J. Kanno1.1 Division of Cellular & Molecular Toxicology, National Institute of Health Sciences, Tokyo, Japan and 2Division of Risk Assessment, National Institute of Health Sciences, Tokyo, Japan.

#371
Poster Board Number ...........................................211
THE EFFECTS OF POLYCYCLIC AROMATIC HYDROCARBONS ON GAP JUNCTION FUNCTION IN AN ADULT HUMAN LIVER STEM CELL LINE. B. L. Upham1,2, P. Babica1,2, J. Park1,2, I. Sovadinova1,2, J. E. Trosko1,2 and C. Chang2,1 Pediatrics & Human Development, Michigan State University, East Lansing, MI and 2and National Food Safety & Toxicology Center, Michigan State University, East Lansing, MI.

Abstract 

#372
Poster Board Number ...........................................212
AHHR PATHWAY GENES ARE EXPRESSED IN HUMAN EMBRYONIC STEM CELLS. E. A. Bolsterstein and B. Allen-Hoffman.1,2 Molecular and Environmental Toxicology Center, University of Wisconsin, Madison, WI and Department of Pathology, University of Wisconsin, Madison, WI.

Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: BIOMARKERS

Chairperson(s): Ivan Rusyn, University of North Carolina Chapel Hill, Chapel Hill, NC and Joel Pounds, Pacific Northwest National Laboratory, Richland, WA.

Displayed: 1:00 PM–4:30 PM
Attended: 2:45 PM–4:30 PM

#373
Poster Board Number ...........................................214
THE MECHANISM OF GALACTOSAMINE TOXICITY AND IDIOSYNCRATIC RESPONSE: A METABONOMIC STUDY. M. Coen1, T. A. Clayton1, E. Want1, C. M. Rhode1, Y. S. Hong1, E. Holmes1, J. C. Lindon1, M. D. Reilly2, D. G. Robertson2 and J. K. Nicholson1.1 Biomolecular Medicine, Imperial College London, London, United Kingdom and 2Metabonomics Evaluation Group, Pfizer Global R&D, Ann Arbor, MI.

#374
Poster Board Number ...........................................215
PHENOTYPIC ANCHORING OF GENE EXPRESSION DATA FROM ACETAMINOPHEN HEPATOTOXICITY STUDIES IN THE MOUSE MODEL OF THE HUMAN POPULATION REVEALS BIOMARKERS OF RESPONSE. A. Hege1, P. Ross2, D. Threadgill1,2 and I. Rusyn1,2.1 Curriculum in Toxicology, UNC-Chapel Hill, Chapel Hill, NC, 2Department of Environmental Sciences and Engineering, UNC Chapel Hill, Chapel Hill, NC and 3Department of Genetics, UNC Chapel Hill, Chapel Hill, NC.

#375
Poster Board Number ...........................................216
EVALUATION OF INDIVIDUAL BILE ACIDS AS BIOMARKERS OF HEPATOTOXICITY. J. Colangelo1, C. Fritz1 and R. Schneider1,1 Drug Safety, Pfizer Global Research & Development, Groton, CT and 2Translational and Molecular Medicine, Pfizer Global Research & Development, Groton, CT. Sponsor: M. Aleo.

#376
Poster Board Number ...........................................217
Program Description (Continued)

Abstract #

#377 Poster Board Number ........................................218 Abstract #

BIOMARKER DOSE RESPONSE PROFILING TO THE NEPHROTOXIN 6-SERINE IN FISHER 344 RATS. C. Mauzy1, J. Frey1, E. Fleming1, D. Todd1, D. Mahle1, N. DelRaso1 and R. Rietcheck1. Applied Biotechnology-Human Effectiveness Directorate, Air Force Research Laboratory (AFRL), Wright Patterson Air Force Base (Wright-Patterson AFB), OH and 2Army Comparative Medicine-Pathology, AFRL, Wright-Patterson AFB, OH. Sponsor: J. Schlager.

#378 Poster Board Number ........................................219 KIDNEY INJURY MOLECULE 1 (KIM-1) AS AN EARLY BIOMARKER OF CADMIUM NEPHROTOXICITY: COMPARISON WITH URINARY CADMIUM AND ALPHA-GLUTATHIONE-S-TRANSFERASE (ALPHA-GST). W. C. Prozialeck1, J. Edwards1, F. C. Lamar1, V. S. Vaidya1 and J. V. Bonventre2. 1Pharmacology, Midwestern University, Downers Grove, IL and 2Renal Division, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA.

#379 Poster Board Number ........................................220 DETECTION OF MULTIPLE GLOBIN MONO-ADDUCTS AND CROSS-LINKS AFTER EXPOSURE OF RAT ERYTHROCYTES TO S-(1, 2-DICHLOROVINYL)-L-CYSTEINE SULFOXIDE BOTH IN VITRO AND IN VIVO. N. Barshteyn and A. A. Elfarra. Pharmaceutical Sciences, University of Madison, Wisconsin, Madison, WI.

#380 Poster Board Number ........................................221 PSTC VXDS02: NOVEL URINARY BIOMARKERS THAT DETECT KIDNEY TUBULAR HISTOPATHOLOGIC ALTERATIONS OUTPERFORM OR ADD VALUE TO BUN AND SERUM CREATININE. J. S. Oster1, V. Vaidya1, D. Holder1, S. Troth1, N. Muniappa1, H. Jin1, Y. Yu1, D. Thudium1, W. White1, D. McCausland1, H. Duong1, M. Lease1, M. Toper1, W. Bailey1, D. Gerhold1, J. Bonventre2 and R. Rietcheck2. 1Safety Assessment, Merck, West Point, PA and 2Harvard Medical School, Brigham and Women’s Hospital, Boston, MA.


#382 Poster Board Number ........................................223 BIOMARKERS OF FURAN EXPOSURE BY METABOLITE PROFILING OF RAT URINE WITH LC-TANDEM Mass SPECTROMETRY AND PRINCIPAL COMPONENT ANALYSIS. M. Kellert, S. Wagner, U. Lutz and W. K. Lutz. Toxicology, University of Würzburg, Würzburg, Germany.
Abstract #  

**#391**  
**Poster Board Number** .................................. 232  
**EARLY CYTOKINE CHANGES AS SURROGATE MARKERS OF LOW DOSE IRRADIATION,** J. Finkelstein1,2, J. P. Williams3, E. Hernady1, C. Reed1 and C. Johnston1,  
1Pediatrics, University of Rochester, Rochester, NY, 2Radiation Oncology, University of Rochester, Rochester, NY and 3Environmental Medicine, University of Rochester, Rochester, NY.  

**#392**  
**Poster Board Number** .................................. 233  
**BIOMARKER LEVELS IN DOGS AFTER 28-DAY ORAL TREATMENT WITH SR16157,** L. L. Rausch1, P. Catz2, S. LeValley1, K. Steinmetz2, C. Green1, I. Tomaszewski2, K. Schweikart2, N. Zaveri1 and J. Mirza1,  
1toxicology, SRI International, Menlo Park, CA and 2Developmental Therapeutics Program, National Cancer Institute, Bethesda, MD.  

**#393**  
**Poster Board Number** .................................. 234  
**TEMPORAL PATTERN OF SKELETAL MUSCLE GENE EXPRESSION FOLLOWING PROLONGED ENDURANCE EXERCISE IN ALASKAN SLED DOGS,** M. A. Peters1, E. P. Brass1, K. W. Hinchcliff1 and R. G. Ulrich2,  
1Rosetta Biosoftware, Seattle, WA, 2Calistoga Pharmaceuticals, Seattle, WA, 3UCLA, Torrance, CA and 4University of Melbourne, Victoria, Australia.  

**#394**  
**Poster Board Number** .................................. 235  

**#395**  
**Poster Board Number** .................................. 236  
**IDENTIFICATION OF RNS/ROS-MODIFIED PROTEINS AS BIOMARKERS FOR CHRONIC INFLAMMATORY STRESS IN MOUSE LUNG,** C. A. Sacksteder1, J. M. Jacobs1, K. M. Lee2, K. M. Waters2, D. J. Bigelow1 and J. G. Pounds1,  
1Pacific Northwest National Laboratory, Richland, WA and 2Battelle Toxicology Northwest, Richland, WA.  

**#396**  
**Poster Board Number** .................................. 237  
**USING PHARMACOKINETIC DATA TO INTERPRET METABOLIC CHANGES IN CD-1 MICE TREATED WITH TRIAZOLE FUNGICIDES,** W. M. Henderson1, J. F. Kenneke1, T. W. Collette1 and S. E. Ritger2,  
1Office of Research and Development, National Exposure Research Laboratory, U.S. Environmental Protection Agency, Athens, GA and 2College of Public Health, Interdisciplinary Toxicology Program, University of Georgia, Athens, GA.  

**#397**  
**Poster Board Number** .................................. 238  
**INVESTIGATING THE EFFECTS OF DIFFERENT HEPATOTOXINS ON SERUM BILE ACID AND PHOSPHOLIPID PATTERNS,** E. J. Want1, M. Coen1, C. Rohde2, E. Holmes1, J. Lindon1, M. D. Reily2, D. Robertson3 and J. K. Nicholson1,  
1Biomolecular Medicine, Imperial College, London, United Kingdom and 2Metabonomics Evaluation Group, Pfizer Global R & D, Ann Arbor, MI.  

**#398**  
**Poster Board Number** .................................. 239  

**#399**  
**Poster Board Number** .................................. 240  
**PSTC VDXS #: URINARY BIOMARKER TO MONITOR DRUG-INDUCED GLOMERULAR TOXICITY IN RATS,** F. Dieterle, E. Perentes, D. R. Roth, A. Coronel, G. Maurer and J. Wonderscher, Pharmacology Development, Novartis, Basel, Switzerland.  

**Monday Afternoon, March 17**  
1:00 PM to 4:30 PM  
Exhibit Hall  

**POSTER SESSION: GENETIC POLYMORPHISMS**  
Chairperson(s): Timothy Fennell, RTI International, Research Triangle Park, NC and David Hein, University of Louisville, Louisville, KY.  

**Displayed: 1:00 PM–4:30 PM**  

**#400**  
**Poster Board Number** .................................. 301  
**COMPARISON OF COPROPORPHYRINOGEN OXIDASE (CPOX) AND ITS GENETIC VARIANT (CPOX4) IN HUMAN LIVER,** T. Li and J. S. Woods, Environmental Health, University of Washington, Seattle, WA.  

**#401**  
**Poster Board Number** .................................. 302  
**POLYMORPHISMS IN THYMIDYLATE SYNTHASE GENE ARE ASSOCIATED WITH INCREASED RISK FOR NON-SMALL CELL LUNG CANCER AND THERAPEUTIC OUTCOME IN A PORTUGUESE POPULATION,** A. Lima12, V. M. Seabra1, A. Coelho2, A. Araujo2 and R. Medeiros2,  
1Pharmaceutical Sciences, ISCS-Norte, Gandra, PRD, Portugal and 2Molecular Oncology, IPO, Porto, Portugal.  

**#402**  
**Poster Board Number** .................................. 303  
**GSTM1 AND GSTT1 POLYMORPHISMS, RESPONSE TO CHEMOTHERAPY AND SURVIVAL IN LUNG CANCER PATIENTS,** M. Iscan1, A. O. Ada1, S. C. Kunak2, F. Hancer1, S. H. Suzen1, S. Alpar3, M. Gullan1 and B. Kurt1,  
1Toxicology, Ankara University, Faculty of Pharmacy, Ankara, Turkey, 2Internal Medicine, Ankara Hospital, Ankara, Turkey and 3Pulmonary diseases, Ataturk PulmonaryDiseases and Thoracic Surgery Hospital, Ankara, Turkey, Sponsor: A. Karakaya.  

**#403**  
**Poster Board Number** .................................. 304  
**IMPACT OF GST POLYMORPHISMS ON HEMOGLOBIN ADDUCTS IN SMOKERS AND NON SMOKERS,** T. R. Fennell and R. W. Snyder, RTI International, Research Triangle Park, NC.
Program Description (Continued)

Abstract #

#404

Poster Board Number .............................................. #305

ASSOCIATION OF THE OGG1 SER326CYS POLYMORPHISM WITH LUNG CANCER RISK IN TURKISH POPULATION. A. E. Karakaya1, B. Karahalih, E. E. Emerce-Tufan1, B. Kocer2, S. Han1 and N. Alkis3. 1Department of Toxicology, Gazi University, Ankara, Turkey, 2Numune Training and Research Hospital, Ankara, Turkey and 3Ankara Oncology Training and Research Hospital, Ankara, Turkey.

#405

Poster Board Number .............................................. #306


#406

Poster Board Number .............................................. #307

GENETIC RISK FACTORS IN PROGRESSIVE MASSIVE FIBROSIS IN COAL MINERS. B. Iveysoy1, V. J. Johnson1, K. Fluhrty1, M. L. Kasha1, J. Slaven1, S. Kissing1, D. Germolec2, V. Vallyathan1 and M. J. Luster1. 1Toxicology and Molecular Biology Branch, CDC/NIOSH, Morgantown, WV. 2Biostatistics and Epidemiology Branch, CDC/NIOSH, Morgantown, WV. 3Pathology and Physiology Research Branch, CDC/NIOSH, Morgantown, WV. 4Biotistics Branch, NIEHS, Research Triangle Park, NC and 5Toxicology Operations Branch, NIEHS, Research Triangle Park, NC.

#407

Poster Board Number .............................................. #308

RELATIONSHIP BETWEEN ARSENIC-SKIN LESIONS AND THE MET287THR POLYMORPHISM IN AS3MT GENE. O. L. Valenzuela1, Z. Drobina1, G. G. Garcia-Vargas1, V. H. Borja-Abarca1, M. Sybil1 and L. M. Del Razo1. 1Toxicology, Cinvestav-IPN, Mexico D.F., Mexico. 2Department of Nutrition, and CEMALB, UNC at Chapel Hill, Chapel Hill, NC. 3Medicina, UJED, Gomez Palacio, Durango, Mexico and 4IMSS, Mexico, D.F., Mexico.

#408

Poster Board Number .............................................. #309

AMINOEVULINIC ACID DEHYDRATASE (ALAD) POLYMORPHISM IS ASSOCIATED WITH BLOOD LEAD LEVEL AND HYPERTENSION IN THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES III). F. Secincicardiello1, B. A. Fowler1, A. Yeupriya2 and M. Chang3. 1DTM, ATSDR, Atlanta, GA. 2NOPHG, CDC, Atlanta, GA and 3for the CDC/NCH NHANES III Genomics Working Group, Atlanta, GA.

#409

Poster Board Number .............................................. #310

GENETIC VARIANTS IN FOUR METAL-REGULATORY GENES IN AUTISM, S. E. Owens1, M. L. Summar1, K. K. Rockman1, J. L. Haines1 and M. Aschner1. 1Pediatrics, Vanderbilt University Medical Center, Nashville, TN and 2Center for Human Genetics Research, Vanderbilt University Medical Center, Nashville, TN.

#410

Poster Board Number .............................................. #311

ASSOCIATIONS BETWEEN THE 5-HTTLPR POLYMORPHISM AND MERCURY FOR MOOD AND BEHAVIOR IN HUMANS. D. Echeverria1, J. S. Woods2, N. Heyer3, D. Rhulman1, F. Farin1 and T. Li1. 1Center for Public Health Research and Evaluation, Battelle CPHRE, Seattle, WA, 2Department of Environmental Health, University of Washington, Seattle, WA and 3Center for Research on Occupational and Environmental Toxicology, Oregon Health and Science University, Portland, OR.

#411

Poster Board Number .............................................. #312

MULTIPLE LOCI SURROUNDING THE APOE GENE ARE ASSOCIATED WITH APOE LEVELS IN POSTMORTEM ALZHEIMER’S DISEASE BRAIN. L. M. Bekris1,2, N. Galloway3, T. J. Montine4, G. D. Schellenberg5 and C. Yu6. 1Medicine, University of Washington, Seattle, WA, 2Geriatric Research, Education and Clinical Center, Veterans Affairs Puget Sound Health Care System, Seattle, WA, 3Neurology, University of Washington, Seattle, WA. 4Pharmacology, University of Washington, Seattle, WA and 5Pathology, University of Washington, Seattle, WA.

#412

Poster Board Number .............................................. #313

IDENTIFICATION OF SINGLE NUCLEOTIDE POLYMORPHISMS IN THE HUMAN AHFR FROM SIX ETHNIC POPULATIONS. J. Rowlands1, R. Budinsky2, R. Gollapudi1, R. Drinkwater1 and M. Storck1. 1The Dow Chemical Company, Midland, MI and 2Functional Biosciences, Inc., Madison, WI.

#413

Poster Board Number .............................................. #314

N-ACETYLTRANSFERASE 2 GENETIC POLYMORPHISM INCREASES BREAST CANCER RISK AMONG WOMEN SMOKERS IN NEW MEXICO. T. J. Schilirio, D. Yang1, M. A. Doll1, K. B. Baumgartner2 and D. W. Hein1. 1Pharmacology and Toxicology, University of Louisville, Louisville, KY and 2Epidemiology and Population Health, University of Louisville, Louisville, KY.

#414

Poster Board Number .............................................. #315

INVESTIGATION OF THE MECHANISM OF INCREASED N-ACETYLTRANSFERASE 1 (NAT1) EXPRESSION IN ESTROGEN RECEPTOR POSITIVE BREAST CANCER. X. Zhang, D. F. Barker, M. A. Doll, R. C. Martin, J. States, C. M. Klinge and D. W. Hein1. 1Pharmacology and Toxicology, University of Louisville, Louisville, KY and 2Biochemistry & Molecular Biology, University of Louisville, Louisville, KY.

#415

Poster Board Number .............................................. #316

FUNCTIONAL EFFECT OF N-ACETYLTRANSFERASE 1 (NAT1*10) POLYMORPHISM IN DNA ADDUCT FORMATION AND MUTAGENESIS FOLLOWING EXPOSURE TO AROMATIC AND HETEROCYCLIC AMINE CARCINOGENS, L. M. Miller, J. Bendaly, M. A. Doll, D. F. Barker, J. States and D. W. Hein. Pharmacology and Toxicology, University of Louisville, Louisville, KY.
Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

NANOTECHNOLOGY

POSTER SESSION: NANO PARTICLES: TESTING APPROACHES, GENO- AND ECOTOXICITY

Chairperson(s): Amy Ringwood, University of North Carolina Charlotte, Charlotte, NC and Richard Peterson, University of Wisconsin Madison, Madison, WI.

Displayed: 1:00 PM–4:30 PM

Attended: 2:45 PM– 4:30 PM

Poster Board Number ...........................................320
THE ROLE OF PARAOXONASE (PON1) IN MODULATING TOXICITY OF OP MIXTURES, K. L. Jansen1, T. B. Cole2, W. Li3, S. Park3, C. E. Furlong4 and L. G. Costa5, 1Environmental and Occupational Health Sciences, University of Washington, Seattle, WA, 2Medical Genetics, University of Washington, Seattle, WA and 3Environmental Health and Occupational Medicine, National Health Research Institutes, Zhunan Town, Taiwan.

Poster Board Number ...........................................321
SUBCELLULAR LOCALIZATION OF SOLUBLE EPOXIDE HYDROLASE REGULATES ENZYME STABILITY AND ACTIVITY, B. Luo, A. E. Enayetallah and D. F. Grant, Department of Pharmaceutical Sciences, University of Connecticut, Storrs, CT.

Poster Board Number ...........................................322

Poster Board Number ...........................................323
QUANTITATION OF NAT1, NAT2 AND NAT3 mRNA IN THE RAT: INVESTIGATION OF TISSUE, GENDER AND AGE-SPECIFIC EFFECTS ON GENE EXPRESSION, D. F. Barker, J. M. Walraven, E. H. Ristagno, M. A. Doll and D. W. Hein, Pharmacology and Toxicology, University of Louisville, Louisville, KY.

Poster Board Number ...........................................330
SIZE-DEPENDENT TOXICITY AND UPTAKE OF FLUORESCENT SILICA NANOPARTICLES INTO CELLS, L. Davis1, C. M. Grabinski2, A. M. Schrand1, R. C. Murdock1, L. K. Braydich-Stolle1, B. Gu2, J. J. Schlager2 and S. M. Hussain3, 1Applied Biotechnology Branch, RHPB, Air Force Research Labs, Wright Patterson, OH, 2Department of Chemical and Materials Engineering, University Of Dayton, Dayton, OH and 3Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN.

Poster Board Number ...........................................331

Poster Board Number ...........................................332

Poster Board Number ...........................................333
DEVELOPMENTAL TOXICITY OF QUANTUM DOTS IN ZEBRAFISH: INFLUENCE OF SURFACE CHEMISTRY, R. E. Petersen1, T. C. King Heiden2, A. Mangham2, P. Wiecinski3, K. M. Metz4, D. Nesbit5, J. A. Pedersen4, R. J. Hamers1 and W. Heideman2, 1Molecular and Environment Toxicol. Center, UW-Madison, Madison, WI, 2School of Pharmacy, UW-Madison, Madison, WI, 3Department of Chemistry, UW-Madison, Madison, WI and 4Environment Chem. and Technol. Program, UW-Madison, Madison, WI.
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<td>#427</td>
<td>ZEBRAFISH AS AN ALTERNATIVE MODEL TO ASSESS BIOMATERIAL NANOTOXICITY. O. Bar-Ilan, R. M. Albrecht, R. E. Peterson and D. Y. Furgeson. Pharmaceutical Sciences, University of Wisconsin-Madison, Madison, WI.</td>
<td>#435</td>
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<td>#428</td>
<td>DIFFERENTIAL TOXICITY OF METALLIC NANOPARTICLES TO AQUATIC SPECIES. J. Griffith, J. Luo, N. D. Denslow, K. Powers and D. S. Barber. Center for Environmental and Human Toxicology, University of Florida, Gainesville, FL and Particle Engineering Research Center, University of Florida, Gainesville, FL.</td>
<td>#436</td>
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<td>#429</td>
<td>A COMPARISON OF BULK AND NANO-SIZED ALUMINUM OXIDE (AL, O.) ECOTOXICITY TO HYALELLA AZTECA AND TUBIFEX TUBIFEX IN SPIKED SEDIMENT. J. K. Stanley. U.S. Army Research and Development Center, Vicksburg, MS. Sponsor: J. Stevens.</td>
<td>#437</td>
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<td>#430</td>
<td>THE EFFECTS OF METAL NANOPARTICLES AND FULLERENES ON OYSTER HEPATOPANCREAS CELLS AND EMBRYOS. A. H. Ringwood, M. McCarthy, T. Changela, D. Carroll and N. Levi. Biology, UNC - Charlotte, Charlotte, NC and Physics, Wake Forest University, Winston-Salem, NC.</td>
<td>#438</td>
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<td>#432</td>
<td>FATE OF FULLERENE NANOPARTICLES AND THEIR INTERACTIONS WITH ORGANIC MATTERS IN AQUATIC ENVIRONMENTS. Y. Xia, X. Q. Kong and X. Xia. Dalian University of Technology, Dalian, China and North Carolina State University, Raleigh, NC.</td>
<td>#439</td>
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<td>#433</td>
<td>AN EZ METRIC FOR EVALUATING NANOMATERIAL-BIOLOGICAL INTERACTIONS. S. L. Harper, S. Lee and R. L. Tanguay. Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR, Fusion Laboratory, Department of Engineering, Oregon State University, Corvallis, OR and Environmental Health Sciences Center, Oregon State University, Corvallis, OR.</td>
<td>#440</td>
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<td>#434</td>
<td>SCREENING ASSAYS FOR ASSESSING NANOPARTICLE TOXICITY. G. Oberdörster, E. K. Rushton and J. N. Finkelman. Pediatrics, University of Rochester, Rochester, NY and Environmental Medicine, University of Rochester, Rochester, NY.</td>
<td>#441</td>
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<tr>
<td>#402</td>
<td>INTEGRATION OF MICROARRAY AND PROTEOMIC DATA REVEALS PATHWAY-SPECIFIC INFLAMMATORY MARKERS OF NANOPARTICLE EXPOSURE TO MOUSE MACROPHAGES. S. Bandopadhyay, L. Masiello, N. Karin, J. Jacobs, J. Pounds, B. Thrall and K. M. Waters. Environmental Biomarkers Initiative, PNNL, Richland, WA.</td>
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<tr>
<td>#404</td>
<td>CORRELATING TOXICITY OF NANOMATERIAL WITH PHYSICAL CHARACTERIZATION USING AN OXIDATIVE STRESS MODEL. M. Korochich, T. Xia and A. E. Nel. Medicine, UCLA, Los Angeles, CA.</td>
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<td>#407</td>
<td>ENHANCED CYTO- AND GENOTOXIC EFFECTS OF FE(III) NANOPARTICLES COMPARED TO FE(III) FINE PARTICLES IN HUMAN LUNG CELLS. K. Bhattacharya, E. Hoffmann, C. Albrecht, R. Schins, G. Alpin, Institute of Hygiene and Occupational Medicine, University of Duisburg-Essen, Essen, Germany, Institute of Cell Biology, University of Rostock, Rostock, Germany, Institut fuer Umweltmedizinische Forschung (IFU), Duesseldorf, Germany and Wageningen University, Wageningen, Netherlands.</td>
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#442
Poster Board Number ...............................409
A 28-DAYS REPEATED DOSE AND GENOTOXICITY STUDY OF SILVER NANOPARTICLES. Y. Kim1, J. Kim1, J. Kim1, J. Park2, H. Chang1, R. Im2, M. Song1, Y. Chung2 and I. Yu3. 1Biosafety Evaluation Headquarters, KEMTI, Incheon, South Korea, 2College of Medicine, Chung-Ang University, Seoul, South Korea, 3College of Medicine, Kosin University, Busan, South Korea and 3Center for Occupational Toxicology, KOSHA, Daegu, South Korea.

#443
Poster Board Number ...............................410
LIMITATIONS OF THE STANDARD IN VITRO GENOTOXICITY PROTOCOLS FOR TESTING OF NANOMATERIALS. M. Schulz1, W. Wohlleben1, B. van Ravenzaaw1 and R. Landsiedel1. 1Experimental Toxicology and Ecology, BASF, Ludwigshafen am Rhein, Germany and 2Polymer Physics, BASF, Ludwigshafen am Rhein, Germany.

Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: KIDNEY

Chairperson(s): Peter Goering, U.S. FDA, Silver Spring, MD.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

#444
Poster Board Number ...............................411
ALTU-237: A 14-DAY ORAL TOXICITY STUDY IN BEAGLE DOGS. E. Koo1, G. Gesswein1, C. Godir1 and K. Loveday2. 1Bridge Global Pharmaceutical Services, Inc., Gaithersburg, MD and 2Toxicology & Pharmacology, Altus Pharmaceuticals, Cambridge, MA.

#445
Poster Board Number ...............................412
MECHANISTIC ASPECTS OF PROPANIL NEPHROTOXICITY IN VITRO. C. Racine1, A. Sweeney1, A. Kraynie1, S. Baksi1, D. Anestis1 and G. O. Rankin1. 1Pharmacology, Marshall University, Huntington, WV and 2Davis & Elkins College, Elkins, WV.

#446
Poster Board Number ...............................413
DETECTION OF ENDOTOXIN-INDUCED ACUTE KIDNEY INJURY IN RATS. R. P. Brown1, V. S. Vaidya1, B. C. Beach1, M. C. Toal1, S. T. Loftin2, J. Zhang2, F. B. Collings1, J. V. Bonventre3 and P. L. Goering1. 1CDRH, U.S. FDA, Silver Spring, MD, 2CDER, U.S. FDA, Silver Spring, MD and 3Brigham and Women’s Hospital, Harvard Medical School, Boston, MA.

#447
Poster Board Number ...............................414
ROLES OF MITOCHONDRIAL DYSFUNCTION, CASPASES, AND FAS RECEPTOR IN S-(1,2-DICHLOROVINYL)-L-Cysteine (DCVC)-INDUCED CYTOTOXICITY IN HUMAN PROXIMAL TUBULAR (HPT) CELLS. L. H. Lash1, F. Xu2, D. A. Putt1 and I. Papayannotou, Pharmacology, Wayne State University Sch. Med., Detroit, MI.

#448
Poster Board Number ...............................415

#449
Poster Board Number ...............................416
PYOMYCIN TREATMENT RESULTED IN DIFFERENTIAL EXPRESSION OF GENES INVOLVED IN PATHWAYS ASSOCIATED WITH GENE-PROTEIN EXPRESSION PROCESS. A. R. Stapleton1 and V. T. Chan2. 1HIF, Wright-Patterson AFB, OH and 2AFRL/HEPB, Wright-Patterson AFB, OH. Sponsor: J. Gearhart.

#450
Poster Board Number ...............................417
ATTENUATION OF N-(3,5-DICHLOROPHENYL)-2-HYDROXYSUCCINIMIDE-O-SULFATE (NSC)-INDUCED NEPHROTOXICITY IN PRIMARY CULTURES OF RAT RENAL PROXIMAL TUBULE CELLS. G. O. Rankin, C. Cook, S. L. Miles, S. K. Hong and D. K. Anestis. Pharmacology, Physiology & Toxicology, Marshall University, Huntington, WV.

#451
Poster Board Number ...............................418
URINARY KIDNEY INJURY MOLECULE-1 AND N-AcETYL-0-GLUCOSAMINIDASE AS BIOMARKERS FOR AMINOGLYCOSIDE AND CISPLATIN-INDUCED NEPHROTOXICITY IN PATIENTS. V. S. Vaidya, S. S. Waikar, F. B. Collings, K. Sunderland and J. V. Bonventre. Medicine-Renal, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA.

#452
Poster Board Number ...............................419
MODULATION OF OXIDATIVE STRESS BY RESVERATROL AND ATTENUATION OF CISPLATIN IN VITRO RENAL TOXICITY. M. Valentinon and M. V. Ternes. Pharmacology, Physiology and Toxicology, Marshall University School of Medicine, Huntington, WV.

#453
Poster Board Number ...............................420

#454
Poster Board Number ...............................421
CHARACTERIZATION OF PROPIVERINE EFFECTS ON RAT PPARS. A. H. Heussner1, M. M. Baldock1, B. Manfred2 and D. R. Dietrich1. 1Human and Environmental Toxicology, University of Konstanz, Konstanz, Germany and 2Preclinical and Clinical Safety, APOGEPHA GmbH, Dresden, Germany.

#455
Poster Board Number ...............................422
THE POTENTIAL EFFECT OF MT-AB ON RENAL DYSFUNCTION WITHIN A CHINESE DIABETIC POPULATION. L. Lei1,2, L. Chen1,2, T. Jiao3, M. Nordberg3 and G. Nordberg4. 1Occupational Health, Fudan University, Shanghai, China, 2Toxicology, Fudan University, Shanghai, China, 3Environmental Medicine, Karolinska Institute, Stockholm, Sweden and 4Public Health and Clinical Medicine, Umea University, Umea, Sweden.
Program Description (Continued)

Abstract #  # Abstract #

#456  #423
Poster Board Number  CHANGES IN THE RENAL EXPRESSION OF RPA-1, RPA-2, AND KIM-1 FROM SPONTANEOUSLY HYPERSENSITIVE RATS (SHR) GIVEN DOXORUBICIN (DRX) OR MITOXANTRONE (MTX), WITH OR WITHOUT DEXRazoXANE (DRZ), J. Zhang1, M. Shaw2, J. Keenan3, C. Kilty4, S. E. Lipschultz1, A. Knapton1, V. S. Vaidya5, J. V. Bouventre6 and E. H. Herman1. (CDER, FDA, Silver Spring, MD, 2Biotrin Intl Ltd, Dublin, Ireland, 3Miller School of Medicine, University of Miami, Miami, FL, and 4Renal Division Department of Med. Brigham & Women’s Hosp., Harvard Medical School, Boston, MA.

#457  #424
Poster Board Number  SPONTANEOUS OCCURRENCE OF A DISTINCTIVE AMPHOPHILIC-VACUOLAR RENAL TUBULE TUMOR PHENOTYPE IN RAT CARCINOGENICITY STUDIES CONDUCTED BY THE NATIONAL TOXICOLOGY PROGRAM, G. C. Hard1, J. C. Seely2, G. E. Kissling1 and L. J. Betz1. (1Private Consultant, Tairura, New Zealand, 2Experimental Pathology Labs., Inc., Research Triangle Park, NC, USA, 3National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC and 4Constella Health Sciences, Durham, NC. Sponsor: J. Hardisty,)

#458  #425
Poster Board Number  UPREGULATION OF GLYCERALDEHYDE 3-PHOSPHATE DEHYDROGENASE (GAPDH) AND GLUTAMIC 6-PHOSPHATE DEHYDROGENASE (G6PDH) DURING THE EARLY STAGES OF CADMIUM-INDUCED RENAL INJURY, J. Edwards, P. C. Lamar and W. C. Prozialek. Pharmacology, Midwestern University, Downers Grove, IL.

#459  #426

#460  #427
Poster Board Number  PATHWAYS OF p-NONYLPHENOL (NP)-INDUCED RENAL TOXICITY SUGGESTED BY GLOBAL GENE EXPRESSION PROFILES, L. Camacho1, T. Han1, X. Fu1, S. Cooper1, J. Fuscoe2 and K. Delcos1. (1Division of Biochemical Toxicology, NCTR, FDA, Jefferson, AR, 2Division of Systems Toxicology, NCTR, FDA, Jefferson, AR and 3Division of Reproductive, Abdominal and Radiological Devices, ODE, CDRH, FDA, Rockville, MD.}

#461  #428
Poster Board Number  ZINC SUPPLEMENTATION PARTIALLY PREVENT DIABETIC NEPHROPATHY. Y. Tang1, Q. Yang2 and L. Cui2. (1Medicine, University of Louisville, Louisville, KY and 2Pathophysiology, Guiyang Medical College, Guiyang, Guizhou, China).

#462  #429
Poster Board Number  IDENTIFICATION OF A RAT SPECIFIC OLIGONUCLEOTIDE (ASO) INDUCED KIDNEY INJURY. L. Shen, R. Louhead, R. Fey, G. Hung and S. P. Henry. ISIS Pharmaceuticals, Inc, Carlsbad, CA.

#463  #430

#464  #431
Poster Board Number  CADMIUM INHIBITS LACTATE GLUCONEOGENESIS IN HUMAN RENAL PROXIMAL TUBULES. G. Buvarel1, H. Faiz1, S. Renault, B. Ferrier, G. Martin, M. Boghossian, M. Martin, A. Duplay-Conjard and R. Nazaret. Metabolomics, INSERM U820, Lyon Cedex 08, France.

#465  #432
Poster Board Number  METHYL ISOBUTYLY KETONE (MIBK) INDUCED a2u-GLOBULIN (a2u) NEPHROPATHY IN MALE AND FEMALE F344 RATS. G. C. Hard1, N. Berdasco1, R. Gingell1, S. Green1, W. Gulledge2 and S. Borghoff2. (1Pathologist, Tairura, New Zealand, 2America Chemistry Council Ketones Panel, Arlington, VA and 3ILS, Inc, Research Triangle Park, NC.}

#466  #433
Poster Board Number  COMBINATION OF RENAL FUNCTION INVESTIGATION WITH PLETHYSMOGRAPHY IN RATS: REFINEMENT OF THE CORE BATTERY. A. Béfat, P. Lainée, G. Froget and R. Forster. CIT, Evreux, France.

#467  #434
Poster Board Number  LINDANE-INDUCED APOPTOSIS IN MDCK CELLS CORRELATES WITH DOWN-REGULATION OF BCL-XL UNDER CONDITIONS OF HYPERTONIC STRESS. A. L. Piskac and M. Smith. Environmental and Occupational Health Sciences, The University of Texas School of Public Health, Houston, TX.

#468  #435
Poster Board Number  CHEMICAL-INDUCED POST-TRANSLATIONAL MODIFICATIONS AND THE CONSEQUENT STRUCTURAL AND FUNCTIONAL ALTERATIONS. A. A. Fisher1, S. Lau1, M. T. Labenski2, S. Malladi3, M. Chen1, X. Shen4, S. B. Bratton2 and T. J. Monks1. (1Pharmacology and Toxicology, The University of Arizona, Tucson, AZ, 2Division of Pharmacology and Toxicology, University of Texas, Austin, TX and 3Carcinogenesis, UT MD Anderson Cancer Center, Smithville, TX.)
Program Description (Continued)

Abstract # Poster Board Number ..........................................................436

#469 TUBEROUS SCLEROSIS-2 AND THE REGULATION OF 8-OXOGUANINE DNA GLYCOSYLASE. I. L. Druwe, S. Lau, A. Weis and T. J. Monks. Pharmacology and Toxicology, The University of Arizona, Tucson, AZ.

#470 MALDI TISSUE IMAGING OF RENAL TUMORS THE IN EKER RAT. S. Lau, B. D. Leinweber, G. T. Triapalis and T. J. Monks. Pharmacology and Toxicology, The University of Arizona, Tucson, AZ.

#471 STRAIN DIFFERENCE OF URINARY OXALATE AND ELECTROLYTES IN ETHYLENE GLYCOL TREATED WISTAR AND F344 RATS. K. McMartin, B. Lieblong and Y. Li. Pharmacology, Toxicology & Neuroscience, LSU Health Sciences Center, Shreveport, LA.

#472 A METABONIC INVESTIGATION INTO THE DIURETIC EFFECTS OF BROMOETHANAMINE. A. J. Campbell1, C. Muirhead1, G. H. Cantor2, N. Arabidou2, J. T. Pearce1, E. J. Want2, M. Sanders2, J. D. Vassallo2, L. Lehman-McKeeman2, E. Holmes1, J. C. Lindon1 and J. K. Nicholson1. 1Biomolecular Medicine, Imperial College London, London, United Kingdom and 2Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.

#473 IDENTIFICATION OF PROBABLE GENOMIC AND URINARY PROTEIN NEPHROTOXICITY BIOMARKERS IN MICE. Y. Gu, E. Wang, R. J. Smith, W. Feng, J. Petrulis and R. D. Snyder. Drug Safety and Metabolism, Schering-Plough, Summit, NJ.

Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: FOOD SAFETY 1

Chairperson(s): Scott Belcher, University of Cincinnati, Cincinnati, OH and Bruce Hammond, Monsanto Company, St. Louis, MO.

Displayed: 1:00 PM–4:30 PM

Attended: 2:45 PM–4:30 PM

#474 Poster Board Number ..........................................................501

WATER ARSENIC AND DAIRY FOOD SAFETY. M. Murphy1, J. Kashian1, J. Linn1, B. Liukkonen1, V. Cray1, Z. Kassa2, M. Campbell2 and G. Horvath1. Veterinary Population Medicine, University of Minnesota, St. Paul, MN; 1Laboratory Services, Minnesota Department of Agriculture, St. Paul, MN and Department of Animal Science, University of Minnesota, St. Paul, MN.

#475 FISH CONSUMPTION ADVISORIES: TOXICOLOGICAL RISK AND NUTRITIONAL BENEFIT MESSAGES TO SENSITIVE POPULATIONS. A. C. Scherer1,2, A. Tsujiya3, L. R. Younglove1, T. M. Burbacher1 and E. M. Faustman1,2. 1Department of Environmental and Occupational Health Sciences, University of Washington, Seattle, WA and 2Institute for Risk Analysis and Risk Communication, Seattle, WA.

#476 NATURAL IS NOT ALWAYS SAFE: A LESSON FROM THE LITERATURE ON THE USE OF HERBAL PRODUCTS. A. Vitalone1 and L. Costa2. 1University of Parma, Parma, Italy and 2University of Washington, Seattle, WA.

#477 IDENTIFICATION AND CHARACTERIZATION OF TOXICITY OF CONTAMINANTS IN PET FOOD LEADING TO AN OUTBREAK OF RENAL TOXICITY. G. Duston, B. Dobson, S. Miotlach, M. Quigian, T. Cambron, T. Baker, A. Pullen, B. Regg, A. Bigelow-Kern, T. Vennard, A. Fix, G. Overmann and Y. Shan. Procter & Gamble, Cincinnati, OH.

#478 DISPOSITION OF MELAMINE IN PIGS. R. E. Baynes, G. Smith, S. E. Mason, E. Barrett, M. Barbow and J. E. Riviere. Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.

#479 ACRYLAMIDE: TOXICOLOGY IN HUMANS. E. Kopp and W. Dekant. Department of Toxicology, University of Würzburg, Würzburg, Germany.

#480 A 12-WEEK TOXICOLOGICAL STUDY OF ORALLY ADMINISTERED ACRYLAMIDE IN JUVENILE RATS. T. Imai, S. Takami, Y. Cho, M. Hirose and A. Nishikawa. Division of Pathology, National Institute of Health Sciences, Tokyo, Japan.

#481 DIET BASED EXPOSURE TO ACRYLAMIDE IN FINLAND. K. Peltomaa, S. Eerola and K. Hollebkeker. Department of Chemistry and Toxicology, Finnish Food Safety Authority EVIRA, Helsinki, Finland.

#482 RELATIVE AMOUNTS OF THE MYCOTOXIN DEOXYNIVALENOL IN FOODS PREPARED FROM WHEAT FLOUR UNDER COMMERCIALLY RELEVANT CONDITIONS. K. A. Voss1, M. E. Snook1, W. Li2, B. Strouts1 and J. Barach4. 1Department of Food Safety and Nutrition, Frito-Lay Inc., Plano, TX; 2American Institute of Baking, Manhattan, KS and 3Grocery Manufacturers/Food Products Association, Washington, DC.
Program Description (Continued)

Abstract #  
Poster Board Number .......................................#483

IV IN VITRO CHARACTERIZATION OF MYCOTOXIN BINDING AGENTS INCLUDED IN ANIMAL FEEDS IN MEXICO.
A. G. Marroquin-Cardona, C. T. Hallmark, J. Taylor, E. Afriyie-Gyawu, A. Robinson, N. Johnson and T. D. Phillips. Veterinary Integrative Biosciences, Texas A&M University, College Station, TX, Soil and Crop Sciences, Texas A&M University, College Station, TX, and Universidad Autonoma de Nuevo Leon, San Nicolas de los Garza, Mexico.

Abstract #  
Poster Board Number .......................................#484

EVIDENCE FOR FUMONISIN-CORN MATRIX BINDING DURING NIXTAMALIZATION. T. D. Burns1, M. E. Snook2, T. R. Mitchell2 and K. A. Voss21. 1Interdisciplinary Toxicology Program, University of Georgia, Athens, GA and 2Toxicology & Mycotoxin Research Unit, ARS-USDA, Athens, GA.

Abstract #  
Poster Board Number .......................................#485


Abstract #  
Poster Board Number .......................................#486

DEVELOPMENT OF ADSORPTIVE MATERIALS FOR THE REMEDIATION OF FUMONISIN B1 CONTAMINATED FOODSTUFFS. A. Robinson, J. Taylor, N. Johnson, A. Marroquin-Cardona, H. Huebner, N. Sarpong, E. Afriyie-Gyawu and T. Phillips. Veterinary Integrative Biosciences, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX.

Abstract #  
Poster Board Number .......................................#487

ACCUMULATION OF SPHINGOID BASES, THE STRUCTURAL SPHINGOID BASE ANALOG FTY720 AND THEIR PHOSPHORYLATED METABOLITES IN BLOOD, PLASMA AND DECIDUA OF SWY AND LMBc MICE TREATED WITH FUMONISIN B1 OR FTY720. R. T. Riley1, K. A. Voss1, J. R. Maddox1, J. Wilberding2 and J. B. Gelineau-van Wisse2. 1Toxicology and Mycotoxin Research Unit, USDA-ARS, Athens, GA and 2Department of Genetics, Cell Biology and Anatomy, University of Nebraska Medical Center, Omaha, NE.

Abstract #  
Poster Board Number .......................................#488

EFFECTS OF GACINIA CAMBOGIA EXTRACT (HYDROXYCITRIC ACID) ON SERUM EARLY HORMONES IN OBESE SUBJECTS: A DOUBLE-BLIND, RANDOMIZED, PLACEBO-CONTROLLED TRIAL. K. Hayamizu1, H. Tomi1, I. Kaneko1, M. Shen1, M. G. Soni2 and G. Yoshino1. 1FANCL Research Institute, Yokohama, Kanagawa, Japan, 2Soni & Associates Inc., Vero Beach, FL and 3Toho University School of Medicine, Ohtta-ku, Tokyo, Japan.

Abstract #  
Poster Board Number .......................................#489

HEAT STABILITY OF ANTIBIOTICS CHARACTERIZED BY CHANGES IN CHROMATOGRAPHIC PROFILES, ULTRAVIOLET SPECTROMETRY, ANTIMICROBIAL ACTIVITY AND GENOTOXICITY. C. Chou1, Y. Huang1, C. Shyu1, J. Liao2 and S. Chang3. 1Veterinary Medicine, National Chung-Hsing University, Taichung, Taiwan, 2Graduate Institute of Veterinary Pathology, National Chung-Hsing University, Taichung, Taiwan and 3Veterinary Medicine, National Taiwan University, Taipei, Taiwan.
#497 Poster Board Number ..........................524
EFFECTS OF SYMPHRELIN, BITTER ORANGE, AND CAFFEINE ON PHYSIOLOGICAL AND CARDIOVASCULAR VARIABLES IN FEMALE SPARRAGE-DAWLEY RATS. P. Duffy¹, 1. White², S. Appana³, L. Pellicore³, V. Francois and D. Hansen.¹ National Center for Toxicological Research, FDA, Jefferson, AR and ²Center for Food Safety and Applied Nutrition, FDA, College Park, MD.

#498 Poster Board Number ..........................525
EFFECT OF DEOXIVALENOLEN ON LPS SIGNALING IN MACROPHAGE. K. Sugiyama¹, M. Muroi¹, K. Tanamoto², M. Nishijima³ and J. Sugita-Kawashita.¹ Division of Microbiology, National Institute of Health Sciences, Tokyo, Japan, ²Division of Food Additives, National Institute of Health Sciences, Tokyo, Japan and ³Department of Food and Health Science, Jissen Women’s University, Tokyo, Japan.

Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: SAFETY ASSESSMENT, NON-PHARMACEUTICAL

Chairperson(s): EvansAfriyie-Gyawu, Texas A&M University, College Station, TX.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

#499 Poster Board Number ..........................530
APPLICATION OF A TOXICOLOGICAL SURROGATE EVALUATION FRAMEWORK: ALKYL AMMONIO ACETATES AS A CASE STUDY. A. Maier¹, R. Venkatapathy¹ and G. Simon². ¹Toxicology Excellence for Risk Assessment, Cincinnati, OH and ²Rhodia, Inc., Raleigh, NC.

#500 Poster Board Number ..........................531
EFFECTS OF OCCUPATIONAL EXPOSURE TO CHEMICALS ON HEARING - A WEIGHT OF EVIDENCE APPROACH. A. Vysokoval¹, G. Truchet¹, T. Leroux³, F. Lemay³, S. Lim³, F. Gagnon¹ and C. Viau¹. ¹Environmental and Occupational Health, Université de Montréal, Montreal, QC, Canada, ²Institut de recherche Robert-Sauvé en santé et en sécurité du travail, Montréal, QC, Canada and ³École d’orthophonie et d’audiologie, Université de Montréal, Montreal, QC, Canada.

#501 Poster Board Number ..........................532

#502 Poster Board Number ..........................533

#503 Poster Board Number ..........................534

#504 Poster Board Number ..........................535

#505 Poster Board Number ..........................536
CUTANEOUS LOCAL TOLERANCE OF DIPHOTHERE® IN HUMAN VOLUNTEERS AFTER A UNIQUE OCCLUSIVE APPLICATION DURING 48 HOURS. L. Mathieu¹, F. Burgher¹, A. H. Half¹ and H. J. Maibach². ¹Prevor Laboratory, Valmondois, France, ²Preventive Medecine, UCHSC, Denver, CO and ³Medical Center, UCSF, San Francisco, CA.

#506 Poster Board Number ..........................537
SUBCHRONIC TOXICITY OF DIMYRCETOL IN RATS. C. Letizia, A. Api and V. Politano. RIFM, Woodcliff Lake, NJ.

#507 Poster Board Number ..........................538
NOVASIL CLAY DOES NOT AFFECT BIOAVAILABILITY AND UTILIZATION OF VITAMINS A AND E AND NUTRIENT MINERALS IN GHANAIANS AT HIGH RISK FOR AFLATOXICOSIS. E. Afriyie-Gyawu¹, Z. Wang¹, N. Johnson¹, L. Xu¹, N. Ankrah¹, T. Li², H. Huebner¹, P. Jolly¹, J. Williams¹, J. Wang² and T. Phillips³. ¹Veterinary Integrative Biosciences, Texas A&M University, College Station, TX, ²Environmental Toxicology/The Institute of Environmental and Human Health, Texas Tech University, Lubbock, TX, ³Noguchi Memorial Institute for Medical Research, University of Ghana, Legon, Accra, Greater Accra, Ghana, ⁴Epidemiology/ School of Public Health, University of Alabama, Birmingham, AL and ⁵Peanut Collaborative Research Support Program, University of Georgia, Griffin, GA.

#508 Poster Board Number ..........................539
METHYL TERTIARY BUTYL ETHER (MTBE) 13-WEEK DRINKING WATER STUDY IN WISTAR RATS. E. Bermudez, H. D. Parkinson and D. E. Dodd. The Hamner Institutes for Health Sciences, Research Triangle Park, NC.

#509 Poster Board Number ..........................540
SCREENING LEVEL RISK EVALUATIONS FOR OCCUPATIONAL EXPOSURES TO CHLOROPRENE DIMERS. R. Valentine and B. Szostek. DuPont Haskell Global Centers for Health and Environmental Sciences, Newark, DE.

#510 Poster Board Number ..........................541
NASAL EPITHELIAL LESIONS IN RATS FOLLOWING AN ACUTE INHALATION EXPOSURE TO NAPHTHALENE VAPOR AT LOW CONCENTRATIONS. O. E. Dodd¹, R. A. James¹, E. A. Gross², R. A. Miller², V. J. Piccirillo³ and B. A. Wong³. ¹The Hamner Institutes for Health Sciences, Research Triangle Park, NC, ²Experimental Pathology Laboratories, Research Triangle Park, NC and ³VIP Consulting, Inc., Ashburn, VA.
Program Description (Continued)

Abstract #

#511
Poster Board Number: 542

#512
Poster Board Number: 543
PRELIMINARY PALATABILITY TESTING OF IONIC LIQUIDS IN WISTAR HAN RATS AND B6C3F1 MICE. J. W. Alguire1, C. R. Crook1, E. Luxford4, A. A. Astle2, A. P. Clark1, R. R. Harris1, C. S. Smith1, M. J. Hoot2 and B. Jayaram1. Product Sciences Division, Midwest Research Institute, Kansas City, MO and 2Environmental Toxicology Program, NIEHS, Research Triangle Park, NC.

#513
Poster Board Number: 544
QUARTZ-CONTAINING CERAMIC DUSTS: IN VITRO SCREENING OF THE CYTOTOXIC AND GENOTOXIC POTENTIAL OF 5 FACTORY SAMPLES. C. Ziemann1, P. Jackson2, R. Brown1, G. Attik1, B. Rihn1 and O. Creutzenberg1. 1Genetic Toxicology, Fraunhofer Institute of Toxicology and Experimental Medicine, Hannover, Germany, 2TERAM, Stoke-on-Trent, United Kingdom and 3Pharmacy, UHP, Nancy, France. Sponsor: H. Muhle.

#514
Poster Board Number: 545
QUARTZ-CONTAINING CERAMIC DUSTS: IN VIVO STUDY ON INFLAMMATORY EFFECTS OF TWO FACTORY SAMPLES IN LUNGS AFTER INTRATACHEAL INSTILLATION IN A 28-DAY STUDY WITH RATS. O. H. Creutzenberg1, C. Ziemann1, T. Hansen1, H. Ernst1, P. Jackson2 and R. Brown1. 1Inhalation Toxicology, Fraunhofer Institute of Toxicology and Experimental Medicine, Hannover, Lower Saxony, Germany, 2TERAM, Stoke-on-Trent, United Kingdom and 3TOXSERVICES, Stretton, United Kingdom. Sponsor: H. Muhle.

#515
Poster Board Number: 546
CARCINOGENESIS STUDIES OF CRESOLS IN RATS AND MICE. J. M. Sanders1, J. R. Bucher1, J. C. Peckham1, G. E. Kissling1, M. R. Hejmanack1 and R. S. Chhabra1. 1National Toxicology Program, NIEHS, RTP, NC and 2Battelle, Columbus, OH.

#516
Poster Board Number: 547
TOXICITY AND CARCINOGENICITY OF CHROMIUM FOLLOWING CHRONIC ORAL EXPOSURE: DEPENDENCE ON VALENCE STATE AND TISSUE UPTAKE. M. D. Stout4, B. J. Collins1, R. A. Herbert1, A. Nyska1, G. E. Kissling1, K. Levine1, G. T. Ross1, C. D. Hebert1, G. S. Travlos1, J. R. Bucher1 and M. J. Hoot1. 1NIHES, Research Triangle Park, NC, 2ILLS, Research Triangle Park, NC, 3RTI International, Research Triangle Park, NC and 4SRI, Birmingham, AL.

#517
Poster Board Number: 548
TISSUE DISTRIBUTION OF CHROMIUM IN MALE FISCHER 344 RATS AND FEMALE B6C3F1 MICE EXPOSED TO SODIUM DICHROMATE DIHYDRATE IN DRINKING WATER FOR 2 YEARS. B. J. Collins1, K. Levine1, G. T. Ross1, R. Fernando2, T. R. Fennell1, G. E. Kissling1, M. D. Stout3 and M. J. Hoot1. National Institute of Environmental Health Sciences, Research Triangle Park, NC and 3RTI International, RTP, NC.

#518
Poster Board Number: 549
TISSUE DISTRIBUTION OF CHROMIUM IN MALE FISCHER 344 RATS AND FEMALE B6C3F1 MICE EXPOSED TO CHROMIUM PICOXALATE MONOHYDRATE IN THE DIET FOR 2 YEARS. R. Fernando1, K. Levine1, B. J. Collins1, G. E. Kissling1, M. J. Hoot1, T. R. Fennell1, G. T. Ross1 and M. D. Stout3. 1RTI International, RTP, NC and 3National Institute of Environmental Health Sciences, Research Triangle Park, NC.

Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: MODULATORS OF CELL PROLIFERATION IN CHEMICAL CARCINOGENESIS

Chairperson(s): Brinda Mahadevan, Schering-Plough Research Institute, Summit, NJ.

Displayed: 1:00 PM–4:30 PM
Attended: 2:45 PM–4:30 PM

#519
Poster Board Number: 550
MODIFYING EFFECTS OF TROGLITAZONE ON THE VASCULAR TUMORIGENESIS INITIATED WITH URETHANE IN RASH2 MICE. M. Jin1,2, Y. Dewa1, J. Shimizu1, M. Matsumoto1, Y. Saegusa1, K. Hasumi1 and K. Mitsumori1. Laboratory of Veterinary Pathology, Tokyo University of Agriculture and Technology, Japan, Fuchu, Tokyo, Japan and 2Department of Applied Biological Science, United Graduate School of Agricultural Sciences, Tokyo University of Agriculture and Technology, Fuchu, Tokyo, Japan. Sponsor: M. Takahashi.

#520
Poster Board Number: 551
EVALUATION OF POSSIBLE CYTOTOXICITY AND MITOGENESIS IN HUMAN MICROVASCULAR ENDOTHELIAL CELLS TREATED WITH THE PPARy AGONIST, TROGLITAZONE. S. Kakuchizaki-Kiyota1, R. Singh1, S. Suzuki1, K. L. Pennington1, M. Nascimento1, L. L. Arnold2 and S. M. Cohen1. Pharmacology and Toxicology, Indiana University School of Medicine, Indianapolis, IN.
Program Description (Continued)

#522 Poster Board Number ...........................................553
GENE EXPRESSION PROFILES OF FLUOROOCCTANOIC, -NONANOIC AND -DECANOIC ACIDS AND 8:2 FLUOROTELOMER ALCOHOL IN RAINBOW TROUT, A MODEL FOR HUMAN HEPATOCARCINOGENESIS. A. D. Benninghoff and D. E. Williams. Department of Environmental and Molecular Toxicology and the Environmental Health Sciences Center, Oregon State University, Corvallis, OR.

#523 Poster Board Number ...........................................554
MECHANISMS OF INHIBITION OF GAP JUNCTION INTERCELLULAR COMMUNICATION THROUGH DIFFERENT MOLECULAR PATHWAYS. J. Park1,2, I. Sovadnova1,2, P. Babica1,2, A. Wilke1,2, H. Boko1,2, L. Kleiow1,2, E. Kumor1,2, J. E. Trost1,2 and B. L. Upham1,2. Pediatrics & Human Development, Michigan State University, East Lansing, MI and 1National Food Safety & Toxicology Center, Michigan State University, East Lansing, MI.

#524 Poster Board Number ...........................................555
MECHANISM OF GENOMIC HYPMETHYLATION DURING HEPATOCARCINOGENESIS INDUCED BY PEROXISOME PROLIFERATORS IN RATS. V. Tryndyak1, A. Boureiko1, S. Melnyk1, I. Rusyn1 and I. Pogribny1. 1Division of Biochemical Toxicology, National Center for Toxicological Research, Jefferson, AR, 2Department of Pediatrics, UAMS, Little Rock, AR and 1Department of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, NC.

#525 Poster Board Number ...........................................556
ROLE OF C-MYC IN NICKEL-INDUCED HISTONE MODIFICATION ALTERATIONS. Q. Li, T. Suen, H. Chen and M. Costa. Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, NC.

#526 Poster Board Number ...........................................557

#527 Poster Board Number ...........................................558
CHRONIC EXPOSURE TO HIGH-FAT DIET CAUSES RENAL PATHOLOGY IN NON-DIABETIC RATS. K. Stemmer1, P. T. Pfugler1, D. Perez-Tilve1, M. H. Tschoêp1 and D. R. Dietrich1. 1Human and Environmental Toxicology, University of Konstanz, Konstanz, Germany and 2Department of Psychiatry, Obesity Research Centre - Genome Research Institute, University of Cincinnati – College of Medicine, Cincinnati, OH.

#528 Poster Board Number ...........................................559
ABERRANT EXPRESSION OF KEY REGULATORS OF MITOSIS AND CHROMOSOME SEGREGATION IN RAT KIDNEY FOLLOWING EXPOSURE TO OCHRATOXIN A. M. Adler, K. Mueller, E. Rached, W. Dekant and A. Mally. Department of Toxicology, University of Wuerzburg, Wuerzburg, Germany.

#529 Poster Board Number ...........................................553
PROPYLENE OXIDE: BIOMARKERS OF EXPOSURE, NASAL CELL PROLIFERATION, AND CANCER MODE-OF-ACTION IN RATS AND MICE EXPOSED VIA INHALATION. L. H. Potterger1, J. A. Hotchkiss1, S. M. Krieger1, J. R. Harkeven1, M. I. Bantin3 and J. A. Swenberg1. 1TERC. The Dow Chemical Company, Midland, MI, 3Michigan State University, East Lansing, MI, 3University of North Carolina, Chapel Hill, NC.

#530 Poster Board Number ...........................................554
CONSTITUTIVE ACTIVATION AND TARGETED DISRUPTION OF SIGNAL TRANSDUCER AND ACTIVATOR OF TRANSCRIPTION 3 (STAT3) IN MOUSE EPIDERMIS REVEAL ITS CRITICAL ROLE IN UVB-INDUCED SKIN CARCINOGENESIS. D. J. Kim and J. DiGiovanni. Department of Carcinogenesis, The University of Texas-M.D. Anderson Cancer Center, Science Park-Research Division, Smithville, TX.

#531 Poster Board Number ...........................................555

#532 Poster Board Number ...........................................556

Monday Afternoon, March 17
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: RECEPTORS

Chairperson(s): Mary Walker, University of New Mexico, Albuquerque, NM and Matthew Stoner, University of Rhode Island, Kingston, RI.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

#533 Poster Board Number ...........................................609
INTERACTIONS BETWEEN ARYL HYDROCARBON RECEPTOR AND ESTROGEN RECEPTOR ALPHAS: ROLE OF AF2 DOMAIN. L. M. MacPherson and J. Matthews. Pharmacology, University of Toronto, Toronto, ON, Canada.
Program Description (Continued)

Abstract # | Poster Board Number | Abstract # | Poster Board Number
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#534 | CHIP-ON-CHIP ANALYSIS OF TCDD-DEPENDENT ARYL HYDROCARBON RECEPTOR BINDING TO HUMAN PROMOTER TILING ARRAYS REVEALS AHR RECRUITMENT TO ESTROGEN RECEPTOR ALPHA PROMOTER AND ENHANCER REGIONS. J. Matthews, S. Ahmed, L. MacPherson, A. Pansoy and A. Forgacs, Department of Pharmacology and Toxicology, University of Toronto, Toronto, ON, Canada. | #540 | REGULATION OF PEROXISOME PROLIFERATOR ACTIVATED RECEPTORS (PPARs) BY E6-ASSOCIATED PROTEIN (E6AP). L. Gopinathan1, D. B. Hannon2 and J. P. Vandeven Heuwel1,2, 1The Huck Institutes of the Life Sciences, Pennsylvania State University, University Park, PA and 2Veterinary and Biomedical Sciences, Pennsylvania State University, University Park, PA.


#536 | PHYTOESTROGENS REGULATE PS2 AND PROGESTERONE RECEPTOR (PGR) GENE EXPRESSION AT THE CHROMATIN LEVEL THROUGH ESTROGEN RECEPTOR IN MCF-7 CELLS. S. Sankella1, S. Naragoni1 and W. G. Gray1,2, 1Environmental Toxicology, Southern University, Baton Rouge, LA and 2Chemistry, Southern University, Baton Rouge, LA. | #542 | SPECIES DIFFERENCE IN THE HEPATIC RESPONSE TO PERFLUOROCANONIC ACID (PFOA). J. P. Vandeven Heuwel1, S. R. Frame2, J. L. Butenhoff1, G. L. Kennedy2, S. E. Loveless2, R. W. Rickard2 and J. M. Peters1, 1Center for Molec. Toxic. & Carcinogenesis, Penn. State University, University Park, PA, 2Dupont Haskell Global Centers of Health and Environmental Sciences, Newark, NJ and 3M Comp., St. Paul, MN.

#537 | ARYL HYDROCARBON RECEPTOR (AHR) ACTIVATION DECREASES PROLIFERATION BUT DOES NOT INCREASE APOPTOSIS IN MAMMARY EPITHELIAL CELLS. B. J. Lew1, L. Collins1, M. O’Reilly2 and B. Lawrence1, 1Environmental Medicine, University of Rochester, Rochester, NY and 2Pediatrics, University of Rochester, Rochester, NY. | #543 | ROLE OF DISCODIN DOMAIN RECEPTOR 1 ON NITRIC OXIDE-INDUCED APOPTOSIS IN MACROPHAGES. S. Lee and S. Kim. Pharmacology, Kyungpook National University Medical School, Daegu, South Korea.

#538 | OVEREXPRESSION OF ARNT DOES NOT ALTER CROSS-TALK BETWEEN THE ARYL HYDROCARBON RECEPTOR AND HYPOXIA PATHWAYS IN PLHC-1 CELLS. C. R. Fleming, S. Billiard, D. E. Hinton and R. T. Di Giulio. Integrated Toxicology and Environmental Health Program, Duke University, Durham, NC. | #544 | IDENTIFICATION OF BORIC ACID-RESPONSIVE RYANODINE RECEPTOR ISOFORMS IN TUMOR AND NON-TUMOR PROSTATE CELL LINES. S. E. Kobylewski1, C. Eckhart2 and K. Henderson1. 1Molecular Toxicology, UCLA, Los Angeles, CA and 2Environmental Health Sciences, UCLA, Los Angeles, CA.

#539 | INTEGRATED REGULATION OF CYTOCHROME P450 1A1 mRNA EXPRESSION BY HYPOXIA AND AHR SIGNALING PATHWAYS IN HUMAN PULMONARY MICROVASCULAR ENDOTHELIAL CELLS. N. Zhang and M. K. Walker. Pharmacy, University of New Mexico, Albuquerque, NM. | #545 | REACTIVE CYSTEINES C1040 AND C1303 OF RYANODINE RECEPTOR TYPE 1 INFLUENCE RESPONSES TO CELLULAR OXIDATIVE STRESS AND GLUTATHIONE DEPLETION. D. Bose1, C. F. Perez2, N. Yamaguchi3, G. Meissner3, P. D. Allen2 and I. N. Pessah1, 1Veterinary Molecular Biosciences, University of California, Davis, Davis, CA, 2Department of Anesthesia Research, Brigham and Women’s Hospital, Boston, MA and 3Department of Biochemistry and Biophysics, University of North Carolina, Chapel Hill, NC.

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Program Description (Continued)

Abstract #

#546  Poster Board Number ...........................................622
COMPARISON OF METHAMPHETAMINE,
COCAINÉ, AND APOmorphINE-INDUCED
BEHAVIORAL SENSITIZATION IN
MU-OPIOID RECEPTOR KNOCKOUT
MICE. T. Ma1, X. Shen1, L. Tien1, I. A. Paul2, H. H. Loh3 and I. K. Ho4. 1Pharmacology & Toxicology, University of Mississippi Medical Center, Jackson, MS; 2Psychiatry & Human Behavior, University of Mississippi Medical Center, Jackson, MS and 3Pharmacology, University of Minnesota Medical School, Minneapolis, MN.

#547  Poster Board Number ...........................................623
GABAA AND PERIPHERAL
BENZODIAZEPINE RECEPTOR LIGANDS
ACTIVATE LIVER NUCLEAR RECEPTORS.
L. D. Hanel1,2 and M. A. Stoner1,2. 1Biomedical & Pharmaceutical Sciences, University of Rhode Island, Kingston, RI and 2Rhode Island IDEA Network of Biomedical Research Excellence (RI-INBRE) Center for Molecular Toxicology, Kingston, RI.

#548  Poster Board Number ...........................................624
UNIQUE TRANSCRIPTION START SITES
AND DISTINCT PROMOTER REGIONS
DIFFERENTIATE THE PREGNANE X
RECEPTOR (PXR) ISOFORMS PXR 1 AND
PXR 2. A. D. Wallace1, L. M. Tompkins2 and T. L. Sij3. 1Environmental and Molecular Toxicology, North Carolina State University, Raleigh, NC and 2Department of Plant Pathology, North Carolina State University, Raleigh, NC.

#549  Poster Board Number ...........................................625
THE CIRCADIAN RHYTHM OF
ENTEROHEPATIC CIRCULATION OF BILE
ACIDS IN MICE. Y. Zhang and C. D. Klausen.
Department of Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, Kansas City, KS.

#550  Poster Board Number ...........................................626
TRANSCRIPTIONAL REGULATION OF
PREGNANE X RECEPTOR BY PROTEIN
ARGININE METHYLTRANSFERASES, Y.
Xie1, S. Ke1, X. Gu1, D. Liu1, W. Xie3, M. Bedford2 and Y. Tian4. 1Texas A&M University, College Station, TX; 2University of Pittsburgh, Pittsburgh, PA and 4University of Connecticut, Storrs, CT.

#551  Poster Board Number ...........................................627
CROSSTALK BETWEEN THE AHR AND
CAR PATHWAYS IN HEPATOCYTES. R. T.
Taylor, S. S. Ferguson, A. Currier, J. Hill and E. L. LeCluyse. CellzDirect, Austin, TX.

#552  Poster Board Number ...........................................628
CHARACTERIZATION OF AHR RECEPTOR
AND ARNT PROTEIN EXPRESSION IN
YEAST. C. Wilson, K. H. Schmidt and R. S. Pollenz.
Cell Biology, Microbiology and Molecular Biology, University of South Florida, Tampa, FL.

#553  Poster Board Number ...........................................629
INTER-SPECIES AND –ISOFORM
DIFFERENCES IN FUNCTIONS OF TWO
ARYL HYDROCARBON RECEPTORS (AHR1
AND AHR2) FROM AVIAN SPECIES. E. Kim1, H. Iwato1, T. Yasui1, N. Inoue1, J. Lee1, D. G. Franks2, S. I. Karchmer1, M. E. Hahn3 and S. Tanabe1. 1Center for Marine Environmental Studies, Ehime University, Matsuyama, Japan and 2Biology Department, Woods Hole Oceanographic Institution, Woods Hole, MA.

#554  Poster Board Number ...........................................630
UNIQUE STRUCTURAL DETERMINANTS
CONFER LOW TCDD RESPONSIVENESS
TO AN ARYL HYDROCARBON RECEPTOR
FROM THE FROG XENOPOS LAEVIS. S. A.
Holzman and W. H. Powell. Biology Department, Kenyon College, Gambier, OH.

#555  Poster Board Number ...........................................631
DIFFERENTIAL FACTORS AFFECTING
BINDING OF SILICA AND TITANIUM
DIOXIDE (TiO2) PARTICLES TO THE
SCAVENGER RECEPTOR CYSTEINE-
RICH (SRCR) DOMAIN OF MACROPHAGE
ASSOCIATED RECEPTOR WITH
COLLAGENOUS DOMAIN (MARCO). S. A.
Thakur1, T. Pikkarainen2 and A. Holman1. 1Center of Environmental Health sciences, Department of Biomedical and Pharmaceutical Sciences, The University of Montana, Missoula, MT and 2Division of Matrix Biology, Karolinska institute, Stockholm, Sweden.

Monday Afternoon, March 17
1:30 PM to 2:30 PM
Exhibit Hall 4C-3

EXHIBITOR HOSTED SESSION: PROGRESS IN USING
HUMAN EMBRYONIC STEM CELLS IN DRUG SCREENING,
TOXICOLOGY AND DRUG DEVELOPMENT

Presented by: Cellular Dynamics International, Inc.

Cellular Dynamics (CDI) is making differentiated cells from human embryonic stem cells for use in all phases of drug development. The first cell type available and in commercial sale and use today from CDI is human cardiomyocytes. CDI will show that cardiomyocytes produced from hES cells exhibit electrophysiology characteristics useful in drug safety screening. CDI will also show data on the use of human cardiomyocytes in in vitro tests of acute toxicity.

Monday Afternoon, March 17
1:30 PM to 2:30 PM
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: PRIMARY STEM CELL
BASED ASSAYS FOR TOXICOLOGY AND OTHER DRUG
SCREENING APPLICATIONS

Presented by: ReachBio LLC

New initiatives such as Stem Cells for Safer Medicine suggest the need for more predictive screening assays early in drug development. We will discuss the validated bone marrow (CFU-GM) and other in vitro biological assays that utilize primary cells. Donor variability, assay sensitivity and choice of cells will be discussed.
Program Description (Continued)

Abstract #
Monday Afternoon, March 17
1:30 PM to 4:15 PM
Room 6B

SYMPOSIUM SESSION: DRUG-INDUCED MITOCHONDRIAL TOXICITY: NOVEL INSIGHTS—NOVEL TOOLS

Chairperson(s): Yvonne Will, Pfizer, Inc., San Diego, CA and Urs Boelsterli, University of Connecticut School of Pharmacy, Storrs, CT.

Endorsed by:
Drug Discovery Toxicology Specialty Section
Mechanisms Specialty Section*

Mitochondria have been increasingly recognized as a target of drug toxicity resulting in disruption of bioenergetics and causing oxidant stress in sensitive organs including CNS, heart, and skeletal muscle. In addition, there is increasing awareness that mitochondria are key mediators of drug toxicity in a number of other organs including liver and kidney, often causing mitochondrial outer membrane permeabilization and release of cell death proteins. Furthermore, certain underlying disease states like diabetes, infections, or neurodegenerative diseases can greatly alter mitochondrial function and make the mitochondria more vulnerable to drug toxicity. Conventional in vitro approaches in drug discovery and development have often failed to detect mitochondrial dysfunction, and there are a few animal models which would readily reveal mitochondrial liability. This symposium will focus on new approaches to detect, understand, and predict mitochondrial toxicity. These novel approaches include transcriptional fingerprinting of mitochondrial changes, transgenic mouse models, and novel in vitro tools.

#556 1:30 DRUG-INDUCED MITOCHONDRIAL TOXICITY: NOVEL INSIGHTS—NOVEL TOOLS. Y. Will1 and U. A. Boelsterli2. 1Drug Safety Research and Development, Pfizer, San Diego, CA and 2Department of Pharmaceutical Science, University of Connecticut, Storrs, CT.

#557 1:45 TRANSCRIPTIONAL SIGNATURE OF MITOCHONDRIAL TOXICITIES. K. B. Wallace. Biochemistry & Molecular Biology, University of Minnesota Medical School, Duluth, MN.

#558 2:15 MITOCHONDRIA IN DRUG-INDUCED LIVER INJURY (DILI). U. A. Boelsterli. Pharmaceutical Sciences, University of Connecticut, Storrs, CT.

#559 2:45 INHIBITION OF ETHANOL EFFECTS BY MITOCHONDRIAL THIOREDOXIN-2. J. Hansen. School of Medicine, Emory University, Atlanta, GA. Sponsor: Y. Will.

#560 3:15 LINKING MITOCHONDRIAL DYSFUNCTION TO HYPERGLYCEMIA: IMPACT OF MITOCHONDRIAL FIDELITY AND OXIDATIVE STRESS ON DIABETES AND ITS COMPLICATIONS. C. M. Palmeira. IMAR, Mitochondrial Research Group, Department of Zoology, University of Coimbra, Coimbra, Portugal.

#561 3:45 STRATEGIES TO REDUCE NCE ATTENTION DUE TO MITOCHONDRIAL TOXICITY: DESIGNING NOVEL SCREENING METHODS. Y. Will. Drug Safety Research and Development, Pfizer, San Diego, CA.

#562 1:30 ENVIRONMENTAL INFLUENCE ON FEMALE PUBERTY AND BREAST TUMORIGENESIS. Elizabeth Maull, NIEHS, Research Triangle Park, NC and Coral Lamartiniere, University of Alabama at Birmingham, Birmingham, AL.

Endorsed by:
Carcinogenesis Specialty Section
Mechanisms Specialty Section
Molecular Biology Specialty Section*

Breast cancer is a complex disease, resulting from both genetic and environmental influences. Environmental exposures during critical windows of mammary gland development may be responsible for altering tissue susceptibility resulting in increased risk of future breast cancer. The pubertal hypothesis suggests that exogenous agents such as endocrine disrupting chemicals or other dietary factors, may mimic estrogen or influence their levels, such that the period of rapid development of the mammary gland is extended, putting the gland at higher risk for a transition to carcinogenesis. The NIEHS and NCI established the Breast Cancer and the Environment Research Centers (BCERC) Network, a unique multidisciplinary, translational grant program that includes basic biology, epidemiology, and community outreach and translation components to address the pubertal hypothesis. A primary objective of the BCERC Network is to explore the influence of a select set of exposures and activities on the onset of breast development and progression through puberty, early onset of puberty being among the most reliable risk factors for future breast cancer. Research within the Network spans a spectrum of biological organization: molecular mechanisms controlling regulation of differentiation of gland stem cells; insights into genomic and proteomic pre-disposition for disease; the impact of environmental exposures (including diet and obesity) at sensitive windows of development on gland development and the future risk of developing breast cancer as well as a cohort study of puberty designed to look at both environmental and genetic factors, and when possible their interactions, evaluating the impact of environmental exposures (broadly defined to include dietary, endocrine disruptors, consumer product use and socioeconomic factors) on progression to and through puberty in young girls. The aim of this symposium is to present the latest findings relating early environmental exposures with alterations in pubertal milestones that predispose towards breast cancer.

#563 1:45 THE EFFECT OF ENVIRONMENTAL EXPOSURES ON MAMMARY STEM CELLS DURING PUBERTY. M. Barcellos-Hoff1, I. Illa-Bochaca1, C. Lamartiniere2 and Z. Werb3. 1Lawrence Berkeley National Laboratory, Berkeley, CA, 2University of Alabama, Birmingham, AL and 3University of California, San Francisco, San Francisco, CA.

#564 2:15 PRENATAL EXPOSURE TO BISPHENOLA (BPA) INDUCES GENOMIC ALTERATIONS IN THE RAT MAMMARY GLAND. J. Russo1, J. Pereira1, R. Moral1, C. Lamartiniere2 and I. H. Russo1. 1Fox Chase Cancer Center, Philadelphia, PA and 2University of Alabama at Birmingham, Birmingham, AL.

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Program Description (Continued)

Abstract #  

#565  2:45  NEONATAL/PRE-PUBERTAL BISPHENOL A EXPOSURE ALTERS THE MAMMARY PROTEOME, DECREASES APOPTOSIS AND INCREASES SUSCEPTIBILITY FOR CHEMICALLY-INDUCED MAMMARY CANCER IN RATS. C. Lantamintere. University of Alabama at Birmingham, Birmingham, AL.

#566  3:15  THE ENVIRONMENTAL IMPACT OF DIET AND OBESITY ON BREAST CARCINOGENESIS. D. Clegg1, R. Gear2, J. Schneider1, M. Mistry3, K. Olson2 and S. Haslam2. 1University of Cincinnati, Cincinnati, OH and 2Michigan State University, East Lansing, MI. Sponsor: E. Maull.

#567  3:45  THE BREAST CANCER AND THE ENVIRONMENT RESEARCH CENTERS: A NOVEL TRANSDISCIPLINARY APPROACH TO UNDERSTANDING THE CAUSES AND MECHANISMS OF BREAST CANCER. D. Winn1, E. A. Maull2, G. Collman2, L. Reinlib2 and S. Lynch1. 1National Institute of Environmental Health Sciences, Research Triangle Park, NC and 2National Cancer Institute, Rockville, MD.

Monday Afternoon, March 17
1:30 PM to 4:15 PM  
Room 6C

SYMPOSIUM SESSION: OXIDANT AIR POLLUTION AND CHILDHOOD ASTHMA (IA/IAT)

Chairperson(s): Laura Van Winkle, University of California Davis, Davis, CA and Jack Harkema, Michigan State University, East Lansing, MI.

Endorsed by:
- Immunotoxicology Specialty Section
- Reproductive and Developmental Toxicology Specialty Section
- Toxicologic and Exploratory Pathology Specialty Section

Ozone is one of the primary constituents of smog. Under the Clean Air Act, the EPA has set protective health-based standards for ozone. However, in 2005, 98 million people lived in U.S. counties with ozone concentrations above the 8 hr National Ambient Air Quality Standard of 0.08. There continues to be concern about the long term sequelae of widespread ozone exposures in sensitive populations, particularly children. This concern has been heightened by a recent surge in asthma prevalence in children, with disproportionately higher morbidity and mortality due to asthma for inner city children. The lung continues to grow and differentiate into adulthood. Interaction with air pollutants, such as ozone, during postnatal development of the respiratory system may alter the normal pattern of either growth or differentiation in such a way as to predispose to disease. Recent research has defined several important features regarding ozone exposure in children including: 1) critical windows of susceptibility to ozone for both the structural and immune components of the respiratory tract, 2) genetic markers for increased risk for decrements in lung function due to ozone exposure and 3) interaction effects with allergic sensitization and preexisting inflammation. The purpose of this session is to bring together the most current basic and applied research on the influence of ozone on the development of the lung.

#568  1:30  OXIDANT AIR POLLUTION AND CHILDHOOD ASTHMA. L. S. Van Winkle1 and J. R. Harkema2. 1Center for Health & the Environment; Vet Med: Anatomy, Physiology and Cell Biology, UC Davis, Davis, CA and 2Department of Pathobiology, Michigan State University, East Lansing, MI.

Abstract #  


#570  2:00  GENETIC MECHANISMS OF SUSCEPTIBILITY TO OZONE-INDUCED LUNG INJURY: NEW INSIGHTS. S. R. Kleeberger. NIEHS, Research Triangle Park, NC. Sponsor: L. Van Winkle.


#572  2:40  CRITICAL TIMEPOINTS FOR POSTNATAL DEVELOPMENT OF INFLAMMATORY AND EPITHELIAL DEFENSE MECHANISMS: OZONE AND LPS EXPOSURE. C. J. Johnston and J. N. Finkelstein. Pediatrics and Environmental Medicine, University of Rochester, Rochester, NY.

#573  3:00  OXIDANT-INDUCED INJURY IN THE IMMATURE/DEVELOPING NASAL AIRWAYS OF INFANTS. J. R. Harkema1, S. A. Carey1, J. G. Wagner2 and E. M. Postlethwait3. 1Pathobiology, Michigan State University, East Lansing, MI and 2Environmental Health Sciences, University of Alabama at Birmingham, Birmingham, AL.

#574  3:30  OXIDANT-INDUCED CHANGES IN CONDUCTING AIRWAYS IN NON-HUMAN PRIMATES. M. V. Fanucchi. School of Veterinary Medicine, University of California, Davis, CA.


4:10  KEY POINTS REGARDING OZONE AND ASTHMA STRUCTURAL CHANGES. Panel Discussion

Monday Afternoon, March 17
1:30 PM to 4:15 PM  
Room 605

SYMPOSIUM SESSION: STEM CELLS: NEW TOOLS FOR NEUROTOXICOLOGISTS (IA/IAT)

Chairperson(s): Timothy Shafer, U.S. EPA, Research Triangle Park, NC and Jeff Johnson, University of Wisconsin Madison, Madison, WI.

Endorsed by:
- In Vitro and Alternative Methods Specialty Section
- Mechanisms Specialty Section
- Neurotoxicology Specialty Section*
- Regulatory and Safety Evaluation Specialty Section

In the last decade, significant progress has been achieved in developing models of neuronal stem and precursor cells. These efforts have been...
Program Description (Continued)

Abstract #

directed primarily towards treatment of neurodegenerative disorders, restorative therapy for spinal cord injuries and other clinically-oriented issues. Stem and neuroprogenitor cells provide a readily available supply of human neurons, glia and oligodendrocytes, and may represent more accurate models of neuronal function and developmental processes than tumor-derived cell lines. As such, they have many potential uses for toxicologists, including mechanistic studies, safety pharmacology, and predictive toxicity screening. To date, the use of neural stem and progenitor cells for toxicity studies has been limited, but will continue to grow as these model systems become more readily available. This symposium will focus on uses of stem and neuroprogenitor cells in toxicology, including as models for investigative or mechanistic toxicology studies of developmental toxicity and potential uses in high-throughput screening of drugs and chemicals for neurotoxicity. This is an abstract for a proposed presentation, and does not represent Agency policy.


#577 1:35 STEM CELL ASSAY FOR DEVELOPMENTAL NEUROTOXICITY. D. M. DeGroot1, S. Schulpen1, H. Wortelboer1, A. Freidig1, J. Lammers1, A. Wolterbeek1, R. Westerink1, A. Seiler1 and J. Burgstede1. TNO Quality of Life, Zeist, Netherlands. -BRAS, Utrecht, Netherlands and 2ZEBET, Berlin, Germany. Sponsor: V. Feron.


#579 2:55 EFFECTS OF NEUROTOXICANTS ON PROLIFERATION AND VIABILITY OF IMMORTALIZED HUMAN CORTICAL NEURAL PROGENITOR CELLS. J. M. Breier2, W. R. Mundy1 and T. J. Shafer1. 1Toxicology, University of North Carolina, Chapel Hill, NC and 2Neurotoxicology Division, U.S. EPA, Research Triangle Park, NC.

#580 3:35 THE NRF2-ARE PATHWAY: IDENTIFICATION OF NEUROTOXIC AND OR NEUROPROTECTIVE CHEMICALS. J. Johnson1,2, D. Johnson1, J. Li1, M. Calkins2, M. Vargas1 and M. Emborg1. 1Pharmaceutical Sciences, University of Wisconsin, Madison, WI, 2Molecular and Environmental Toxicology Center, University of Wisconsin, Madison, WI, 3Neuroscience Training Program, University of Wisconsin, Madison, WI and 4Wisconsin National Primate Research Center, University of Wisconsin, Madison, WI.

Workshop Session: Getting the Most Out of Model Organism Databases: From the Basic to the Complex

Chairperson(s): Michael Carvan, University of Wisconsin Milwaukee, Milwaukee, WI and Susan Bello, The Jackson Laboratory, Bar Harbor, ME.

Endorsed by: Molecular Biology Specialty Section*

Model organisms are surrogates for studying normal and disease-related biology as well as extrapolating to potential human responses to toxicants.

Monday Afternoon, March 17
1:30 PM to 4:15 PM
Room 615

Workshop Session: Getting the Most Out of Model Organism Databases: From the Basic to the Complex

#581 1:30 GETTING THE MOST OUT OF MODEL ORGANISM DATABASES: FROM THE BASIC TO THE COMPLEX. S. M. Bello, Mouse Genome Informatics, The Jackson Laboratory, Bar Harbor, ME.


2:55 Tutorial and Questions from the Audience.
**Program Description (Continued)**

**Abstract #**

Monday Afternoon, March 17
1:30 PM to 4:15 PM
Room 608

**WORKSHOP SESSION: MIXTURE EXPOSURES TO METALS/ METALLOIDS AND RELATED HEALTH EFFECTS**

**Chairperson(s):** Bruce Fowler, CDC Agency for Toxic Substances & Disease Registry, Atlanta, GA and Monica Nordberg, Karolinska Institutet, Stockholm, Sweden.

**Endorsed by:**
Metals Specialty Section*
Mixtures Specialty Section

Exposure of human populations to mixtures of metals (lead, cadmium, mercury) and metalloids (arsenic) are common under both occupational and environmental situations such as Superfund sites. The routes of exposures to these mixtures may include inhalation, ingestion or absorption across the skin and result in a number of deleterious health effects. Particle exposures of rodents to binary semiconductor compounds such as gallium arsenide and indium arsenide have demonstrated a number of compound – specific changes in proteomic and metabolomic biomarkers. Studies of human populations in China with combined exposures to cadmium and arsenic have demonstrated marked increases in renal toxicity with regard to proteinuria biomarkers. Factorial design studies in rats exposed to low dose mixtures lead, cadmium and arsenic have shown increased oxidative stress in kidneys and changes in a number of other target organ system biomarkers as a function of duration of exposure. Interaction studies between lead and dietary calcium have demonstrated a strong influence of calcium intake on the gastrointestinal absorption of lead and hence risk of toxicity. Selenium exposure has been shown to influence the toxicity of inorganic mercury but not methyl mercury. Data from these studies provide clear evidence for the need to understand interactions among components of metallic mixture exposures in order to improve human health risk assessments.

**#586 1:30 MIXTURE EXPOSURE TO METALS/ METALLOIDS AND RELATED HEALTH EFFECTS. M. Nordberg1 and B. A. Fowler2. 1Division of Toxicology and Environmental Medicine, ATSDR, Atlanta, GA and 2Environmental Medicine, Karolinska Institute, Stockholm, Sweden.**

**#587 1:35 INTERACTIVE EFFECTS ON MOLECULAR BIOMARKERS FOLLOWING EXPOSURE TO BINARY III-V SEMICONDUCTOR COMPOUNDS: AN OVERVIEW OF IN VIVO AND IN VITRO STUDIES. B. A. Fowler1, E. A. Conner2 and H. Yamauchi3. 1Division of Toxicology and Environmental Medicine, ATSDR, Atlanta, GA, 2Laboratory of Experimental Carcinogenesis, NCI, Bethesda, MD and 3Pharmaceutical Sciences, Kitasato University, Kitasato, Japan.**

**#588 2:15 MIXED EXPOSURES TO CADMIUM AND ARSENIC AND RELATED DOSE-RESPONSE RELATIONSHIPS IN HUMANS. G. F. Nordberg1, T. Jin2, F. Hong, A. Zhang, J. P. Bucher and A. Bernard. 1Environmental Medicine, University of Umea, Umea, Sweden, 2Occupational Health, Fudan University, Shanghai, China, 3Toxicology, Guiyang Medical College, Guiyang, China and 4Industrial Toxicology, Universite Catholique de Louvain, Brussels, Belgium.**

**Abstract #**

Monday Afternoon, March 17
1:30 PM to 4:15 PM
Room 611

**WORKSHOP SESSION: WHERE THE RUBBER MEETS THE ROAD: CURRENT APPLICATION OF GENOMIC TOOLS IN PRODUCT DEVELOPMENT AND DECISION MAKING**

**Chairperson(s):** George Daston, Procter & Gamble Company, Cincinnati, OH and Russell Thomas, The Hamner Institutes for Health Sciences, Research Triangle Park, NC.

**Endorsed by:**
Drug Discovery Toxicology Specialty Section
Regulatory and Safety Evaluation Specialty Section*

The use of genomic tools to broadly survey the transcriptional response of an organism or cell began over a decade ago. The toxicology community initially embraced the technology with the hope that it would allow rapid hazard identification and provide mechanistic insights into how environmental chemicals and pharmaceuticals exert their adverse effects. However, the direct application of genomic technology has proven to be challenging for the both toxicology and regulatory communities. Issues such as reproducibility, the ability to link transcriptional changes to phenotypic effects, and the conservative nature of safety assessment have all hindered the acceptance and wide-spread application of genomic tools. With the maturation of the technology, the toxicology and regulatory communities now have a better grasp on how these tools can be applied in product development and decision making in the context of safety assessment. The purpose of this symposium is to offer practical examples of how genomic technologies are being applied within a broad range of industries together with perspectives from the EPA and FDA on how these data are currently being used in regulatory decision-making.

**#591 1:30 WHERE THE RUBBER MEETS THE ROAD: CURRENT APPLICATION OF GENOMIC TOOLS IN PRODUCT DEVELOPMENT AND DECISION MAKING IN THE CONSUMER PRODUCT, PHARMACEUTICAL, AND CHEMICAL INDUSTRIES. R. S. Thomas4 and G. P. Daston3. 1The Hamner Institutes for Health Sciences, Research Triangle Park, NC and 4Central Product Safety Evaluation, Procter & Gamble, Cincinnati, OH.**

**#592 1:45 GENOMIC TECHNOLOGY AND ANALYSIS FOR ASSESSING TOXICITY AND RISK IN THE CONSUMER PRODUCTS INDUSTRY. G. Daston and J. Nicoll. Miami Valley Labs, Procter & Gamble, Cincinnati, OH.**
Program Description (Continued)

Abstract # 593 2:15 APPLICATION OF GENOMICS TESTING TO NEW PRODUCT DEVELOPMENT. G. M. Rusch, Toxicology & Risk Assessment, Honeywell International, Morristown, NJ.


Abstract # 596 3:45 USE OF GENOMICS DATA AT THE U.S. EPA FOR PREDICTIVE AND MECHANISTIC TOXICOLOGY. D. J. Dix, National Center for Computational Toxicology, U.S. Environmental Protection Agency, Research Triangle Park, NC.

Monday Afternoon, March 17
1:30 PM to 4:15 PM
Room 618

INFORMATIONAL SESSION: FUTURE PATHS FOR PUGET SOUND: CONTAMINANTS, CULTURES, AND ECOSYSTEM RISK CHARACTERIZATION—A SPECIAL REGIONAL INTEREST SESSION

Chairperson(s): Annie Jarabek, NIEHS, Research Triangle Park, NC and Roseanne M. Lorenzana, U.S. EPA, Seattle, WA.

Endorsed by:
Risk Assessment Specialty Section*

The Puget Sound Georgia Basin ecosystem, extending from the Campbell River in Northern British Columbia, Canada to the Nisqually River in Central Western WA in the U.S. is one of the most ecologically diverse in North America. The health of this ecosystem is a cornerstone of the region’s quality of life and vibrant economy. Current population in this region is over 6 million people with projections that by 2020 to over 10 million. The area is ethnically diverse with long established cultural, social, religious and resource-based traditions and customs within these local areas. However, this uniquely valuable region faces increasing pressures and the vital relationship between ecosystem health, human health and ocean are at risk. Of particular challenge to the scientific community is the complexity and interrelatedness of these pressures for predicting and protecting human and ecosystem health. This symposium will explore these relationships. Case examples from the region will describe ecosystem challenges in relationship to persistent organic pollutants and marine mammal health and characterize risks for high fish and shellfish consuming human populations. The regional public health risk assessment dilemmas for encouraging consumption of “heart and brain healthy” seafoods will be discussed in relationship with risk messages warning of eating contaminated seafoods that may contain neurodevelopementally toxic or cancer causing substances. The importance of understanding the dynamics of naturally produced toxins such as those from harmful algal blooms, the significance of microbial contaminants (such as vibrio) and presence of persistent environmental pollutants that bioaccumulate will illustrate the need for integrated public health relevant risk assessments and prevention measures for this region.

Abstract # 597 1:30 FISH: BRAIN FOOD OR BRAIN POISON? A SPECIAL REGIONAL INTEREST SESSION. E. Faustman1 and R. Lorenzana2. 1Institute for Risk Analysis and Risk Communication, Seattle, WA and 2U.S. EPA, Seattle, WA.


Abstract # 599 1:45 OCEANS AND HUMAN HEALTH: LESSONS LEARNED FROM THE PUGET SOUND. E. Faustman. Institute for Risk Analysis and Risk Communication, Seattle, WA.


Abstract # 601 2:45 MERCURY EXPOSURE IN A GROUP OF PUGET SOUND AREA ASIAN-AMERICAN WOMEN OF CHILD-BEARING AGE. K. Marien. Department of Health, Office of Environmental Health Assessments, Olympia, WA. Sponsor: E. Faustman.

Abstract # 602 3:15 DEFINING CULTURAL WELL-BEING FOR TRIBAL NATIONS: GOING BEYOND ACCEPTABLE LEVELS OF RISK. J. Donatuto. Office of Planning and Community Development, Swinomish Indian Tribal Community, LaConner, WA.


Monday Afternoon, March 17
1:30 PM to 4:15 PM
Room 602

PLATFORM SESSION: APC’S, B CELLS AND HAEMATOPOIESIS

Chairperson(s): David Shepherd, CEHS, Missoula, MT.

Abstract # 604 1:30 INNATE CONTROL OF ADAPTIVE IMMUNITY: DENDRITIC CELLS AND TCCD. J. Bankoti1, 2T. Rase1 and D. M. Shepherd1,2. 1Center for Environmental Health Sciences, University of Montana, Missoula, MT and 2Biomedical & Pharmaceutical Sciences, University of Montana, Missoula, MT.

Abstract # 605 1:55 MECHANISMS OF ETHANOL MEDIATED SUPPRESSION OF MACROPHAGE ACTIVATION. K. von Maltzan1 and S. B. Pruett1,2. 1Department Basic Sciences, College Vet. Med., Mississippi State U., Mississippi State, MS and 2Cellular Biology & Anatomy, LSU Health Sciences Center, Shreveport, LA.

Abstract # 606 2:18 AHR ACTIVATION REDUCES DENDRITIC CELL FUNCTION BUT NOT MIGRATION IN INFLEUNZA VIRUS-INFECTED MICE. G. Jin1, J. J. Neumiller1, J. A. Cundiff2 and J. Donatuto3. 1Institute of Environmental Medicine, University of Rochester, Rochester, NY and 3Biological Sciences, Washington State University, Pullman, WA.

Abstract # 607 2:42 ACTIVATION AND TRAFFICKING OF PERITONEAL BIA B CELLS IN RESPONSE TO ASBESTOS. J. C. Pflau, K. M. Hurley and S. Li. Biomedical and Pharmaceutical Sciences, University of Montana, Missoula, MT.
#608 3:06 EFFECTS OF THE HEAVY METALS MERCURY AND LEAD ON IL-33-INDUCED MAST CELL CYTOKINE SECRETION. C. A. Hudson1, P. T. Massa1 and D. Lawrence1. 1Upstate Medical University, Syracuse, NY and 2Wadsworth Center, Albany, NY.


#610 3:53 BENZ(A)PYRENE AND 7, 12-DIMETHYLBENZ(A)ANTHRACENE DIFFERENTIALLY DISRUPT HAEMATOPOIESIS IN BONE MARROW AND LYMPHOID ORGANS. A. N'jai1, L. Shi1, M. Larsen1, C. Jefcoat1 and C. Czuprynski1, 2. 1PBS, University of Wisconsin Madison, Madison, WI, 2Mol. & EnV. Toxicology University of Wisconsin Madison, Madison, WI and 3Pharmacology, University of Wisconsin, Madison, WI.

Monday Afternoon, March 17
1:30 PM to 4:15 PM
Room 6A

PLATFORM SESSION: DISPOSITION/PHARMACOKINETICS

Chairperson(s): Rakesh Dixit, MedImmune, Gaithersburg, MD and Gabriel Knudsen, University of Arizona, Tucson, AZ.

#611 1:30 ORGANIC CATION TRANSPORTERS 1 AND 2 MEDIATE PRALIDOXIME RENAL SECRETION. M. Kayouka1, P. Houze1, P. Risede1, C. Monier1, S. Cisternino1, C. Pope1 and F. J. Baud1. 1INSERM U705 - UMR CNRS/INSERM 7157, Université Paris V - VII, Paris, France and 2Department of Physiological Sciences, Oklahoma State University, Stillwater, OK.

#612 1:51 PBPK MODELING OF DELTAMETHRIN IN RATS. S. J. Godin1, R. Tornero-Velez1, E. J. Scollone1, D. G. Ross1, M. F. Hughes1, R. Comolli2 and M. DeVito2. 1Curriculum In Toxicology, UNC-CH, Chapell Hill, NC, 2ORD/NERL, U.S. EPA, Durham, NC, 3ORD/NCCT, U.S. EPA, Durham, NC and 4ORD/NHEERL, U.S. EPA, Durham, NC.


#614 2:33 DISPOSITION OF NOVEL NANOPARTICLE CONSTRUCTS IN JUVENILE SWINE. S. W. Casteel1, G. M. Fent2, K. Branson3, K. Katti1, R. Kannan1, K. K. Katti1, S. Nune1, E. Boote1, J. C. Waldrep1, J. Gao1 and R. Dhand1. 1Veterinary Pathobiology, University of Missouri, Columbia, MO, 2Veterinary Medicine and Surgery, University of Missouri, Columbia, MO, 3Medical Radiology, University of Missouri, Columbia, MO, 4Physics and Astronomy, University of Missouri, Columbia, MO and 5Pulmonary, Critical Care and Environmental Medicine, University of Missouri, Columbia, MO.

Abstract #
#615 2:54 THE ORGANIC SOLUTE TRANSPORTER ALPHA AND BETA, A POTENTIAL STEROID HORMONE CONJUGATE TRANSPORTER IN STEROIDONEGIC TISSUES. F. Fang and N. Ballatori. enviromedical medicine, university of rochester, Rochester, NY.

#616 3:15 UPTAKE OF PERFLUOROOCTANOIC ACID BY FRESHLY ISOLATED HEPATOCYTES FROM MALE AND FEMALE RATS. X. Han, C. Yang, S. I. Snajdr, D. L. Nabb and R. T. Mingoia. DuPont Haskell Global Centers for Health & Environmental Sciences, Newark, DE.

#617 3:35 EFFECT OF NRF2 ACTIVATION ON BILARY EXCRETION OF BSP AND DBSP. I. L. Csanaky, S. A. Reisman, R. L. Yeager and C. D. Klaukseen. Department of Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, Kansas City, KS.

#618 3:55 TISSUE DISTRIBUTION OF THE MACROCYCLIC TRICHTHOCACNE SATRATOXIN G FOLLOWING INTRANASAL INSTILLATION IN THE MOUSE. C. J. Amazie1,2, Z. F. Ismail1, J. R. Harkema1,2 and J. J. Pestka1,2. Comparative Medicine and Integrative Biology, Michigan State University, East Lansing, MI and 3Center for Integrative Toxicology, Michigan State University, East Lansing, MI.

Monday Afternoon, March 17
1:30 PM to 4:15 PM
Room 2A

PLATFORM SESSION: FRONTIERS IN LIVER TOXICOLOGY RESEARCH

Chairperson(s): Michael Cunningham, NIEHS, National Toxicology Program, Research Triangle Park, NC and Jose Manautou, University of Connecticut, Storrs, CT.

#619 1:30 DEVELOPMENT OF PREDICTIVE IN VITRO ASSAYS FOR THE DETECTION OF STEATOSIS IN PRIMARY RAT HEPATOCYTES. L. M. Rice, H. Garside, J. Pilling, E. Ainscow and M. Sullivan. Advanced Science and Technology Laboratory, AstraZeneca, Loughborough, Leicestershire, United Kingdom.

#620 1:49 USE OF RAT AND HUMAN SANDWICH-CULTURED HEPATOCYTES AND A CASSETTE DOSING APPROACH TO ASSESS INHIBITION OF BILE ACID TRANSPORT. K. K. Wolf1, S. Vora1, L. O. Webster2, G. T. Generaux3, J. W. Polli2 and K. Brouwer1. 1School of Pharmacy, University of North Carolina, Chapel Hill, NC and 2Center for Integrative Toxicology, Michigan State University, East Lansing, MI.

Program Description (Continued)

Abstract #


#623 2:45 TROVAFLOXACIN ENHANCES THE INFLAMMATORY RESPONSE TO A GRAM-NEGATIVE OR A GRAM-POSITIVE STIMULUS, RESULTING IN NEUTROPHIL-DEPENDENT LIVER INJURY IN MICE. P. J. Shaw, P. E. Ganey and R. A. Roth. Pharmacology & Toxicology, Michigan State University, East Lansing, MI.

#624 3:03 CENTRIOBULAR INDUCTION OF MRP4 DURING ALICYL ALCOHOL TOXICITY IS NOT DEPENDENT ON KUPFFER CELL FUNCTION. S. N. Campion1, L. M. Augustine2, M. J. Goedken3, N. J. Cherrington2 and J. E. Manautou4. 1Department of Pharmaceutical Sciences, University of Connecticut, Storrs, CT, 2Department of Pharmacology and Toxicology, University of Arizona, Tucson, AZ and 3Schering-Plough Research Institute, Lafayette, NJ.

#625 3:21 ROLE HYPOXIA-INDUCIBLE FACTOR-1ALPHA IN THE DEVELOPMENT OF LIVER FIBROSIS. B. L. Coppie and J. Moon. Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, Kansas City, KS.

#626 3:39 MECHANISMS OF PROTECTION AGAINST ACETAMINOPHEN HEPATOTOXICITY BY GLUTATHIONE AND N-ACTYLGLYCINE. C. Saito1, C. Zwingmann2 and H. W. Jaeschke1. 1Pharmacology, Toxicology & Therapeutics, University of Kansas Medical Center, Kansas City, KS and 2Centre de recherche, Centre hospitalier de l’Universite de Montreal, Hopital Saint-Luc, Montreal, ON, Canada.

#627 3:57 COX-2 KO MICE ARE SUSCEPTIBLE TO SPLA2-MEDIATED PROGRESSION OF ACETAMINOPHEN HEPATOTOXICITY. H. M. Mehendale1, V. S. Bhave1, S. Donthamsetty1, J. R. Latendresse2 and M. Cunningham2. 1University of Louisiana at Monroe, Monroe, LA, 2NIEHS, RTP, NC and 3NCTR, Jefferson, AR.

Monday Afternoon, March 17
2:45 PM to 3:45 PM
Exhibit Hall 4C-3
EXHIBITOR HOSTED SESSION: TOOLS FOR SYSTEMS TOXICOLOGY—INTEGRATING CHEMICAL, GENE EXPRESSION, PROTEIN AND METABOLIC DATA INTO SAFETY ASSESSMENT
Presented by: GeneGo, Inc.
This session will address a critical issue facing Safety Assessment groups today—how to efficiently integrate and interpret data generated by the many different types of computational and molecular analyses performed during compound discovery and development. A brief introduction to the systems toxicology tools available from GeneGo will be followed by a case study presentation by Dr. Ethan Xu of Merck & Co., with new insights into two classic nephrotoxicants—cisplatin and gentamicin.

Monday Afternoon, March 17
2:45 PM to 3:45 PM
Exhibit Hall 4C-4
EXHIBITOR HOSTED SESSION: PUBLIC ACCESS TO THE NATIONAL TOXICOLOGY PROGRAM: FROM ACRYLAMIDE TO ZINC
Presented by: National Toxicology Program
Learn about the NTP’s research and risk assessment activities and how you can be a part; from nominating substances for toxicity testing to the post-doctoral training program, and even how to get free information from an extensive archive of data, reports and biological specimens.

Monday Afternoon, March 17
3:30 PM to 4:30 PM
Room 201
UNDERGRADUATE TOXICOLOGY FACULTY MEETING
Interested in Undergraduate Toxicology education? The Education Committee invites all faculty who teach toxicology or interested in including toxicology at the undergraduate level to meet and provide feedback. The Education Committee is moving forward on recommendations resulting from the Undergraduate Faculty Focus Group held last fall. Some of the initiatives include establishing a subcommittee for undergraduate education, providing support for faculty, including increasing undergraduate research opportunities and developing curricular resources, and increasing communication among these SOT members. Attend to hear about these plans, provide your input, and network.
Program Description

Abstract #

Monday Afternoon, March 17
4:30 PM to 5:50 PM
Room 615

ROUND TABLE SESSION: IMMUNOTOXICITY TESTING: SHOULD ELEVATED ANTIBODY RESPONSES BE INTERPRETED AS AN INDICATOR OF IMMUNOTOXICOLOGICAL HAZARD?


Endorsed by:
- Immunotoxicology Specialty Section*
- Regulatory and Safety Evaluation Specialty Section
- Risk Assessment Specialty Section

The current EPA Office of Prevention, Pesticides and Toxic Substances draft Health Effects Test Guidelines (OPPTS 870.7800 Immunotoxicity) were designed to meet testing requirement of the Toxic Substances Control Act and the Federal Insecticide, Fungicide and Rodenticide Act. The guidelines require evaluation of the antibody response to sheep red blood cells (SRBC) to determine whether repeated exposure to a pesticide causes immunotoxicity. The purpose of OPPTS 870.7800 is “to provide information on suppression of the immune system”. Although many immunotoxicants suppress the primary antibody response, certain pesticides (e.g., propanil and malathion), drugs (cocaine) and other chemicals of environmental concern (T-2 toxin, cadmium, lead and methyl mercury) have been reported to cause increased responses to T-dependent antigens. It can be argued that increased antibody production in response to immunization should not be interpreted as adverse ‘per se’ because current vaccination protocols typically rely on chemical adjuvants that stimulate antibody production. However, in some cases, elevated antibody synthesis following xenobiotic exposure has been associated with increased production of autoantibodies or worsening of disease in autoimmune-prone animal models. The current language of the immunotoxicity testing guidelines identifies suppression, rather than modulation, of the antibody response as the outcome of concern, and in essence ignores an increased antibody response to SRBC as a signal of potential immunotoxicity. This Roundtable will address whether considering only suppression of the antibody response may compromise hazard identification and risk assessment.


#629 4:35 THE BACKGROUND: ELEVATED ANTIBODY RESPONSES FOLLOWING EXPOSURE TO PESTICIDES. Rosana Shafer

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Abstract #

4:40 THE ISSUE, PART I: ELEVATED ANTIBODY RESPONSES ALONE CAN BE INTERPRETED AS AN INDICATOR OF IMMUNOTOXICOLOGICAL HAZARD. Henk van Loveren

4:45 THE ISSUE, PART II: ELEVATED ANTIBODY RESPONSES ALONE SHOULD NOT BE INTERPRETED AS AN INDICATOR OF IMMUNOTOXICOLOGICAL HAZARD. Mary Jane Selgrade

4:50 THE REACTION: AN INDUSTRY PERSPECTIVE. Michael Woolfiser

4:55 THE REACTION: AN EPA PERSPECTIVE. Vicki Dellarco

5:00 PANEL DISCUSSION.

Monday Afternoon, March 17
4:30 PM to 5:50 PM
Room 602

HISTORICAL HIGHLIGHT SESSION: OZONE TOXICOLOGY: HISTORICAL PERSPECTIVES OF THE SCIENCE THAT SHAPED THE REGULATORY STANDARDS

Chairperson(s): Michael Madden, U.S. EPA, Chapel Hill, NC and Richard Schlesinger, Pace University, Pleasantville, NY.

Endorsed by:
- Inhalation and Respiratory Specialty Section*
- Occupational and Public Health Specialty Section
- Risk Assessment Specialty Section

Ozone (O3) is a ubiquitous air pollutant that has been the focus of intense study for decades. O3 is a criteria pollutant requiring the U.S. EPA to reevaluate new findings on public health periodically to determine if the National Ambient Air Quality Standard (NAAQS) should be revised. Early studies demonstrated human lung physiological changes in healthy adults. Panel studies with populations exposed to O3 for several hours provided further evidence of ozone-induced physiological changes with ambient exposures. O3-induced changes in human lung cell populations and soluble mediator production in lavage fluids were also documented. In vitro O3 exposures performed with lung cells allowed mechanistic examination of how this pollutant exerted effects. Studies with nonhuman animal models also provided valuable insights into the toxicity. Chief among those types of studies were subchronic and chronic exposure studies, and assessment of whole lung pathobiology. With advances in genetics and molecular biology, the role of genetic polymorphisms in mediating the effects of O3 has been studied, in part to identify possible susceptible individuals. Epidemiological studies continue to examine possible effects of long term ozone exposures, as well as the role of O3 in modifying the effects of other air pollutants, e.g., particulate matter. The reactions of O3 with other airborne components may induce some health effects. O3 has remained a major air pollutant of concern in the U.S. and globally despite regulation and extensive study. For instance, under a recent court ordered decision, the U.S. EPA has until March 12, 2008 to decide to retain or revise the O3 standard. The lessons learned from O3 research have helped optimize current investigations examining the role of other air pollutants in human health effects, have assisted in strategies for performing risk assessment especially with possible sensitive populations, and given guidance in management of health risks. Mort Lippmann, Rich Schlesinger, and Harvey Richmond will present these findings. [This abstract may not reflect EPA policy.]
**Program Description (Continued)**

**Abstract #**

4:35 **HUMAN HEALTH EFFECTS STUDIES WITH OZONE FROM WHOLE POPULATIONS TO SENSITIVE INDIVIDUALS.** Morton Lippmann

5:00 **USE OF ANIMAL MODELS TO BETTER ASSESS THE HEALTH EFFECTS AND THE MECHANISMS LEADING TO TOXICITY FROM OZONE EXPOSURE.** Richard Schlesinger

5:25 **HISTORICAL PERSPECTIVE AND RECENT DEVELOPMENTS CONCERNING U.S. AND INTERNATIONAL HEALTH-BASED AMBIENT STANDARDS FOR GROUND LEVEL OZONE.** Harvey Richmond

**Monday Afternoon, March 17**

4:30 PM to 6:00 PM

**Room 605**

*CAREER DEVELOPMENT*

**INFORMATIONAL SESSION: PUTTING YOUR BEST FOOT FORWARD: JOB INTERVIEWING WORKSHOP FOR EARLY-CAREER SCIENTISTS**

*Chairperson(s):* Kristen Mitchell, University of Texas Medical Branch, Galveston, TX and Nick Radio, U.S. EPA, Research Triangle Park, NC.

**Endorsed by:**
- Career Resource and Development Committee
- Postdoctoral Assembly®
- Student Advisory Council

You’ve finished graduate school and maybe completed one or two stints as a postdoctoral fellow. You may know how to conduct research, write manuscripts and present seminars, but do you know what it takes to land that first job? This interactive workshop is designed to provide novice job seekers with timely and valuable information about how to successfully navigate the hiring process. Listen as hiring managers from government and industry discuss what they look for when reviewing job applications and get the straight facts about what can make or break a job interview. Find out what to say and how to present yourself during the interview so that hiring managers know that YOU are the person for the job. Furthermore, listen to the firsthand experience of an early-career scientist who recently landed an academic position. Watch and learn as experts and audience members participate in skits and mock interviews. Join us for a dynamic, informative and interactive workshop designed to put you in the driver’s seat of your career development!


1Department of Pharmacology and Toxicology, University of Texas Medical Branch, Galveston, TX, 2Neurotoxicology Division, U.S. EPA, Research Triangle Park, NC, 3Experimental Toxicology Division, U.S. EPA, Research Triangle Park, NC, and 4Drug Safety Research and Development, Pfizer Global Research and Development, San Diego, CA.

**4:35 INTERVIEWING FOR A POSITION IN GOVERNMENT.** Linda Birnbaum

**4:50 INTERVIEWING FOR A POSITION IN INDUSTRY.** Leigh Ann Burns Naas

**5:05 WHAT TO EXPECT WHILE INTERVIEWING FOR AN ACADEMIC POSITION.** Kristen Mitchell

**5:20 SKITS AND MOCK INTERVIEWS.** Nick Radio

**Abstract #**

**Monday Afternoon, March 17**

4:30 PM to 6:00 PM

**Room 307**

**SPECIALTY SECTION PRESIDENTS AND OFFICERS MEETING**

If you will be a President or a Vice President of a Specialty Section in 2008–2009, please make plans to attend the Specialty Section President meeting scheduled for 4:30 PM–6:00 PM on Monday, March 17. The agenda for the meeting will include an overview of the SOT Long-Range Plan. If you have long-range planning ideas that you would like added to the agenda, please send a message to Marcia Lawson at SOT Headquarters. The agenda will include information on the scientific session selection process, budgetary guides, a review of 2007–2008 activities, and plans for the future.

**Monday Afternoon, March 17**

4:30 PM to 6:00 PM

**Sheraton Metropolitan B Room**

**NORTHERN CALIFORNIA AND PACIFIC NORTHWEST REGIONAL CHAPTERS, UC DAVIS AND UC BERKELEY JOINT MEETING/RECEPTION**

**Monday Afternoon, March 17**

5:00 PM to 6:00 PM

**Gordon Biersch Brewery/Restaurant**

**REGIONAL CHAPTERS MEETING/RECEPTION: GULF COAST AND SOUTH CENTRAL CHAPTERS JOINT MEETING/RECEPTION**

**Monday Afternoon, March 17**

5:00 PM to 8:00 PM

**Sheraton Grand Ballroom D**

**SPECIAL INTEREST GROUP MEETING/RECEPTION: AMERICAN ASSOCIATION OF CHINESE IN TOXICOLOGY**

**Monday Afternoon, March 17**

5:30 PM to 8:00 PM

**Hyatt Leonesa 1 Room**

**SPECIAL INTEREST GROUP MEETING/RECEPTION: KOREAN TOXICOLOGIST ASSOCIATION IN AMERICA**

**Monday Afternoon, March 17**

5:30 PM to 6:30 PM

**Sheraton Capitol Hill Room**

**SPECIALTY SECTION MEETING: ORGANIZATIONAL MEETING FOR A POTENTIAL NEW OCULAR TOXICOLOGY SPECIALTY SECTION**

**Monday Afternoon, March 17**

5:30 PM to 6:30 PM

**Sheraton Capitol Hill Room**

**SPECIALTY SECTION MEETING: SUBSTANCE ABUSE AND ADDICTION SPECIALTY SECTION**

**Monday Afternoon, March 17**

5:30 PM to 6:30 PM

**Sheraton Capitol Hill Room**

**SPECIALTY SECTION MEETING: ORGANIZATIONAL MEETING FOR A POTENTIAL NEW TOXICOLOGY SPECIALTY SECTION**

**Monday Afternoon, March 17**

5:30 PM to 6:30 PM

**Sheraton Capitol Hill Room**

**SPECIALTY SECTION MEETING: AGROCHEMISTRY AND ENVIRONMENTAL TOXICOLOGY SPECIALTY SECTION**

**Monday Afternoon, March 17**

5:30 PM to 6:30 PM

**Sheraton Capitol Hill Room**

**SPECIALTY SECTION MEETING: NEUROTOXICOLOGY SPECIALTY SECTION**

**Monday Afternoon, March 17**

5:30 PM to 6:30 PM

**Sheraton Capitol Hill Room**

**SPECIALTY SECTION MEETING: PULMONARY TOXICOLOGY SPECIALTY SECTION**

**Monday Afternoon, March 17**

5:30 PM to 6:30 PM

**Sheraton Capitol Hill Room**

**SPECIALTY SECTION MEETING: ORGANIZATIONAL MEETING FOR A POTENTIAL NEW PULMONARY TOXICOLOGY SPECIALTY SECTION**

**Monday Afternoon, March 17**

5:30 PM to 6:30 PM

**Sheraton Capitol Hill Room**
Monday Evening, March 17
6:00 PM to 7:00 PM
Sheraton Kirkland Room

SPECIAL INTEREST GROUP ANNUAL MEETING/RECEPTION:
HISPANIC ORGANIZATION FOR TOXICOLOGISTS

Monday Evening, March 17
6:00 PM to 7:30 PM
See Daily Pocket Calendar on page 6 for room listings

SPECIALTY SECTION MEETINGS/RECEPTIONS: ETHICAL,
LEGAL AND SOCIAL ISSUES, FOOD SAFETY, MECHANISMS,
RISK ASSESSMENT

Tuesday Morning, March 18
7:00 AM to 8:30 AM
Room 307

REGIONAL CHAPTERS PRESIDENTS AND OFFICERS
MEETING
If you will be a President or a Vice President of a Regional Chapter in
2008–2009, please make plans to attend the Regional Chapters Presidents
meeting scheduled for 7:00 AM–8:30 AM Tuesday, March 18. The agenda
for the meeting will include an overview of the SOT Long-Range Plan.
If you have long-range planning ideas that you would like added to the
agenda, please send a message to Marcia Lawson at SOT Headquarters.
The agenda will include Headquarters administrative support information,
budgetary guides, a review of 2007–2008 activities, and plans for the future.

Tuesday Morning, March 18
7:30 AM to 8:30 AM
Ballroom 6B

ISSUES SESSION: OVER-THE-COUNTER COUGH AND
COLD MEDICATIONS IN CHILDREN: EFFICACY,
SAFETY, AND USE

Chairpersons: Charles Vincent Smith, Seattle Children’s Hospital
Research Institute, Seattle, WA and Sid Nelson, University of Washington,
Seattle, WA

Endorsed by:
SOT Presidential Chain

Parents spend around $500 million each year in the U.S. to purchase 95
million boxes containing almost 4 billion doses of over-the-counter (OTC)
pediatric cough and cold products, despite the absence of published
evidence of efficacy of these formulations from randomized, double-
blind, placebo-controlled studies in children or infants. Both the American
Academy of Pediatrics and the American College of Chest Physicians have
published statements on the lack of efficacy of these products in children.
Nevertheless, many parents, including many parents trained as biomedical
scientists, believe that these OTC products provide beneficial effects in
their children. Decongestants (alpha-1 agonists) have been linked to cardiac
arrhythmias and hypertension, antihistamines with sedation and visual
hallucinations, and antitussives with depressed levels of consciousness and
encephalopathy, particularly in children under the age of 6 years. A Food
and Drug Administration (FDA) review identified 123 deaths in children
less than 6 years of age over the last several decades associated with use
of OTC cough and cold products. This number has been questioned due to
inclusion of examples in which oter factors may have been dominant and,
conversely, the identification of true cases may be incomplete. Whatever
the true measure, the number of deaths has been interpreted either as small,
relative to the millions of children dosed, or as unjustifiable, in absence of
evidence of efficacy. Additional concerns are that virtually nothing is known
of potentially adverse effects of these products on child development. An
advisory panel convened by the FDA in October 2007 produced a vigorous
discussion of the need for better data on risks and benefits in children of
OTC cough and cold medications. In addition to the direct importance of the
topic, this controversy serves as an example of several core issues relevant to
toxicologists, regulatory personnel, and consumers. One issue is the recogni-
tion that children are not simply small adults, and differences from adults
in physiologies and susceptibilities to pharmacological and environmental
exposures need to be considered and studied, so that rational judgments and
risk/benefit assessments can be made. A second consideration arises from
the broader question of how best to use incomplete data for evidence-based
risk/benefit evaluations and decision-making processes that can be applied
in timely and useful policies. Discussion of these principles will enhance our
efforts to identify the most important questions to be addressed by ongoing
and future research.
Program Description (Continued)

Abstract #

Efficacy and Toxicity Concerns of Current Cough and Cold Products in Children, Wayne Snodgrass, University of Texas Medical Branch at Galveston, Galveston, TX

Cough Cold Efficacy Studies, Philip D. Watson, University of Cincinnati, Cincinnati, OH

Making Decisions Without Sufficient Data: OTCs in Children As an Example, Richard C. Dart, Rocky Mountain Poison and Drug Center, Denver Health, Denver, CO

Tuesday Morning, March 18
7:30 AM to 8:50 AM
Room 618

ROUNDTABLE SESSION: BREAKING THE LOG-JAM: PUBLIC-PRIVATE PARTNERSHIPS AS A WAY TO DISCOVER AND ADVANCE BIOMARKERS OF DRUG-INDUCED TOXICITY

Chairperson(s): William Mattes, Critical Path Institute, Rockville, MD and Friedlieb Pfannkuch, Hoffmann La Roche, Inc., Basel, Switzerland.

Endorsed by:
Regulatory and Safety Evaluation Specialty Section*

The drug-development process entails an interaction between the industrial (private) sector and public regulatory agencies. Likewise, changing this process through the use of innovative new safety tests also requires an interaction between the public and private sectors. Two unique and parallel efforts are the Innovative Medicines Initiative and the Predictive Safety Testing Consortium. The former, under the auspices of the European Union, brings together academics and companies in a combined effort to discover and qualify new biomarkers of drug toxicity. The latter, under the direction of the non-profit Critical Path Institute, brings together companies to comprehensively qualify new safety biomarkers for both non-clinical and clinical applications. Both efforts directly involve members of the regulatory agencies so that the processes are not just transparent to regulatory agencies, but result in assays that are accepted by the general scientific, industrial and regulatory communities. This Roundtable will provide an overview of these processes with particular attention to the interaction between scientific approaches and regulatory input, and allow discussion of how these partnerships achieve their goals.

Abstract #

Tuesday Morning, March 18
7:30 AM to 8:50 AM
Room 602

DEVELOPMENTAL BASIS OF DISEASE

ROUND TABLE SESSION: REPRODUCTIVE TOXICITY STUDIES: ONE GENERATION VERSUS TWO GENERATIONS


Endorsed by:
Regulatory and Safety Evaluation Specialty Section
Reproductive and Developmental Toxicology Specialty Section*
Risk Assessment Specialty Section

As an outcome of an international effort to develop an alternative protocol for hazard and dose-response characterization for agricultural chemicals, a life stage oriented testing paradigm was proposed (Cooper et al., 2006). The screening protocol as described in this manuscript incorporates multiple endpoints that might traditionally be assessed in completely separate studies; it thereby strives to reduce the number of animals used in testing and to refine the testing paradigm through more efficient utilization of animals. An important and controversial aspect of this study design is the use of a single generation of rodents to assess reproductive toxicity. Questions and concerns have been expressed regarding the adequacy of using a one-generation study for the characterization of reproductive hazard and dose response, rather than the traditionally accepted two generations. A previous EPA workshop (Francis and Kimmel, 1988) had concluded that two-generations were optimal and that one would be insufficient. However, a preliminary review of historical evidence available at the time of the Cooper et al. publication suggested that this conclusion may not be universally supported. More rigorous retrospective reviews of reproductive toxicity study outcomes and their use in risk assessment have been conducted since the time of the publication and will be presented in this session. Some of the issues for consideration and discussion include: What has been learned through the retrospective review of reproductive toxicity study data? How might hazard and dose-response characterization be affected by assessment of only one generation? What would trigger the conduct of a second generation, and how confident could one be that this decision would be applied appropriately and consistently? What role might chemical class or mode of action information play in directing the testing paradigm on a chemical-specific basis? How will testing and validation of this approach be conducted?
Program Description (Continued)

Abstract #

Tuesday Morning, March 18
7:30 AM to 8:50 AM
Room 6C

ROUND TABLE SESSION: THE 2007 PET FOOD RELATED TOXIC NEPHROPATHY IN DOGS AND CATS

Chairperson(s): Jim Riviere, North Carolina State University, Raleigh, NC and Ramesh Gupta, Murray State University, Hopkinsville, KY.

Endorsed by:
Comparative and Veterinary Specialty Section*
Food Safety Specialty Section
Toxicologic and Exploratory Pathology Specialty Section

The focus of this Roundtable will be to provide an up-to-date overview of the pet food related toxic nephropathy that swept across the United States and Canada in 2007. This episode was unique in both the breadth and rapidity of its occurrence as well as to the unique nature of its toxicological manifestations. It exposed the public to a large-scale toxicological investigation in progress, and has had significant impact on assessing safety of imported foods for both animal and human consumption. This Roundtable will review the epidemiology, clinical manifestations, pathology and potential mechanisms of action, as well as the regulatory response and management of the crisis.

#633 7:30 THE 2007 PET FOOD RELATED TOXIC NEPHROPATHY IN DOGS AND CATS. J. Riviere1 and R. Gupta2. 1College of Veterinary Medicine, North Carolina State University, Raleigh, NC and 2Murray State University, Hopkinsville, KY.

7:40 EPIDEMIOLOGY OF THE 2007 PET FOOD RECALL: VETERINARY COMMUNITY PERSPECTIVE. Sharon Gwaltney-Brant

7:55 MENU FOOD MYSTERY BEGINNING INVESTIGATION. Karyn Bischoff

8:10 PET FOOD SAFETY: MORPHOLOGIC FINDINGS AND IMPLICATIONS FOR PATHOGENESIS. Wanda Haschek-Hock

8:25 REGULATORY RESPONSE. Stephen Sundlof

8:40 SUMMARY AND LESSONS LEARNED. Ramesh C. Gupta

OXIDATIVE SIGNALING AND REDOX BIOLOGY

INFORMATIONAL SESSION: DETECTION OF BIOLOGICAL FREE RADICALS IN TIME AND SPACE

Chairperson(s): Michael Waalkes, NCI at NIEHS, Research Triangle Park, NC and Ron Mason, NIEHS, Research Triangle Park, NC.

Endorsed by:
Mechanisms Specialty Section*
Metals Specialty Section

The accurate and sensitive detection of biological free radicals in a reliable manner is a requirement to define the mechanistic roles of such species in toxicology. Most of the techniques currently available are either not appropriate to detect free radicals in cells and tissues due to sensitivity limitations (electron paramagnetic resonance, EPR) or subject to artifacts that make the validity of the results questionable (fluorescent probe based analysis). The recently introduced immuno-spin trapping technique is based on the fact that amino acid derived radicals react with the spin trap 5,5-dimethyl-1-pyrroline-N-oxide (DMPO) to form protein-DMPO nitroxide radical adducts. These adducts have limited stability and decay producing the very stable protein-DMPO-nitrone product. The formation of protein-DMPO-nitrone adducts is based on the selective reaction of free radical addition to the spin trap and is thus not subjected to artifacts frequently encountered with ordinary methods for free radical detection. Rabbit polyclonal anti-DMPO nitrone antiserum has been developed and validated. Immuno-spin trapping is proving to be a potent, sensitive, and accessible method to detect free radicals produced in vitro and in vivo. Moreover, it has been established that anti-DMPO nitrone antibodies can be utilized for the detection of DNA-derived radicals in the form of DNA-DMPO nitrone adducts, and such technique has been applied to models of metal carcinogenesis. Most recently, immunofluorescence and immunochemistry have been used to determine the distribution of free radicals in cells and tissues. In summary, the advances the immuno-spin trapping technique affords in accurate and sensitive determination of biological free radicals is having a major impact on our understanding of the role of such radicals in toxic response and mechanism.

#634 7:30 DETECTION OF BIOLOGICAL FREE RADICALS IN TIME AND SPACE. M. Waalkes1, R. Mason2 and V. Kagan3. 1LPC, NIEHS, Research Triangle Park, NC, 2LCC, NCI at NIEHS, Research Triangle Park, NC and 3University of Pittsburgh, Pittsburgh, PA.

7:35 USING ANTI-5, 5-DIMETHYL-1-PYRROLINE-N-OXIDE (ANTI-DMPO) TO DETECT PROTEIN AND DNA RADICALS IN TIME AND SPACE WITH IMMUNO-SPIN TRAPPING. Ron Mason

8:00 CYTOCHROME C ACTS AS A CARDIOLIPIN OXYGENASE REQUIRED FOR RELEASE OF PROAPOPTOTIC FACTORS. Valerian Kagan

8:25 OXIDATIVE DNA DAMAGE INDUCED BY INORGANIC ARSENITE DETECTED USING THE IMMUNO-SPIN TRAPPING METHOD: DELAYED DAMAGE AT ENVIRONMENTALLY RELEVANT EXPOSURE LEVELS. Michael P. Waalkes
TUESDAY

**Program Description (Continued)**

**Tuesday Morning, March 18**
8:00 AM to 8:50 AM
Ballroom 6A

**SOT/EUROTOX DEBATE**

**MOTION: IN VITRO TOXICOLOGY IS USEFUL FOR REGULATORY PURPOSES**

Endorsed by:
- Society of Toxicology (SOT)
- European Societies of Toxicology (EUROTOX)

Debaters:
- **SOT:** George Daston, Procter & Gamble Company, Cincinnati, OH (con)
- **EUROTOX:** Thomas Hartung, European Centre for the Validation of Alternative Methods, Ispra, Italy (pro)

Each year the SOT Annual Meeting includes a debate that continues a tradition that originated in the early 1990s in which leading toxicologists advocate opposing sides of an issue of great toxicological importance. This year, our debaters will address the proposition: *In Vitro* Toxicology is Useless for Regulatory Purposes.

In *vitro* toxicity assays have been in use for a long time and have a large number of applications, but in regulatory settings they are still used largely as preliminary screens rather than as the definitive basis for chemical regulation. A number of reasons underlie the current status of *in vitro* tests, including that they often do not provide information that is directly usable in risk assessment. Addressing the question of regulatory utilization of *in vitro* tests is becoming urgent as laws such as the European Union’s 7th Amendment to the Cosmetics Directive come into force, which will not allow ingredients tested in animals after 2013 to be used in personal care products. The debate will present some of the challenges to the use of *in vitro* toxicity assays as the basis for chemical regulation.

Regardless of framework differences and personal convictions, each scientific delegate will present relevant evidence and compelling scientific arguments to persuade and appeal to the response of the audience in order to obtain the approval or refusal of the motion.

In addition to being a featured session at the Annual Meeting, this debate will again take place from October 5–8 at the 45th Congress of EUROTOX in Rhodes, Greece.

**Tuesday Morning, March 18**
8:30 AM to 12:00 noon

**K–12 PARACELSUS GOES TO THE CLASSROOM—THE TEAM PROJECT: TOXICOLOGISTS EDUCATING AND MENTORING STUDENTS**

Chairperson(s): Katie Sprugel, Amgen, Seattle, WA and Vanessa Fitsanakis, King College, Bristol, TN

Continuing the tradition of providing public outreach in conjunction with the Annual Meeting, the Committee on K–12 Education will host a symposium for high school students by videoconferencing from the Annual Meeting to classrooms around the state of Washington. Twelve groups of students will present their projects to one another and to a panel of toxicologists in a morning and an afternoon session. Other students will have the opportunity to submit an electronic version of their project for a virtual poster session. The presentations will educate other students about a health or environmental health issue of importance to the students or their community. Toxicologists from SOT will also serve as mentors in the months preceding the meeting as the students develop their presentations.

**Tuesday Morning, March 18**
8:30 AM to 9:30 AM
Exhibit Hall 4C-4

**EXHIBITOR HOSTED SESSION: ROSETTA BIOSOFTWARE: CRITICAL PATH: ANALYSIS OF SHARED TOXICITY DATA BETWEEN PHARMACEUTICAL COMPANIES BRIDGES BIOMARKER DISCOVERY**

Presented by: Rosetta Biosoftware

In 2006 the Critical Path Initiative’s Predictive Safety Testing Consortium licensed the Rosetta Resolver® system as a mechanism for collaboration and analysis of toxicity data from multiple technologies such as: nonclinical data, metabolomics and transcriptomics. This workshop will illustrate how such data is shared across organizations and analyzed by the Resolver system.

**Tuesday Morning, March 18**
8:30 AM to 9:30 AM
Exhibit Hall 4C-3

**EXHIBITOR HOSTED SESSION: ONE YEAR INTO THE MODERN ERA OF DATA COLLECTION: SUCCESSES, IMPROVEMENTS, AND WHAT’S NEXT**

Presented by: VivoMetrics, Inc.

In this session we will discuss recent developments to the LifeShirt Preclinical, a wireless telemetry system that non-invasively monitors in real-time a broad range of cardiopulmonary parameters in preclinical settings unlike any other available system. We will review historical background, context for development and a description of how the LifeShirt works in both human and animal research. Opportunities, challenges and exciting next steps will also be included in the discussion.
OXIDATIVE SIGNALING AND REDOX BIOLOGY

SYMPOSIUM SESSION: MOLECULAR AND GENOMIC INSIGHTS INTO THE NRF2-REGULATED OXIDATIVE STRESS RESPONSE: IMPACT ON CARCINOGENESIS


Endorsed by:  
Carcinogenesis Specialty Section  
Mechanisms Specialty Section  
Molecular Biology Specialty Section*

The transcription factor Nrf2 plays a significant role in protecting cells from endogenous and exogenous stresses. Mice lacking Nrf2 are more sensitive to the hepatic, pulmonary, ovarian, and neurotoxic consequences of acute exposures to environmental agents and drugs as well as chronic exposures to cigarette smoke and other carcinogens. Under quiescent conditions, Nrf2 interacts with the actin-anchored protein Keap1, leading to low basal expression of Nrf2-regulated genes. However, upon recognition of chemical signals imparted by oxidative and electrophilic molecules, Nrf2 is released from Keap1, escapes proteasomal degradation, translocates to the nucleus, and trans-activates the expression of several dozen cytoprotective genes that enhance cell survival. This symposium will highlight recent exciting findings in the field including different mechanisms by which chemical exposure can activate Nrf2, the role of Nrf2 in modifying chemical carcinogenesis and how cancer cells can hijack this protective system to increase survival.

#635  9:00  MOLECULAR AND GENOMIC INSIGHTS INTO THE NRF2-REGULATED OXIDATIVE STRESS RESPONSE: IMPACT ON CARCINOGENESIS. C. Corton1 and T. Kensler2, 1NHEERL, U.S. EPA, Research Triangle Park, NC and 2Johns Hopkins University, Baltimore, MD.

#636  9:15  FUNCTION AND SIGNAL TRANSDUCTION OF NRF2 FROM A METAL’S PERSPECTIVE. Q. Ma and X. He. Toxicology and Molecular Biology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV.


#638  10:15  NRF2-MEDIATED SIGNALING: ROLE IN LUNG INFLAMMATION AND TUMORIGENESIS. S. R. Kleeberger1, A. K. Bauer2, X. Wang2 and D. A. Bell1, 1NIERHS, Research Triangle Park, NC and 2Michigan State University, East Lansing, MI. Sponsor: C. Corton.

#639  10:45  DYSFUNCTIONAL KEAP1-NRF2 INTERACTIONS IN LUNG CANCER AND IMPLICATIONS FOR OTHER CANCERS. S. Biswal. Johns Hopkins University, Baltimore, MD. Sponsor: C. Corton.
Program Description (Continued)

Abstract #

#645 10:45 THE ONCOGENIC MICRORNA-27A TARGETS GENES THAT REGULATE SPECIFICITY PROTEIN (SP) TRANSCRIPTION FACTORS AND ESTROGEN RECEPTOR α IN BREAST CANCER CELLS. S. Safe1, S. U. Mertens-Talcott2, S. Chintarlapalli2 and X. Li1. 1Veterinary Physiology & Pharmacology, Texas A&M University, College Station, TX and 2Institute of Biosciences & Technology, Texas A&M Health Science Center, Houston, TX.


Tuesday Morning, March 18
9:00 AM to 11:45 AM
Room 611
WORKSHOP SESSION: DRUG-RELATED TORSADES DE POINTEs: ADVANCEMENTS IN PRECLINICAL MODELING OF POTENTIAL CARDIAC TOXICITY

Chairperson(s): Alan Bass, Schering-Plough Research Institute, Kenilworth, NJ and Jean-Pierre Valentijn, AstraZeneca, Macclesfield, United Kingdom.

Endorsed by:
Regulatory and Safety Evaluation Specialty Section*
Risk Assessment Specialty Section
Safety Pharmacology Society

Drug-induced delay in cardiac ventricular repolarization (QT/QTc prolongation) serves as a sensitive surrogate of the potential life-threatening cardiac arrhythmia, torsades des pointes (TdP), but importantly lacks the specificity to know if, when & under what circumstances TdP may be elicited in the clinical population. Identification of better preclinical models of drug-related TdP is a significant challenge for the scientific community, and was thoroughly debated at an ILSI/HESI workshop convened in November 2005 at which recommendations for further study were proposed (www.hesiglobal.org/Events/TdPWorkshop.htm). Advancements in three key areas of investigation will be judged in terms of progress in each of these areas of model development. They include: cellular and molecular biology of drug-induced TdP; attempts to directly link drug exposure to TdP; understanding the dynamics of periodicity (beat to beat variability in the electrocardiogram) from preclinical and clinical investigations; and in vitro and in vivo modeling of drug-induced TdP. The timing of the 2008 SOT workshop is important as 2009/2010 was selected for a followup two day ILSI/HESI meeting at which those areas of scientific pursuit holding the greatest promise of providing better predictors of TdP arrhythmia will be considered and possibly prioritized. The 2008 workshop will be an important interim assessment of advancements in each of the three areas of study since the 2005 program and also serve to advocate further investigation by toxicology scientists in preparation for the important debate in 2009/2010. Drug-induced TdP remains a serious public health issue in rapidly bringing safe new pharmaceutical agents to the marketplace for diseases for which there are no acceptable alternative therapies. As a result, accurate identification of those drugs posing a risk of cardiac toxicity using the best preclinical models is of paramount importance. This workshop is being co-sponsored by Society of Toxicology and Safety Pharmacology Society.

Abstract #

#647 9:00 DRUG-RELATED TORSADES DES POINTEs: ADVANCEMENTS IN PRECLINICAL MODELING OF POTENTIAL CARDIAC TOXICITY. A. S. Bass1 and J. Valentijn2.

1Investigational & Regulatory Safety Pharmacology, Schering-Plough, Kenilworth, NJ and 2Drug Safety, AstraZeneca, Macclesfield, Cheshire, United Kingdom.


Tuesday Morning, March 18
9:00 AM to 11:45 AM
Room 6A
WORKSHOP SESSION: THE ALLERGIC MARCH: THE ROLE OF CHEMICALS IN THE INCREASING PREVALENCE OF ALLERGY AND ASTHMA

Chairperson(s): Ian Kimber, The University of Manchester, Manchester, United Kingdom and Ian Gilmour, U.S. EPA, Research Triangle Park, NC.

Endorsed by:
Immunotoxicology Specialty Section*

It is now well-established that during the last four decades there has been in industrialized western societies a substantial increase in the prevalence of asthma and atopic allergic disease. These changes are acknowledged to have been too rapid to be accounted for by alterations in the gene pool, and for this reason there has been considerable interest in the roles played by environmental influences and acquired host factors on susceptibility to allergy and asthma. We will here explore whether and to what extent chemical exposure is implicated in susceptibility to allergic disease, and in addition what other environmental factors may be influential.
During the past decades, the safety of oxidative hair dyes has been repeatedly questioned. Oxidative hair dyes contain aromatic amines, a chemical family that includes known human carcinogens. Therefore, the association of hair dye exposure and neoplastic diseases in consumers and professionals handling hair dyes has been the subject of numerous epidemiological and toxicological investigations. During the past years several investigators have undertaken major research efforts to investigate the safety of oxidative hair dyes in depth, in particular the systemic exposure of consumers, the metabolic activation in animal models after dermal application, human skin and hepatocytes, including their capacity to form electrophilic and potentially carcinogenic metabolites. In addition, several recent epidemiologic investigations have implicated oxidative hair dyes, especially the permanent type, in the development of bladder cancer, leukemia and non-Hodgkin’s lymphoma. The objectives of the session are: (1) Present and discuss the recent findings on the development of bladder cancer, leukemia and non-Hodgkin’s lymphoma. The overall objective of the symposium is to foster career development of a toxicologist by providing education and knowledge about different facets of a toxicology career. The goals of this session are: 1. To provide insights...
Program Description (Continued)

Abstract #


Abstract #


Tuesday Morning, March 18
9:00 AM to 11:45 AM
Room 6C

Platform Session: Accelerating Discoveries in Toxicology through ‘omics Research

Chairperson(s): Helmut Zarbl, University of Medicine and Dentistry of New Jersey, Piscataway, NJ.


#670 9:21 INDEPENDENTLY PUBLIC TOXICOGENOMICS STUDIES VALIDATE THE TRANSSULFATION PATHWAY AS A POTENTIAL LIVER TOXICITY PATHWAY. M. Chen, L. K. Schnackenberg, R. Holland, R. D. Berger, S. Isukapalli, P. G. Georgopoulos, W. J. Welsh and W. Tong. Division of Systems Toxicology, FDA’s National center for toxicology research, Jefferson, AR and Departments of Pharmacology and of Environmental and Occupational Medicine, UMDNJ-RWJMS, Piscataway, NJ.

#671 9:42 PHENOTYPIC ANCHORING OF CARCINOGEN-INDUCED GENE EXPRESSION REVEALS A COINCIDENCE BETWEEN THE NO TRANSITIONAL EFFECT LEVEL (NTEL) AND THE NO DETECTABLE ADDUCT LEVEL (NODAL): IMPLICATIONS FOR RISK ASSESSMENT? H. Zarbl, R. C. Sullivan, J. Glick and P. Vousos. Environmental and Occupational Health Sciences Institute, Robert Wood Johnson Medical School, UMDNJ, Piscataway, NJ and Department of Chemistry and Chemical Biology and The Barnett Institute, Northeastern University, Boston, MA.

#672 10:03 TRANSCRIPT PROFILING REVEALS DIVERGENT REGULATION OF MITOCHONDRIAL METABOLISM IN HUMAN AND MOUSE MODELS IN RESPONSE TO XENOBiotics. K. M. Olsansky, M. Johnson, S. Storm, H. Zarbl and C. Omiecinski. Department of Veterinary and Biomedical Sciences, Pennsylvania State University, University Park, PA; Department of Pathology, University of Pittsburgh, Pittsburgh, PA and Fred Hutchinson Cancer Research Center, Seattle, WA.


#674 10:45 COMPARATIVE METABOLIC ANALYSIS OF HEPATOTOXICITY EXPERIMENTS IN RATS AND MICE. G. L. Jahn, N. V. Reo, M. N. Kent, M. K. Makley, A. Kopec, D. R. Boverhoff, L. Burgon*, T. R. Zarcharewski* and N. DelRaso*. Advanced Information Technologies, BAE Systems, San Diego, CA; Department Biochemistry & Molecular Biology, Boonshoft School of Medicine, Wright State University, Dayton, OH; Department Biochemistry & Molecular Biology, National Food Safety & Toxicology Center, Michigan State University, East Lansing, MI and Human Effectiveness Directorate, Air Force Research Laboratory, Wright-Patterson AFB, OH.
Abstract #

#676 11:25 INTEGRATED TRANSCRIPTOMIC AND PROTEOMIC EVALUATION OF GENTAMICIN NEPHROTOXICITY IN RATS. E. Com1, E. Boitier1, J. Marchandau1, M. Courcol1, J. Leonard1, M. Duchesne2, B. Genet1, S. Schroeder1, M. Wendt1 and J. Gautier1. 1Drug Safety Evaluation, sanofi aventis, Vitry sur Seine, France, 2Biological Sciences, sanofi aventis, Vitry sur Seine, France, 3Nycomed GmbH, Barsbüttel, Germany and 4Genedata AG, Basel, Switzerland. Sponsor: E. Harpur.

Tuesday Morning, March 18
9:00 AM to 11:45 AM
Room 618

PLATFORM SESSION: CHEMICAL AND BIOLOGICAL WEAPONS: MOLECULAR BASIS FOR DETECTION AND THERAPEUTIC POTENTIAL

Chairperson(s): Gunda Reddy, U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD and Charles Timchalk, Pacific Northwest National Laboratory, Richland, WA.

#677 9:00 TOXIGENIC PHASE OF ANTHRAX INFECTION: BIOLOGICALLY-BASED MODELING OF MODULATION OF MAP KINASE SIGNALING PATHWAY. D. J. Schneider1, P. J. Robinson1, J. M. Gearhart1, C. Hack1, G. A. Andrews2 and B. W. Gutting1. 1HEPB, Air Force Research Laboratory, Wright-Patterson AFB, OH, 2Air Force Institute of Technology, Wright-Patterson AFB, OH and 3Naval Surface Warfare Center, Dahlgren, VA.

#678 9:23 BIOLOGICAL AND MOLECULAR MARKERS FOR SULFUR MUSTARD ANALOG CEES-INDUCED SKIN INJURY IN MOUSE AND HUMAN EPIDERMAL KERATINOCYTES. N. Tewari-Singh1, S. Rana1, M. Gu1, C. Agarwal1, C. W. White2 and R. Agarwal1. 1Pharmaceutical Sciences, UCDHSC, Denver, CO and 2National Jewish Medical and Research Center, Denver, CO. Sponsor: V. Vasiliou.

#679 9:46 NANOPARTICLE-BASED ELECTROCHEMICAL IMMUNOSENSOR FOR DETECTION OF PHOSPHORYLATED ACETYLCOLINESTERASE ADDUCT: AN EXPOSURE BIOMARKER OF ORGANOPHOSPHATE PESTICIDES AND NERVE AGENTS. Y. Lin1, G. Liu2, J. Wang1, C. Timchalk1, P. L. Gassman1, R. C. Barry1, A. L. Bushy1 and H. Wang1. 1Pacific Northwest National Laboratory, Richland, WA and 2North Dakota State University, Fargo, ND.

#680 10:09 TRANSCRIPTIONAL RESPONSES IN PORCINE SKIN FOLLOWING SULFUR MUSTARD AND THERMAL BURNS. J. Price1, J. Rogers1, J. McDougall1, F. Reid1 and J. Graham1. 1Battelle, Columbus, OH, 2Wright State University, Dayton, OH and 3USAMRICD, APG, MD.

#681 10:32 GENE EXPRESSION PROFILING OF PORCINE SKIN EXPOSED TO SULFUR MUSTARD. C. S. Phillips1, J. S. Graham1 and J. F. Dillman1. 1Cell and Molecular Biology, USAMRICD, Aberdeen Proving Ground, MD and 2Medical Toxicology Branch, USAMRICD, Aberdeen Proving Ground, MD.

Abstract #


#683 11:17 DIFFERENTIAL GENE EXPRESSION IN SULFUR MUSTARD TREATED MURINE SKIN AFTER TREATMENT WITH MMP-2/9 INHIBITOR I. Y. Chang1, R. P. Casillas2, C. C. Sabourin1, J. D. Laskin1 and D. R. Gerecke1. 1Pharmacology & Toxicology, Rutgers University, Piscataway, NJ, 2Battelle Biomedical Research Center, Columbus, OH and 3Environmental & Occupational Medicine, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ.

#684 11:39 BIODEGRADABLE MICROSPHERE DELIVERY SYSTEM FOR BUTYRYLCOLINESTERASE TO PROTECT AGAINST ORGANOPHOSPHATE TOXICITY. B. R. Coleman, W. Bahar, J. Yeager, R. K. Gordon and M. Nambiar. Walter Reed Army Institute of Research, Silver Spring, MD.

Tuesday Morning, March 18
9:00 AM to 11:45 AM
Room 6E

DEVELOPMENTAL BASIS OF DISEASE

PLATFORM SESSION: DEVELOPMENTAL BASIS OF DISEASE

Chairperson(s): Mary Walker, University of New Mexico, Albuquerque, NM and David Threadgill, University of North Carolina Chapel Hill, Chapel Hill, NC.

#685 9:00 MODULATION OF OSTEOBLAST DIFFERENTIATION BY A MECHANISM INVOLVING THE ARYL HYDROCARBON RECEPTOR. E. P. Ryan1, J. D. Holt2, T. Sheu2, T. A. Gasiewicz2 and J. Puzas2. 1Environmental Medicine, University of Rochester, Rochester, NY and 2Orthopedics and Center for Musculoskeletal Research, University of Rochester, Rochester, NY.

#686 9:21 NEW INSIGHTS INTO HOW SUSTAINED AHR ACTIVATION DURING DEVELOPMENT CAUSES LONG-LASTING ALTERATIONS IN IMMUNE FUNCTION. A. J. Moore1, J. Hogaboam2 and B. Lawrence1. 1Environmental Medicine, University of Rochester, Rochester, NY and 2Pharmaceutical Sciences, Washington State University, Pullman, WA.

#687 9:42 IN UTERO AND LACTATIONAL TCDD EXPOSURE ALTERS LIPID METABOLISM IN MALE C57BL/6 MOUSE OFFSPRING FED A HIGH-FAT DIET. E. Sugai, W. Yoshoka and C. Tohyama. Division of Environmental Health Sciences, CDBIM, The University of Tokyo Graduate School of Medicine, Tokyo, Japan.
Program Description (Continued)

Abstract #

#688 10:03 OBESITY AND PERINATAL TCDD EXPOSURE INCREASES MAMMARY TUMORS IN FVB MICE, M. La Merrill1,2,3, L.S. Birnbaum1, R. D. Cardiff2 and D. W. Threadgill1,2,3, 1Curriculum in Toxicology, UNC-CH, Chapel Hill, NC, 2Department of Genetics, UNC-CH, Chapel Hill, NC, 3Center for Environmental and Health Susceptibility, UNC-CH, Chapel Hill, NC, 4NHEERL, U.S. EPA, RTP, NC and 5Center for Comparative Medicine, Department of Pathology and Laboratory Medicine, UCD, Davis, CA.

#689 10:24 DEVELOPMENTAL EXPOSURE OF THE MOUSE TO 2, 3, 7, 8-TCDD (TCDD) INCREASES THE SUSCEPTIBILITY TO HYPERTENSION AND CARDIAC HYPERTROPHY IN ADULTHOOD. M. K. Walker, A. C. Aragon and M. Goens, Pharmacy, University of New Mexico, Albuquerque, NM.

#690 10:45 IDENTIFICATION OF GENES DEVELOPMENTALLY REPROGRAMMED IN THE UTERUS BY NEONATAL EXPOSURE TO XENOESTROGENS. K. L. Greathouse1, J. D. Cook1, K. Lin1, B. J. Davis1, T. Berry1, T. Bredefeld1 and C. L. Walker1, 1Carcinogenesis, UT MD Anderson Cancer Center, Smithville, TX, 2Millennium Pharmaceuticals, Cambridge, MA and 3Dana-Farber Cancer Institute, Boston, MA.

#691 11:06 DISPARITIES IN LEARNING, MEMORY AND BEHAVIOR AS A RESULT OF ENVIRONMENTAL CONTAMINANT EXPOSURE DURING GESTATION. D. B. Hood1, M. M. McCullister1, S. Liu1, M. Maguire1, F. F. Ebner2, P. Levitt4 and M. Ashcroft1, 1Center for Molecular and Behavioral Neuroscience, mehray medical college, Nashville, TN, 2Center for Cognitive and Integrative Neuroscience, Vanderbilt University, Nashville, TN, 3Center in Molecular Toxicology, Vanderbilt University, Nashville, TN and 4Center for Research in Child and Human Development, Vanderbilt University, Nashville, TN.

#692 11:26 FETAL EXPOSURE TO CIGARETTE SMOKE ALTERS OFFSPRING RESPIRATORY FUNCTION: A MOUSE MODEL. J. Grabowski, C. Hoffman, E. Brush, S. P. Doherty and J. T. Zelikoff, Environmental Medicine, New York University School of Medicine, Tuxedo, NY.

Tuesday, March 18
9:00 AM to 11:45 AM
Room 615

PLATFORM SESSION: HEALTH RISKS AND FOOD SAFETY

Chairperson(s): John Garst, Consultant, Alamogordo, NM and Ronald Riley, U.S. Department of Agriculture, Athens, GA.

#693 9:00 FISH INTAKE GUIDELINES: N-3 FATTY ACID INTAKE AND CONTAMINANT EXPOSURE IN THE KOREAN AND JAPANESE COMMUNITIES. A. Tsuchiya1,2, J. Hardy1, T. M. Barbacher4, F. M. Elaine4,5 and K. Marién1, 1Department of Environmental and Occupational Health Medicine Sciences, University of Washington, Seattle, WA, 2Institute for Risk Analysis and Risk Communication, University of Washington, Seattle, WA and 3Washington State Department of Health, Olympia, WA.

#694 9:19 SAMPLE SELECTION PROCESS FOR USDA/FSIS NATIONAL RESIDUE PROGRAM. J. Vedela1, H. L. Walker1 and K. Dearfield2, 1Residue Branch, USDA/FSIS, Washington DC, DC and 2USDA/FSIS, Residue branch, Washington DC, DC.

#695 9:38 CRITICAL FOLATE PROBLEM WITH “LIFETIME” ASPARTAME AND RELATED STUDIES. J. E. Garst, consultant, Alamogordo, NM.

#696 9:57 DETERMINATION OF MULTI-CLASS, MULTI-RESIDUE SULFUR-CONTAINING ANTIBIOTICS IN ANIMAL TISSUES USING INTEGRATED PULSED AMPEROMETRIC DETECTION FOLLOWING HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY. S. R. Vavilala and W. R. Lacourse, Department of Chemistry, UMBC, Baltimore, MD.

#697 10:15 ASSESSMENT OF THE HEALTH RISKS POSED BY BENZENE IN CERTAIN SOFT DRINKS. M. Harris1, J. A. Tachovsky2, E. S. Williams3, D. J. Paustenbach3 and L. C. Haws3, 1ChemRisk, Houston, TX, 2ChemRisk, Austin, TX and 3ChemRisk, SanFrancisco, CA.

#698 10:33 THE IMPORTANCE OF ENDOTOXIN CONTAMINATION OF COMMERCIAL PROTEIN PREPARATIONS IN THE CELLULAR EFFECTS OF ADVANCED GLYcation ENdPRODUCTS. T. M. Bueeler, H. Latado, A. Baumann, T. Delatorre and B. Schilter, QS, Nestlé Research Center, Lausanne, Switzerland.

#699 10:51 MODE OF EXPOSURE FOR PHOTOTOXIC COMPOUNDS DERIVED FROM FOOD AND DRUG EXTRACTS. J. B. Schulte, Office of the Dean, Johann Wolfgang Goethe-University, Frankfurt/Main, Germany.

#700 11:09 INDIVIDUAL AND COMBINED EFFECTS OF OCHRATOXIN A AND FUMONISIN B1. E. E. Creppy1,2, J. F. Page1, A. Tsuchiya1,2, F. F. Ebner2, P. Levitt4 and M. Ashcroft1, 1Carcinogenesis, UT MD Anderson Cancer Center, Smithville, TX, 2Southeast University, Nanjing, China, 3NIAID, National Institutes of Health, Bethesda, MD, 4Center in Molecular Toxicology, Vanderbilt University, Nashville, TN, 5Washington State Department of Health, Olympia, WA.

#701 11:27 VALIDATION OF URINARY FREE FUMONISIN B1 AS A BIOMARKER OF EXPOSURE. J. S. Wang1, L. Xu1, Q. Cai1, L. Tang1, G. Sun1, X. Hu1 and J. Su1, 1Texas Tech University, Lubbock, TX, 2Southeast University, Nanjing, China, 3Zhuzhou CDC, Huzain, China and 4Guangxi Cancer Inst., Nanning, China.
Program Description (Continued)

Abstract #

Tuesday Morning, March 18
9:00 AM to 11:45 AM
Room 2A

PLATFORM SESSION: MANGANESE NEUROTOXICITY: FROM WORMS TO PRIMATES

Chairperson(s): Tomas Guilarte, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD and Dejan Milatovic, Vanderbilt University, Nashville, TN.


#703 9:24 POTENTIATION OF PROINFLAMMATORY CYTOKINES BY MANGANESE IN LPS-ACTIVATED MICROGLIA IS ASSOCIATED WITH DECREASED EXPRESSION AND ACTIVITY OF MITOGEN ASSOCIATED PROTEIN KINASE PHOSPHATASE-1. P. L. Crittenden, S. Lee and N. M. Filipov. CEHS, Basic Sciences, Mississippi State University, Mississippi State, MS, 1Environmental Radiological and Health Sciences, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD and 2Pathology, Anatomy, Colorado State University, Fort Collins, CO, 2Program in Molecular, Cellular, and Integrative Neuroscience, Colorado State University, Fort Collins, CO, 2School of Health Sciences, Purdue University, West Lafayette, IN.

#704 9:48 NF-κB-DEPENDENT EXPRESSION OF NITRIC OXIDE SYNTHASE 2 IN ASTROCYTES IS POTENTIATED BY MANGANESE VIA ACTIVATION OF SOLUBLE GUANYLYL CYCLASE AND EXTRACELLULAR REGULATED KINASE SIGNALING PATHWAYS. J. Moreno1,2, K. A. Sullivan1, D. Carbone1 and R. B. Tjalkens1,2,3, 1Environmental Radiological and Health Sciences, Colorado State University, Fort Collins, CO, 2Program in Cell and Molecular Biology, Colorado State University, Fort Collins, CO and 3Program in Molecular, Cellular, and Integrative Neuroscience, Colorado State University, Fort Collins, CO.

#705 10:12 MANGANESE PRIMARILY ACCUMULATES IN NUCLEUS OF CULTURED BRAIN CELLS. K. Kalia1, W. Jiang2 and W. Zheng2, 1Biosciences, Sardar Patel University, Anand, Gujarat, India and 2School of Health Sciences, Purdue University, West Lafayette, IN.

#706 10:36 DEVELOPMENTAL VULNERABILITY TO MANGANESE-INDUCED BEHAVIORAL DYSFUNCTION. C. Yeomans1, J. A. Moreno1,2, K. A. Sullivan1 and R. B. Tjalkens1,2,3. 1ERHS, Colorado State University, Fort Collins, CO, 2Program in Cellular and Molecular Biology, Colorado State University, Fort Collins, CO and 3Program in Molecular, Cellular, and Integrative Neuroscience, Colorado State University, Fort Collins, CO.

#707 11:00 EFFECTS OF CHRONIC MANGANESE EXPOSURE ON GLUTAMATERIC MARKERS IN THE NON-HUMAN PRIMATE BRAIN. N. C. Burton1, J. S. Schneider1 and T. R. Guilarte1. 1Environmental Health Sciences, Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD and 2Pathology, Anatomy, & Cell Biology, Thomas Jefferson University, Philadelphia, PA.

Abstract #

Tuesday Morning, March 18
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: ADVERSE EFFECTS OF NATURAL PRODUCTS

Chairperson(s): David McCormick, IIT Research Institute, Chicago, IL and Ira Richards, Consultant, Lutz, FL.

Displayed: 9:00 AM–12:30 PM

#709 11:23 MANGANESE EXPOSURE IN 328 SMELTING WORKERS: RELATIONSHIP AMONG EXTERNAL/INTERNAL MARKERS AND NEUROLOGICAL/PSYCHOMOTOR EXAMINATIONS. D. M. Cowan1, Q. Fan1, Y. Zou2, X. Shi3, F. S. Rosenthal4, M. Aschner5 and W. Zheng3. 1Health Sciences, Purdue University, West Lafayette, IN, 2Preventive Medicine, Zunyi Medical College, Zunyi City, Guizhou, China, 3Guizhou Institute of Occupational Safety and Health, Zunyi City, Guizhou, China and 4Pediatrics, Vanderbilt University Medical Center, Nashville, TN.

#710 10:36 SYNTHESIS AND SCANNING ELECTRON MICROSCOPY OF SOME ACID-INDUCED CHANGES IN THE TRANSCRIPTIONAL PROFILE OF MITOCHONDRIAL GENES IN MOUSE LIVER. V. G. Desai1, A. Joseph1, T. Lee1, C. L. Molandi1, W. S. Brannah1, J. C. Fusco2, S. M. Lewis1 and J. E. Leakey3, 1Center for Functional Genomics, Division of Systems Toxicology, NCTR, Jefferson, AR, 1Marketed Health Products Directorate, Health Canada, Ottawa, ON, Canada and 3Health Products and Food Branch Inspectorate, Health Canada, Ottawa, ON, Canada. Sponsor: G. Bondy.

#711 10:56 HEPTATOXIC REACTION ASSOCIATED WITH A PRODUCT CONTAINING “BLACK COHOSH”: ONE CASE OF MISTAKEN IDENTITY. S. Jordan1, M. Murty1, S. Perwaiz1, R. Bertrand2 and J. Griffiths1. 1Marketed Health Products Directorate, Health Canada, Ottawa, ON, Canada and 2Health Products and Food Branch Inspectorate, Health Canada, Ottawa, ON, Canada. Sponsor: G. Bondy.

#712 11:00 CYTOTOXICITY SCREENING OF AYURVEDIC HERBAL EXTRACTS USING IN VITRO TECHNIQUES AND SCANNING ELECTRON MICROSCOPY. J. R. Placido and S. Zito. Pharmaceutical Sciences, St. John’s University, Jamaica, NY.
Abstract #

#713  
**Poster Board Number** ........................... 105
**CYTOTOXICITY OF STILBENE COMPOUNDS IN TRANSFORMED CELLS, D. Hardej, V. Radkar, C. Lai-Cam and B. Biluk. Pharmaceutical Sciences, St. John’s University, Jamaica, NY.**

#714  
**Poster Board Number** ........................... 106
**OXYMATRINE REDUCES DMSO-INDUCED TOXICITY IN HEI HE CELLS, P. Lee, W. Chim and J. Ho. Biochemistry, CUHK, Shatin, China.**

#715  
**Poster Board Number** ........................... 107
**SUBCHRONIC SAFETY EVALUATION OF A UNIQUE COMPOSITION OF DEFIND EXTRACTS OF SCUTELLARIA BAICALENSIS AND ACACIA CATECHU, M. A. Yimam, Y. Zhao, W. Ma and Q. Jia. Unigen Pharmaceuticals Inc., Lacey, WA. Sponsor: P. Marone.**

#716  
**Poster Board Number** ........................... 108
**TOXICITY EVALUATION OF PHYLLANTHUS AMARUS SCHUM &THONN EXTRACTS, E. E. Creppy, P. S. Lawson-Evi, K. C. Eklu-Gadegebekri, A. Agbonou, K. Alikokou, S. Moukha and M. F. Gbeassor. Toxicology, University Bordeaux 2, Bordeaux, France and 1Laboratory of Physiology, University of Lome, Lome, Togo.**

#717  
**Poster Board Number** ........................... 109
**THE EFFECTS OF CHRONIC ALOE VERA ADMINISTRATION ON COLONIC PROTEIN EXPRESSION AND GLOBAL DNA METHYLATION IN THE FISHER-344 RAT, M. Pogribna, F. A. Beland, V. Tryndyak and M. D. Boudreau. Division of Biochemical Toxicology, National Center for Toxicological Research, Jefferson, AR. Sponsor: W. Tolleson.**

#718  
**Poster Board Number** ........................... 110
**PURIFICATION AND TOXICITY CHARACTERIZATION OF SATRATOXIN G AND RORIDIN I2 FROM THE BLACK MOLD STACHYBOTrys CHARTARUM, Z. Islam, J. R. Harkema and J. J. Pestka. 1Center for Negligent Toxicology, Michigan State University, East Lansing, MI; 2Department of Microbiology and Molecular Genetics, Michigan State University, East Lansing, MI and 3Food Science and Human Nutrition, Michigan State University, East Lansing, MI.**

#719  
**Poster Board Number** ........................... 111

#720  
**Poster Board Number** ........................... 112
**SUBCHRONIC TOXICITY OF PULEGONE ADMINISTERED BY GAVAGE TO FISCHER344 RATS, D. K. Gerken, M. J. Ryan, A. J. Skowroniec, S. W. Graves, J. M. Durnford, M. R. Hejtmancik and P. Chau. TOXIC, Battelle Memorial Institute, Columbus, OH and 1NIEHS, Research Triangle Park, NC.**

**Abstract #**

#721  
**Poster Board Number** ........................... 113
**THE ESSENTIAL OIL OF LIPPIA ALBA PROTECTS AGAINST THE CYTOTOXIC AND GENOTOXIC EFFECTS OF CADMIUM, R. Baldiris, J. Guette, E. Stashenko, B. Jaramillo, M. Quintero, M. Florian, G. Caballero, A. Patiño, L. Molina and J. Olivero. 1Environmental and Computational Chemistry Group, Universidad de Cartagena, Cartagena, Colombia; 2CENIVAM, Bucaramanga, Colombia and 3University of the Atlanntico, Barranquilla, Colombia.**

#722  
**Poster Board Number** ........................... 114
**TOXICITY OF THE LICHEN XANTHOPARMELIA CHLOROCHROA, M. Raisbeck, R. N. Dailey, D. Montgomery, J. T. Ingram, R. S. Siemion and M. Vasquez. 1University of Wyoming, Laramie, WY and 2Clinical Sciences, Colorado State University, Fort Collins, CO.**

#723  
**Poster Board Number** ........................... 115
**SAFETY ASSESSMENT OF MALE ENHANCEMENT DIETARY SUPPLEMENTS, A. Schaus, I. Financsek, Y. Smitsaris, C. Chen, W. Lin and J. Kababick. 1ABMIR Life Sciences, Puyallup, WA; 2PCDL, Budapest, Hungary, 3Mae Fah Luang University, Muang Chiangrai, Thailand, 4CTPS, Xizhi City, Taiwan, 5MPITDC, Taipei Hsien, Taiwan and 6Flora Res., Grants Pass, OR.**

#724  
**Poster Board Number** ........................... 116
**THE EFFECT OF HIGH DELTAELINE CONCENTRATION ON THE TOXICITY OF METHYLLYCACONTINE IN MICE, K. Welch, K. Panter, D. Gardner, B. Green, J. Pfister and D. Cook. Poisonous Plant Research Laboratory, USDA-ARS, Logan, UT.**

#725  
**Poster Board Number** ........................... 117
**PUERARIN STIMULATES HEME OXYGENASE-1 EXPRESSION THROUGH PI3K AND Nrf-2 PATHWAY, H. Jeong and Y. Hwang. 1Pharmacy, Chosun University, Kwangju, South Korea and 2Research Center for Proteinaceous Materials, Chosun University, Gwangju, South Korea.**

**Tuesday Morning, March 18**

9:00 AM to 12:30 PM

**Exhibit Hall**

**POSTER SESSION: PARTICULATE MATTER AND THE CARDIOVASCULAR SYSTEM**

**Chairperson(s):** Michael Kleiman, University of California Irvine, Irvine, CA and Ursima Kodavanti, U.S. EPA, Research Triangle Park, NC.

**Displayed:** 9:00 AM–12:30 PM

**Attended:** 11:00 AM–12:30 PM

#726  
**Poster Board Number** ........................... 122
**ATHEROGENIC AND PULMONARY RESPONSE OF APOE- AND LDL RECEPTOR-DEFICIENT MICE TO CIGARETTE SMOKE, S. Han, D. Howatt, A. Daughtery and C. Gairola. 1Graduate Center for Toxicology, University of Kentucky, Lexington, KY and 2Cardiovascular Research Center, Gill Heart Institute, University of Kentucky, Lexington, KY.**
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<tr>
<th>Abstract #</th>
<th>Poster Board Number</th>
<th>Program Description (Continued)</th>
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<tr>
<td>#727</td>
<td>#775</td>
<td><strong>EXACERBATION OF ATHEROSCLEROSIS FOLLOWING EXPOSURE TO VARIOUS COMBUSTION SOURCE PARTICLES.</strong> H. S. Floyd, N. Haykal-Coates and K. L. Dreher, NHEERL, U.S. EPA, Research Triangle Park, NC.</td>
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<tr>
<td>#729</td>
<td>#777</td>
<td><strong>HEALTH EFFECTS OF TRAFFIC RELATED PARTICULATE MATTER.</strong> M. Gerlofs-Nijland1, A. Campbell2, M. Miller3, K. Donaldson3 and F. Cassee4, 1National Institute for Public Health and the Environment, Bilthoven, Netherlands, 2Western University of Health Sciences, Pomona, CA and 3University of Sydney, Sydney, Australia.</td>
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<tr>
<td>#730</td>
<td>#778</td>
<td><strong>WILL THE GASEOUS DIESEL EXHAUST SYNERGISTICALLY EXACERBATE CONCENTRATED AMBIENT PARTICLES INDUCED PROGRESSION OF ATHEROSCLEROSIS PLAQUE IN APOE-/- MICE?</strong> C. Quan, X. Jin, M. Zhong, M. Lippmann and L. Chen, Environmental Medicine, New York University, Tuxedo, NY.</td>
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<td>#731</td>
<td>#779</td>
<td><strong>ALTERATION OF CARDIAC FUNCTION BY URBAN AND RURAL CONCENTRATED AMBIENT PM.</strong> Q. Li, X. Jin, M. Zhong, M. Lippmann and L. Chen, Environmental Medicine, New York University, Tuxedo, NY.</td>
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<td>#732</td>
<td>#780</td>
<td><strong>FINE PARTICULATE MATTER EXPOSURE EXACERBATES ATHEROSCLEROSIS IN GENETICALLY SUSCEPTIBLE (APOE KNOCKOUT) MICE.</strong> M. T. Kleinman1, D. Meacher1, G. Gookin1, K. Salazar1, P. Willett1, X. Jin2, Q. Li2 and L. Chen2, 1Community and Env. Med., University California, Irvine, Irvine, CA and 2Environmental Med., New York University School of Med., Tuxedo, NY.</td>
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<td>#733</td>
<td>#781</td>
<td><strong>ULTRAFINE PM AFFECTS CNS INFLAMMATORY PROCESSES AND MAY ACT VIA MAP KINASE SIGNALING PATHWAYS.</strong> M. T. Kleinman1, J. Araujo1, A. Nel2, C. Sioutas3, R. Cong3 and S. C. Bondy4, 1Community and Env. Med., University California, Irvine, Irvine, CA, 2NanoMedicine, University California, Los Angeles, Los Angeles, CA, 3Medicine, Cardiology Division University California, Los Angeles, Los Angeles, CA and 4Civil/Environmental Engineering, University Southern California, Los Angeles, CA.</td>
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<td>#734</td>
<td>#782</td>
<td><strong>CHRONIC EXPOSURE OF APOLIPROTEIN E KNOCKOUT MICE TO FINE PARTICLES INDUCED HEART RATE CHANGES BUT NOT CHANGES IN TIME DOMAIN MEASUREMENTS OF HEART RATE VARIABILITY.</strong> K. Salazar, D. Meacher, G. Gookin, P. Willett and M. Kleinman, Community and Env. Med., University California, Irvine, Irvine, CA.</td>
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<td>#735</td>
<td>#783</td>
<td><strong>EXPOSURE TO PARTICULATE MATTER POTENTIATES INSULIN RESISTANCE ASSOCIATED WITH MACROPHAGE ACCUMULATION IN ADIPOSE TISSUE.</strong> Q. Sun1, C. N. Lumeng2, A. Wang3, X. Jin2, Y. Cai4, M. Zhong1, M. Lippmann1, A. R. Saltiel5, L. Chen6 and S. Rajagopalan7, 1The Ohio State University, Columbus, OH, 2University of Michigan, Ann Arbor, MI and 3New York University, Tuxedo, NY.</td>
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<td>#736</td>
<td>#784</td>
<td><strong>ADVERSE CARDIOVASCULAR EFFECTS WITH ACUTE PARTICULATE MATTER AND OZONE EXPOSURES: THE ROLE OF TOLL-LIKE RECEPTOR 4.</strong> A. Hamadeh, R. Rabold and C. G. Tankersley, Environmental Health Sciences, Johns Hopkins University, Baltimore, MD.</td>
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<td>#737</td>
<td>#785</td>
<td><strong>CHRONIC EXHAUST EXPOSURE AUGMENTS ENDOTHELIN CONSTRUCTOR SENSITIVITY AND DIMINISHES ACETYLCHOLINE MEDIATED DILATION IN RAT CORONARY ARTERIES.</strong> T. Cheng1, N. Kanay1, M. Campen1 and B. Walker1, 1University of New Mexico, Albuquerque, NM and 2Lovelace Respiratory Research Institute, Albuquerque, NM.</td>
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<td>#738</td>
<td>#786</td>
<td><strong>INHALED COMPLEX COMBUSTION EMISSIONS UPREGULATE TRANSCRIPTION AND ACTIVITY OF SYSTEMIC MATRIX METALLOPROTEINASE-9 (MMP9): EVIDENCE IN MURINE AND HUMAN MODELS.</strong> M. J. Campen1, A. K. Lund1, M. C. Malder1, J. Lucero1, S. Lucus1, T. L. Knuckles1, M. Doyle-Eisele1, S. Allen2, J. D. McDonald1, M. D. Reed3, J. Seagrave3 and J. L. Mauderly1, 1Toxicology, Lovelace Respiratory Research Institute, Albuquerque, NM and 2NHEERL, HSD, U.S. EPA, Chapel Hill, NC.</td>
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<td>#739</td>
<td>#787</td>
<td><strong>GASOLINE ENGINE EMISSIONS EXPOSURE RESULTS IN UPREGULATION OF ENDOTHELIN-1 – MEDIATED VASCULAR MATRIX METALLOPROTEINASE ACTIVITY.</strong> A. K. Lund, J. Lucero, S. Lucus, T. L. Knuckles and M. J. Campen. Lovelace Respiratory Research Institute, Albuquerque, NM.</td>
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<td>#740</td>
<td>#788</td>
<td><strong>CARBON NANOTUBE ACUTE LUNG EXPOSURE INDUCES PLASMINOGEN ACTIVATOR INHIBITOR 1.</strong> A. Erdely, T. Hudlerman, R. Salmen, A. Liston, P. C. Zeidler, Erdely and P. Simeonova. NIOSH, Morgantown, WV.</td>
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Abstract #

Poster Board Number .................................... #741
THE AORTA, BUT NOT LUNG OR HEART, IS THE TARGET OF CHRONIC DIESEL-INDUCED INJURY AND INFLAMMATION.
R. Thomas1, M. C. Schladweiler2, A. D. Ledbetter1, J. Shannahah1, J. Wallenborn3, A. Nyska1, D. Malarkey3, J. H. Richards1, R. Jaskot1 and U. P. Kodavanti1. 1ETD/NHEERL, U.S. EPA, RTP, NC, 2Curriculum in Toxicology, UNC, Chapel Hill, NC, 3SPH, UNC, Chapel Hill, NC, 4Toxicologic Pathology, Timrat, Israel and 5NTP, NIEHS, RTP, NC.

Poster Board Number .................................... #742
CHANGES IN ENDOTHELIAL TUBE CELL-CELL BORDERS IN RESPONSE TO DIESEL EXHAUST PARTICLES. M. Chau1, P. Po1, J. Koslosky2, D. R. Gerecke2, R. Laumbach1 and M. K. Gordon1. 1Pharmacology and Toxicology, Rutgers University, Piscataway, NJ, 2Molecular and Cell Biology, Bristol-Myers-Squibb, New Brunswick, NJ and 3Environmental and Occupational Medicine, UMDNJ, Robert Wood Johnson Medical School, Piscataway, NJ.

Poster Board Number .................................... 139
EXACERBATION OF Atherosclerosis by Urban and Rural Concentrated Ambient PM. L. Chen1, Q. Liu1, C. Prophete1, X. Jin1, M. Zhong1, Q. Sun2, S. Rajagopalan1 and M. Lippmann1. 1Environmental Medicine, New York University School of Medicine, Tuxedo, NY, 2Environ Health Sci, OSU, Columbus, OH and 3Davis Heart and Lung Institute, Ohio State University, Columbus, OH.

Poster Board Number .................................... 140
LIPOIC ACID PREVENTS VASCULAR DYSFUNCTION AND INFLAMMATION IN PARTICULATE AIR POLLUTION EXPOSED OBESERATS. A. Elder1, N. Corson1, R. Gelein1, P. Mercer1, A. Rinderknecht1, W. Watts2, D. Kettelsen2, R. Phipps2, M. Frampton2, M. Uet1, J. Finkelman2 and G. Oberdöster1. 1Environmental Medicine, University of Rochester, Rochester, NY, 2Mechanical Engineering, University of Minnesota, Minneapolis, MN, 3Adult Critical Care Medicine, University of Rochester, Rochester, NY and 4Pediatrics, University of Rochester, Rochester, NY.

Poster Board Number .................................... 201
EFFECTS OF FRESHLY-GENERATED LOW-AND ULTRALOW-SULFUR FUEL EMISSION AEROSOLS IN INSULIN-RESISTANT, OBESERATS. A. Elder1, N. Corson1, R. Gelein1, P. Mercer1, A. Rinderknecht1, W. Watts2, D. Kettelsen2, R. Phipps2, M. Frampton2, M. Uet1, J. Finkelman2 and G. Oberdöster1. 1Environmental Medicine, University of Rochester, Rochester, NY, 2Mechanical Engineering, University of Minnesota, Minneapolis, MN, 3Adult Critical Care Medicine, University of Rochester, Rochester, NY and 4Pediatrics, University of Rochester, Rochester, NY.

Poster Board Number .................................... 202
REPEATED EXPOSURE EFFECT OF TRAFFIC RELATED AIR POLLUTANTS ON THROMBOGENICITY. E. Kline1, H. Spronk1, H. ten Cate2, R. van Oerle3, F. Cassee1 and M. Gerlofs-Nijland1. 1Laboratory for Clinical Thrombosis and Haemostasis, Maastricht University, Maastricht, Netherlands and 2National Institute for Public Health and the Environment, Bilthoven, Netherlands.

Abstract #

Poster Board Number .................................... #747
PARTICLE-INDUCED RELEASE OF CYTOKINES IN MONO- AND CO-CULTURES OF PRIMARY LUNG AND HEART CELLS. A. I. Totlandsdal1, M. Refsnæs1, T. Skomedal2, J. Osnes2, P. E. Schwarze1 and M. Låg3. 1Division of Environmental Medicine, Norwegian Institute of Public Health, Oslo, Norway and 2Department of Pharmacology, University of Oslo, Oslo, Norway. Sponsor: E. Dybing.

Poster Board Number .................................... #748
ACUTE EXPOSURE TO PARTICULATE MATTER (PM) IN A RAT MODEL OF HEART FAILURE. A. P. Carl1, N. Haykal-Coates2, D. W. Winsett1, W. H. Rowan2, A. D. Ledbetter1, J. H. Richards4, A. K. Farraj1, D. L. Costa1 and W. P. Watkinson2. 1Environmental Sciences & Engineerning, University of North Carolina School of Public Health, Chapel Hill, NC, 2Experimental Toxicology Division, U.S. EPA, RTP, NC and 3ORD, U.S. EPA, RTP, NC.

Poster Board Number .................................... #749
DIFFERENTIAL CARDIAC ARRHYTHMIA PROFILES IN HYPERTENSIVE AND NORMAL RATS AFTER EMISSION SOURCE PARTICULATE EXPOSURE. A. K. Farraj1, D. W. Winsett1, N. Haykal-Coates2, M. S. Hazari2, A. P. Carl2, A. D. Ledbetter1 and D. L. Costa1. 1Experimental Toxicology Division, U.S. EPA, Durham, NC, 2Curticulum in Toxicology, University of North Carolina, Chapel Hill, NC, 3Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, NC and 4Office of Research and Development, U.S. EPA, Durham, NC.

Poster Board Number .................................... #750
DOSE INDEPENDENT CHANGES IN HEART RATE AND HEART RATE VARIABILITY FOLLOWING INHALATIONAL EXPOSURE TO DIESEL EXHAUST. L. M. Corey1, C. Baker2, J. Stewart, D. L. Luchtel, J. D. Kaufman, T. J. Kavanaugh2 and M. E. Rosenfeld. Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.

Poster Board Number .................................... #751
ALTERATIONS OF HEART RATE VARIABILITY AND CARDIOVASCULAR RISK FACTORS IN RATS EXPOSED TO COARSE AND FINE PARTICULATE BLOOD GASES AND CARDIOVASCULAR FUNCTION. A. Al-Dissi1, J. Marii2, T. German2 and L. P. Weber2. 1Toxicology, University of Saskatchewan, Saskatoon, SK, Canada and 2Veterinary Biomedical Sciences, University of Saskatchewan, Saskatoon, SK, Canada.

Poster Board Number .................................... #752
Program Description (Continued)

Abstract #  
Tuesday Morning, March 18  
9:00 AM to 12:30 PM  
Exhibit Hall

POSTER SESSION: XENOBIOTIC BIOTRANSFORMATION 1

Chairperson(s): Aaron Rowland, University of Utah, Salt Lake City, UT and Nathan Cherrington, University of Arizona, Tucson, AZ.

Displayed: 9:00 AM–12:30 PM

Attended: 9:00 AM–11:00 AM

#754 Poster Board Number ..............................210 PATHWAY AND SPECIES DIFFERENCE IN THE BIOACTIVATION OF TRICYCLIC ANILINES CATALYZED BY P450 ENZYMES. Y. Hu, S. Yang, B. Shilliday, D. Thompson, P. Chiang, B. Heyde, J. Gard, S. Selness and A. Thurston. PGID, Pfizer, Inc., St. Louis, MO.

#755 Poster Board Number ..............................211 CYTOCHROME P450 2E1 PHENOTYPING IN HUMANS: DOSE-DEPENDENT METABOLISM OF CHLOROAZONE MAY CAUSE UNRELIABLE RESULTS. L. Ernstgård, G. Johanson and M. Warholm. Work Environment Toxicology, Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden.

#756 Poster Board Number ..............................212 EFFECT OF TROGLITAZONE ON INDUCTION OF CYTOCHROME P450 1A1 AND BENZO[A]PYRENE-DNA ADDUCT FORMATION IN HEPA-1C1C7 CELLS. H. Kim1,2 and H. Jeong1,2. 1Pharmacy, Chosun University, Kwangju, South Korea and 2Research Center for Proteineous Materials, Chosun University, Gwangju, South Korea.


#758 Poster Board Number ..............................214 PARTICIPATION OF MICRORNA IN THE REGULATION OF HUMAN CYP3A4 EXPRESSION. A. Miyajima-Tabata1, S. Ishida1, S. Ozawa2 and K. Nakazawa1. Division of Pharmacology, National Institute of Health Sciences, Setagaya, Tokyo, Japan and 2Department of Pharmacodynamics and Molecular Genetics, Iwate Medical University, Yahaba, Iwate, Japan. Sponsor: M. Ema.

#759 Poster Board Number ..............................215 INDUCTION OF P450s4A1 ACTIVITY AND PEROXISOMAL PROLIFERATION BY LAMBDA-CYHALOTHIRIN. M. R. Martinez-Larratiga, V. Castellano, M. A. Martinez, M. Martinez, M. J. Diaz, V. Caballero and A. Arancon. Department of Toxicology and Pharmacology, Faculty of Veterinary Medicine, Universidad Complutense, Madrid, Spain.
Program Description (Continued)

Abstract #

#768 Poster Board Number ...............................224

MUTATIONS IN THE PXR GENE AFFECT BASAL EXPRESSION AND INDUCIBILITY, BUT DO NOT PREVENT THE ABILITY OF SULFONPHANE TO INHIBIT LIGAND BINDING TO PXR. E. M. Poulton and D. L. Eaton. DEOH, University of Washington, Seattle, WA.

#769 Poster Board Number ...............................225

NONYLPHENOL ACTIVATES THE CONSTITUTIVE ANDROSTANE RECEPTOR AND CAUSES SEXUALLY DIMORPHIC CHANGES IN P450 EXPRESSION. J. P. Hernandez1, L. M. Mota1 and W. S. Baldwin2. 1Biological Sciences, The University of Texas at El Paso, El Paso, TX and 2Environmental Toxicology, Clemson University, Pendleton, SC.

#770 Poster Board Number ...............................226

TETRAMETHOXYSTILBENE (TMS), A POTENT CYTOCHROME P450 (CYP) 1A1/1B1 INHIBITOR, ENHANCED BENZO(A)PYRENE (BP)-DNA ADDUCT FORMATION IN MCF-7 CELLS. T. L. Einen, R. L. Division, Y. Chu and M. C. S. O. Muir. Carcinogen-DNA Interactions Section, Laboratory of Cancer Biology and Genetics, National Cancer Institute, NIH, Bethesda, MD.

#771 Poster Board Number ...............................227

METABOLISM OF INHALED GLUCOCORTICOIDS BY CYTOCHROME P450 3A ENZYMES. C. R. Orton and G. S. Yost. Pharmacology and Toxicology, University of Utah, Salt Lake City, UT.

#772 Poster Board Number ...............................228

MICE LACKING THE GENES FOR CYTOCHROME P450 (CYP)1A1 OR 1A2 DISPLAY INCREASED LEVELS OF LIPID PEROXIDATION PRODUCTS AND ENHANCED SUSCEPTIBILITY TO HYPEROXIC LUNG INJURY IN VIVO. B. Moorhut1, L. Wang1, X. Couteau1, F. M. Khan2 and W. Jiang1. 1Pediatrics, Baylor College of Medicine, Houston, TX and 2Pathology, UTMB, Galveston, TX.

#773 Poster Board Number ...............................229

CYTOCHROME P4501A1 AND ARSENIC IN BENZO(A)PYRENE-INDUCED CARCINOGENESIS. K. Burwinkel1, D. Thompson1 and G. Mayer2. 1Northern Kentucky University, Highland Heights, KY and 2University of Maine, Orono, ME.

#774 Poster Board Number ...............................230


#775 Poster Board Number ...............................231

FICZ, A SUGGESTED NATURAL AHR LIGAND AND A SUPER SUBSTRATE FOR HUMAN CYPI ENZYMES. E. Wincent1, A. Rannug1 and U. Rannug1. 'Genetics, Microbiology and Toxicology, Stockholm University, Stockholm, Sweden and 2Karolinska Institutet, Institute of Environmental Medicine, Stockholm, Sweden.

#776 Poster Board Number ...............................232


#777 Poster Board Number ...............................233


#778 Poster Board Number ...............................234

CHARACTERIZATION OF DRUG-METABOLIZING ENZYMES (DME) AND RECEPTORS IN THE HEPATOMA CELL LINES HEPG2 AND HAIE, AND PRIMARY RAT HEPATOCYTES. Y. Fery1, S. O. Mueller2 and D. Schenk1. 1food chemistry and toxicology, University of Kaiserslautern, Kaiserslautern, Germany and 2Institute of Toxicology, Merck KGaA, Darmstadt, Germany.

#779 Poster Board Number ...............................235

ARYL HYDROCARBON RECEPTOR (AHR)-DEPENDENT INDUCTION OF FLAVIN-CONTAINING MONOOXYGENASES. T. Celius1, S. Roblin1,2, P. A. Harper1,2, P. C. Boutros1, I. D. Moffat1, J. Matthews1, D. Wendelin1, R. Pohjanvirta1,2 and A. B. Okey1. 1Pharmacology, University of Toronto, Toronto, ON, Canada, 2The Hospital for Sick Children, Toronto, ON, Canada, 3Department of Food and Environmental Hygiene, University of Helsinki, Helsinki, Finland and 4Finnish Food Safety Authority EUVIRA, Kuopio Research Unit, Kuopio, Finland.

#780 Poster Board Number ...............................236

STRUCTURAL AND FUNCTIONAL ANALYSIS OF THE RAINBOW TROUT (ONCORHYNCHUS MYKISS) FMO GENE. R. Aparicio-Fabre and D. Schlenk. Environmental Sciences, University of California Riverside, Riverside, CA.

#781 Poster Board Number ...............................237

ANALYSIS OF A PUTATIVE FOX1 BINDING SITE IN THE DANIO RERIO CYPIA1 PROMOTER/ENHANCER REGION. G. ZeRuth and R. S. Pollenz. Cell Biology, Microbiology and Molecular Biology, University of South Florida, Tampa, FL.

#782 Poster Board Number ...............................238

CHARACTERIZATION OF TCDD-INDUCED HISTONE MODIFICATIONS TO STUDY THE DIFFERENTIAL REGULATION OF THE HUMAN CYPIA1 AND CYPIB1 GENES. S. R. Beedanagari, R. T. Taylor and O. Hankinson. Molecular Toxicology, UCLA, Los Angeles, CA.

#783 Poster Board Number ...............................239

SUSCEPTIBILITY DIFFERENCES OF THE KOREAN PEARS (PYRUS PYRIFORMIA VAR.) INDUCED ALCOHOL DETOXIFICATION IN ALDH2 KNOCKOUT MICE. M. Yang1, H. Lee2, T. Isser1 and T. Kawamoto.1. ‘Department of Toxicology, SooMyungWoo’s University College of Pharmacy, Seoul, South Korea and 2Department of Environmental Health, University of Occupational and Environmental Health, Kitakyushu, Japan.
Tuesday Morning, March 18
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: PERSISTENT ORGANIC POLLUTANTS
(POPS)
Chairperson(s): Anne Chappelle, Sanoco, Inc.; Marcus Hook, PA and Janis Hultta, U.S. Army, Corps of Engineers, Sacramento, CA.

Displayed: 9:00 AM–12:30 PM
Attended: 11:00 AM–12:30 PM

#785
Poster Board Number ...........................................301
CURRENT LEVELS OF POLYBROMINATED DIPHENYL ETHER (PBDE) FLAME RETARDANTS IN THE USA: HUMANS, FOOD, ENVIRONMENTAL SAMPLES AND DAILY INTAKE. A. J. Schecter, T. R. Harris, N. C. Shah and P. Paepke. 1Environmental and Occupational Health Sciences, U. Texas School of Public Health, Dallas Campus, Dallas, TX, 2B iostatistics, Univ of Texas School of Public Health, Dallas, TX and 3Eurofins-ERGO, Hamburg, Germany.

#786
Poster Board Number ...........................................302
OCTYLPHENOL AND NONYLPHENOL-INDUCED APOPTOSIS IN MOTOR NEURON IS RELATED TO FAS-FAS LIGAND PATHWAY. L. Kyungjin and H. Jeong. 1Pharmacy, Chosun University, Kwangju, South Korea and 2Research Center for Proteinous Materials, Chosun University, Gwangju, South Korea.

#787
Poster Board Number ...........................................303
TRIBUTYL Tin INDUCED APOPTOSIS IN RAT LEYDIG CELL LINE, R2C, THROUGH THE FAS/FAS L PATHWAY. K. Lee and H. Jeong. 1Pharmacy, Chosun University, Kwangju, South Korea and 2Research Center for Proteinous Materials, Chosun University, Gwangju, South Korea.

#788
Poster Board Number ...........................................304
O, P’-DDT INDUCE MAST CELL DEGRANULATION AND ENHANCE IGE-MEDIATED RELEASE OF ALLERGIC MEDIATORS. H. Eunhee and H. Jeong. 1Pharmacy, Chosun University, Kwangju, South Korea and 2Research Center for Proteinous Materials, Chosun University, Gwangju, South Korea.

#789
Poster Board Number ...........................................305
STRUCTURE-ACTIVITY RELATIONSHIPS FOR PEFLUOROCARBON-MEDIATED TRANSCRIPTIONAL RESPONSE IN RAT AND HUMAN HEPATOCYTES. J. A. Bjork, J. L. Butenhoff, S. Chang and K. B. Wallace. 1Biochemistry & Molecular Biology, University of Minnesota, Duluth, MN and 2Medical Department, 3M, St. Paul, MN.

#790
Poster Board Number ...........................................306
GLUTATHIONE LEVELS MODULATE THE NEUROTOXICITY OF POLYBROMINATED MIXTURE DE-71 IN MOUSE NEURONS. L. G. Costa, T. J. Kavanagh and G. Giordano. 1Environmental and Occupational Health Sciences, University of Washington, Seattle, WA and 2Human Anatomy, Pharmacology and Forensic Medicine, University of Parma Medical School, Parma, Italy.

#791
Poster Board Number ...........................................307
LUNG MORPHOLOGY AND RESPIRATORY MECHANICS ARE SIGNIFICANTLY ALTERED IN RATS GESTATIONALLY EXPOSED TO 2, 3, 7, 8-TETRACHLORODIBENZO-P-DIOXIN. K. M. Koehler, B. P. McGarrigle and J. R. Olson. Pharmacology & Toxicology, University at Buffalo, The State University of New York, Buffalo, NY.

#792
Poster Board Number ...........................................308
XENOBIOTIC GEOMETRY AND MEDIA PH DETERMINE CYTOTOXICITY THROUGH SOLUBILITY. G. Ludewig, J. Jacobus, B. J. Smith, A. Rahaman, L. W. Robertson and G. Ludewig. 1Occupational and Environmental Health, University of Iowa, Iowa City, IA, 2Interdisciplinary Graduate Program in Human Toxicology, University of Iowa, Iowa City, IA and 3Institute for Inorganic & Physical Chemistry, University of Bremen, Bremen, Germany.

#793
Poster Board Number ...........................................309
DISPARITY IN THE INDUCTION OF OXIDATIVE DNA DAMAGE AND REPAIR BY POLYCHLORINATED BIPHENYLS (PCBs) IN HUMAN MCF-7 AND MDA-MB-231 BREAST CANCER CELLS. P. Lin, C. Lin, C. Huang and M. Chuang. Department of Environmental Engineering, National Chung Hsing University, Taichung, Taiwan.

#794
Poster Board Number ...........................................310
ENHANCED POTENCY OF PBB METABOLITES 6-OH-BDE24 TO AFFECT CA2+ HOMEOSTASIS AND EXOCYTOSIS IN PC12 CELLS. M. M. Dingesmann, A. de Groot, G. van Kleeft, B. Bergman, M. van den Berg, H. P. Vijverberg and R. H. Westerink. 1Institute for Risk Assessment Sciences - Toxicology Division, Utrecht University, Utrecht, Netherlands and 2Department of Environmental Chemistry - Wallenberg Laboratory, Stockholm University, Stockholm, Sweden.

#795
Poster Board Number ...........................................311
FREE RADICAL FORMATION BY UV IRRADIATION OF DECA- BROMODIPHENYL ETHER (DECA-BDE). Y. Suh, G. R. Buettner, L. W. Robertson and G. Ludewig. 1Occupational and Environmental Health, University of Iowa, Iowa City, IA and 2Free Radical and Radiation Biology & ESR Facility, University of Iowa, Iowa City, IA.

#796
Poster Board Number ...........................................312
POLYBROMINATED DIPHENYL ETHERS (PBDES) IN LEACHATES FROM SELECTED LANDFILL SITES IN SOUTH AFRICA. A. D. Odusanya, J. O. Okonkwo and B. M. Botha. 1Department of Environmental Science, Water & Earth Sciences, Tshwane University of Technology, Pretoria, Gauteng, South Africa and 2Department of Chemistry, Tshwane University of Technology, Pretoria, Gauteng, South Africa.
Program Description (Continued)

Abstract #

#797

Poster Board Number ................................313

EFFECTS OF THE BROMINATED FLAME RETARDANT HBCD ON CA2+
HOMEOSTASIS IN PC12 CELLS, H. J. Heusinkveld1, M. M. Dingemans1, M. J. Bergman2, M. van den Berg1 and R. H. Westerink1. 1Cellular and Molecular Toxicology, Institute for Risk Assessment Sciences - Utrecht University, Utrecht, Netherlands and 2Department of Environmental Chemistry, Wallenberg Laboratory, Stockholm University, Stockholm, Sweden.

#798

Poster Board Number ................................314

PERFLUOROOCTANOIC ACID ALTERS T LYMPHOCYTE PHENOTYPES AND CYTOKINE EXPRESSION IN MICE FOLLOWING 21-DAY ORAL EXPOSURE. H. Son, S. Lee, H. Lee and S. Kim. Pharmacology, Kyungpook National University Medical school, Daegu, South Korea.

#799

Poster Board Number ................................315

IN VITRO HEPATIC METABOLISM OF PBDE CONGENERS 99 AND 209 BY CHINOOK SALMON. E. P. Brown1, S. Tilton2, H. Stapleton2 and E. Gallagher1. 1Environmental and Occupational Health Sciences, University of Washington, Seattle, WA and 2Nicholas School of the Environment and Earth Sciences, Duke University, Durham, NC.

#800

Poster Board Number ................................316

INVESTIGATION OF 4-CHLOROBIPHENYL (4-CB) AND ITS PHASE I METABOLITES AS SUBSTRATES OF HUMAN RECOMBINANT PROSTAGLANDIN H SYNTHASE-2. O. Wangpradit1, L. Teets1, M. Duffiel1, K. Norstrom1, L. Waterman1 and G. Lubbe1. 1Interdisciplinary Graduate Program in Human Toxicology, University of Iowa, Iowa city, IA, 2High Resolution Mass Spectrometry Facility, University of Iowa, Iowa city, IA and 3Civil and Environmental Engineering, University of Iowa, Iowa city, IA.

#801

Poster Board Number ................................317

RESIDUAL PAHs, PCBs, PCDDs, AND PCDFs IN SOIL AND HOUSE DUST FOLLOWING AN INDUSTRIAL CHEMICAL RELEASE AND FIRE. P. Nony1,2, D. W. Gaylor3, G. C. Milliner4, A. C. Nye5 and J. Gandy1,2. 1Center for Toxicology and Environmental Health, LLC, North Little Rock, AR; 2Department of Environmental and Occupational Health, University of Arkansas for Medical Sciences, Little Rock, AR and 3Gaylor and Associates, LLC, Eureka Springs, AR.

#802

Poster Board Number ................................318


#803

Poster Board Number ................................319

IN VITRO ANTI-ANDROGENICITY OF PBDES, HBCD, TBP AND AND HYDROXYLATED AND METHOXILYLATED PBDES BASED ON A YEAST BIOASSAY. R. F. Cantón1, M. van den Berg1, T. Bovee2, A. Bergman3, F. Daamen1 and M. B. van Duursen1. 1Institute for Risk Assessment Sciences (IRAS), Utrecht University, Utrecht, Netherlands, 2RIKILT - Institute for Food Safety, Wageningen University and Research Center, Wageningen, Netherlands and 3Department of Environmental Chemistry and Analytical Chemistry, Stockholm University, Stockholm, Sweden.

#804

Poster Board Number ................................320

2, 2’, 3, 3’, 6’, 6’-HEXACHLOROBIPHENYL (PCB 136) ATROPISOMERS BIND ENANTIOSELECTIVELY TO HEPATIC MICROSOMAL CYTOCHROME P450 ENZYMES. H. Lehmler1, I. Kania-Korwel1, E. Hrycay2 and S. M. Bandiera2. 1Department of Occupational and Environmental Health, University of Iowa, Iowa City, IA and 2Faculty of Pharmaceutical Sciences, University of British Columbia, Vancouver, BC, Canada.

#805

Poster Board Number ................................321

IDENTIFYING A UNIQUE HEPATIC GENE EXPRESSION SIGNATURE FOR EXPOSURE TO DIOXIN-LIKE COMPOUNDS. C. Ellison1, B. Orlandi2, K. Kransler2 and J. Olson1. 1University at Buffalo, Buffalo, NY and 2Procter & Gamble, Cincinnati, OH.

#806

Poster Board Number ................................322

DIETHYLSTILBESTROL-LIKE EFFECT OF METABOLITES OF LOWER CHLORINATED BIPHENYLS ON WNT7A GENE EXPRESSION IN A HUMAN ENDOMETRIAL CELL LINE. L. Lehmann1, J. Wagner1 and L. W. Robertson2. 1University of Karlshue, Karlsruhe, Germany and 2The University of Iowa, Iowa City, IA.

#807

Poster Board Number ................................323

LOWER CHLORINATED NON-DIOXIN-LIKE PCBs ACT AS PARTIAL AGONIST ON THE GABA RECEPTOR AND INHIBIT AROMATASE ACTIVITY. E. Antunes Fernandes, M. B. van Duursen, F. E. Daamen, R. G. van Kleef, M. van den Berg and R. H. Westerink. Cellular and Molecular Toxicology, Institute for Risk Assessment Sciences, Utrecht University, Utrecht, Netherlands.

#808

Poster Board Number ................................324

INTERACTION OF POTASSIUM PERFLUOROALKYL ACIDOPAA WITH MODEL AND CELL MEMBRANES: FLUORESCENCE ANISOTROPY STUDY. W. Xie1, K. Wang2, H. Lehmler1 and G. Ludewig1. 1Occupational and Environmental Health, The University of Iowa, Iowa City, IA and 2Biostatistics, The University of Iowa, Iowa City, IA.

#809

Poster Board Number ................................325

CYTOCHROME P450 MEDIATED BIOTRANFORMATION OF 2, 3, 4, 4′-TETRABROMODIPHENYL ETHER. S. M. Bandiera and P. R. Edwards. Faculty of Pharmaceutical Sciences, University of British Columbia, Vancouver, BC, Canada.
Abstract #  
#810 Poster Board Number ...........................................326  
PARAOXONASE (PONI) ACTIVITY IN RATS AFTER EXPOSURE TO POLYCHLORINATED BIPHENYLS (PCBs). H. Shen1,2. 1Interdisciplinary Graduate Program in Human Toxicology, University of Iowa, Iowa City, IA and 2Department of Occupational and Environmental Health, University of Iowa, Iowa City, IA. Sponsor: L. Robertson.

#811 Poster Board Number ...........................................327  
INTERACTIONS OF NON-DIOXIN-LIKE 2, 2', 4, 4', 5, 5'-HEXACHLOROBIPHENYL (PCB 153) WITH MEMBRANE-ASSOCIATED AND INTRACELLULAR SIGNALING PATHWAYS IN LIVER EPITHELIAL CELLS. M. Machala1, P. Simeckova1, V. Paderova1, J. Slavik1, K. Pencikova1, J. Neca1, L. Umannova1, Z. Andryiska1, J. Hofmanova1 and J. Vondracek1. 1Veterinary Research Institute, Brno, Czech Republic and 2Institute of Biophysics, Brno, Czech Republic.

#812 Poster Board Number ...........................................328  
DECACHLOROBIPHENYL (PCB209) LACKS ENZYME INDUCTION POTENTIAL, GENETIC TOXICITY, AND ENDOCRINE ACTIVITY. J. O'Connor1, M. Donner1, X. Han1, J. Clarke1, D. Nabi1, R. Mingoa1, S. Snaidr1, L. Ford1 and M. Kaplan1. 1Investigative Toxicology, DuPont Haskell Global Center for Human Health & Environmental Sciences, Newark, DE and 2BioReliance Corporation, Rockville, MD.

#813 Poster Board Number ...........................................329  
3, 3', 4, 4'-TETRACHLOROBIPHENYL (PCB77) ALTERS DIETARY FATTY ACID ACTIVATION OF PEROXISOME PROLIFERATOR-ACTIVATED RECEPTOR-ALPHA (PPARα) AND INDUCTION OF ITS RESPONSE GENES IN MOUSE LIVER. X. Arzuaga1, E. P. Black1, A. J. Stromberg1, L. A. Cassis1, M. J. Toborek2 and B. Hennig3. 1Animal Sciences, University of Kentucky, Lexington, KY, 2Pharmaceutical Sciences, University of Kentucky, Lexington, KY, 3Statistics, University of Kentucky, Lexington, KY, 4Neurosurgery, University of Kentucky, Lexington, KY and 5Nutritional Sciences, University of Kentucky, Lexington, KY.

#814 Poster Board Number ...........................................330  
ANALYTICAL METHOD DEVELOPMENT FOR THE SIMULTANEOUS EXTRACTION AND ANALYSIS OF BIPHENOL A (BPA), BIS-GMA, BADGE, BPAHPE, BPADM AND TEGDMA IN HUMAN URINE AND SALIVA. F. J. Schebler1, K. E. Brackman1, T. M. O’Neill1, L. L. Haney1, A. P. Clark1, R. K. Harris1, J. W. Algailer1, B. Jayaram2 and C. S. Smith2. 1Product Sciences Division, Midwest Research Institute, Kansas City, MO and 2Environmental Toxicology Program, NIEHS, Research Triangle Park, NC.

#815 Poster Board Number ...........................................331  
PBBE CONGREGERS ARE CAR ACTIVATORS. E. Pacyna1, G. Guo1, C. Klaussen1 and K. Kramer2. 1Pharmacology, Toxicology & Therapeutics, University of Kansas Medical Center, Kansas City, KS and 2Puracyp, Inc., Carlsbad, CA.

#816 Poster Board Number ...........................................332  
CONGENER CLASS AND CONGENER-SPECIFIC RELATIVE POTENCY VALUES FOR DIOXIN AND DIOXIN-LIKE CHEMICALS DETERMINED IN NORMAL HUMAN EPIDERMAL KERATINOCYTES. J. B. Silsworth1, C. Sutter1 and T. R. Sutter2. 1Environmental Programs, General Electric, Niskayuna, NY and 2Feinestone Center for Genomic Research, University Memphis, Memphis, TN.
Program Description (Continued)

Abstract #

Tuesday Morning, March 18
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: LIVER I: IN VIVO

Chairperson(s): Jeff Waring, Abbott Laboratories, Abbott Park, IL and Christine Powell, University of North Carolina Chapel Hill, Chapel Hill, NC.

Displayed: 9:00 AM–12:30 PM

Tuesday Morning, March 18
9:00 AM to 12:30 PM
Exhibit Hall

#822 Poster Board Number ...........................................38
HEPATIC TRANSPORTER AND DRUG METABOLISM ENZYME EXPRESSION IN HUMANS WITH NON-ALCOHOLIC FATTY LIVER DISEASE. C. D. Fisher, A. J. Lickteig, L. M. Augustine and N. J. Cherrington, Department of Pharmacology and Toxicology, University of Arizona, Tucson, AZ.

#823 Poster Board Number ...........................................39
ISOMORPHS OF ALANINE AMINOTRANSFERASES IN HUMAN TISSUES AND SERUM. B. Glinghammar1, P. Thulin2, L. Rafter1, A. Ulf1, P. Lindblom1 and C. Jan1. 1Molecular Toxicology, Safety Assessment, Södertälje, Sweden and 2Atherosclerosis Research Unit, Center for Molecular Medicine, Karolinska Institute, Stockholm, Sweden.

#824 Poster Board Number ...........................................40
ADAPTIVE REGULATION AFTER HEPATOCYTE-SPECIFIC LOSS OF NADPH- CYTOCHROME P450 REDUCTASE (CPR) IN MICE. X. Cheng1, J. Gu2 and C. D. Klaassen1. 1Pharmacology, KUMC, Kansas City, KS and 2Wadsworth Center, Albany, NY.

#825 Poster Board Number ...........................................41
CHARACTERIZATION OF MICE NULL FOR LIVER-SPECIFIC UPTAKE TRANSPORTER ORGANIC ANION TRANSPORTING POLYPEPTIDE 1B2 (OATP1B2). H. Lu1, S. Choudhuri1, K. Ogura2, I. Csanyi3, P. Song1, X. Cheng1, X. Lei1 and C. D. Klaassen1. 1University of Kansas Medical Center, Kansas City, KS, 2Department of Pathology, Schering-Plough Research Institute, Saddle River, NJ and 3Tokyo University of Pharmacy and Life Science, Tokyo, Japan.

#826 Poster Board Number ...........................................42
ROLE OF HEPATIC LIPOASE IN ACROLEIN-INDUCED DYSLIPIDEMIA IN MICE. O. A. Barski, A. Bhattacharjee and D. J. Conklin, Inst. Mol. Card., University of Louisville, Louisville, KY.

#827 Poster Board Number ...........................................43
INDUCTION OF BILE ACID TRANSPORTERS AND NUCLEAR RECEPTORS BY BILE ACIDS. P. Song and C. Klaassen, Pharmacology, toxicology and therapeutics, University of Kansas Medical Center, Kansas City, KS.

#828 Poster Board Number ...........................................38
GENDER- AND AGE-DEPENDENT HEPATIC GENES EXPRESSION DUE TO RXRα DEFICIENCY. M. Guo1, G. Lei1, L. Lehman-McKeeman1 and Y. Wan4, 1Pharmacology, KUMC, Kansas City, KS and 2Bristol-Myers Squibb Company, New York.

#829 Poster Board Number ...........................................45
ANTIF-TREATED FXR-NULL MOUSE LIVERS EXHIBIT MORE SINGLE CELL DEGENERATION DUE TO IMPAIRED INDUCTION OF EFFLUX TRANSPORTERS. Y. Cui1, L. M. Aleksunes1, Y. Tanaka2, M. J. Goedken3 and C. D. Klaassen1. 1Department of Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, Kansas City, KS and 2Department of Pathology, Schering-Plough Research Institute, Lafayette, NJ.

#830 Poster Board Number ...........................................38
UPREGULATION OF EARLY GROWTH RESPONSE FACTOR-1 BY BILE ACIDS REQUIRES EGR RECEPTOR ACTIVATION. K. Allen and B. Copple. Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, Kansas City, KS.

#831 Poster Board Number ...........................................46
TIME-COURSE COMPARISON OF GENE EXPRESSION SIGNATURES OF XENOBIOTIC ACTIVATORS OF CAR AND PPARγ IN MOUSE LIVER. K. J. Ross1, C. G. Woods2,1, B. U. Bradford1, O. Kosky3 and I. Rasyin4. 1UNC-CH, Chapel Hill, NC, 2Hammer Institutes for Health Sciences, RTP, NC and 3ExxonMobil Biomedical Sciences, Annandale, NJ.

#832 Poster Board Number ...........................................47
HYDROCARBON RECEPTOR PROMOTES HEPATIC LIPOGENESIS. J. Torres1, J. Hoon2 and W. Xie3. 1Chemistry, University of Puerto Rico at Cayey, Cayey, PR and 2Center for Pharmacogenetics and Department of Pharmaceutical Sciences, University of Pittsburgh School of Pharmacy, Pittsburgh, PA. Sponsor: R. Ross.

#833 Poster Board Number ...........................................48
MECHANISMS OF HEPATOPROTECTION DURING LCA-INDUCED CHOLESTASIS: ROLE OF APOTOTIC SIGNALING. L. D. Belk1, A. L. Stitt2 and N. J. Cherrington3. 1Pharmacology/Toxicology, University of Arizona, Tucson, AZ and 2Biomedical and Pharmaceutical Sciences, University of Rhode Island, Kingston, RI.

#834 Poster Board Number ...........................................49

#835 Poster Board Number ...........................................50
ONCOTIC NECROSIS AND APOPTOSIS MEDIATE LIVER INJURY IN RESPONSE TO SUPEROXIDE FORMATION IN VIVO. J. Hong and H. W. Jaeschke. Pharmacology, Toxicology & Therapeutics, University of Kansas Medical Center, Kansas City, KS.
Program Description (Continued)

Abstract #

#836  Poster Board Number...........................................412 ROLE OF APOPTOSIS-INDUCING FACTOR IN ACETAMINOPHEN-INDUCED LIVER CELL NECROSIS. H. W. Jaeschke¹, M. Lebofsky¹, J. J. Lemasters² and M. Baïj³. ¹Pharmacology, Toxicology & Therapeutics, University of Kansas Medical Center, Kansas City, KS and ²Medical University of South Carolina, Charleston, SC.

#837  Poster Board Number...........................................413 ROLE OF TISSUE FACTOR AND PROTEASE ACTIVATED RECEPTOR-1 IN ACETAMINOPHEN-INDUCED HEPATOTOXICITY IN MICE. J. P. Layndyk¹, P. E. Ganey², S. W. Newport³, T. M. Eagle¹, J. F. Maddox⁴, N. Mackman¹ and R. A. Roth⁴. ¹Department of Immunology, The Scripps Research Institute, La Jolla, CA and ³Department of Pharmacology and Toxicology, Michigan State University, East Lansing, MI.

#838  Poster Board Number...........................................414 EFFECT OF SAME TREATMENT GIVEN AFTER ACETAMINOPHEN (APAP) OVERDOSE ON HEPATIC TRANSMETHYLATION SUBSTRATES. J. Brown and M. Valentovic. Pharmacology, Physiology and Toxicology, Marshall University School of Medicine, Huntington, WV.

#839  Poster Board Number...........................................415 CAVEOLIN-1 IS REQUIRED FOR HIGH MOBILITY GROUP BOX PROTEIN-1 (HMGB1)-INDUCED MACROPHAGE ACTIVATION AND NITRIC OXIDE PRODUCTION DURING ACETAMINOPHEN-INDUCED HEPATOTOXICITY. A. Dragonir, C. R. Gardner, L. B. Joseph and D. L. Lauskin. Rutgers University, Piscataway, NJ.

#840  Poster Board Number...........................................416 AUTOPROTECTION AGAINST ACETAMINOPHEN HEPATOTOXICITY: CLUES FROM A GENE EXPRESSION PROFILE ANALYSIS. M. A. O’Connor¹, P. Kozlo-Taylor¹, L. M. Alesanes², S. N. Campion¹, M. Lawton¹ and J. E. Munafo². ¹Department of Pharmaceutical Sciences, University of Connecticut, Storrs, CT, ²Pfizer Inc., Groton, CT and ²Department of Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, Kansas City, KS.

#841  Poster Board Number...........................................417 MECHANISMS OF PROTECTION BY SAPONINS DERIVED FROM ROOTS OF PLATYCODON GRANDIFLORUM AGAINST CARBON TETRACHLORIDE-INDUCED LIVER DAMAGE IN MICE. C. H. Jaeho¹, K. Lee¹, Y. Chung² and H. Jeong¹. ¹Pharmacy, Chosun University, Kwangju, South Korea and ²Division of Food Science, Jinju National University, Jinju, South Korea.

#842  Poster Board Number...........................................418 METHYL-DONOR ENRICHMENT ATTENUATES ACETAMINOPHEN-INDUCED LIVER INJURY: MECHANISMS OF PROTECTIVE ACTION. C. Craig¹, C. L. Powell², I. Pogribny³, S. Melnyk¹, M. Tschuhy¹, B. U. Bradford, D. W. Threadgill⁴ and J. Rush⁴. ¹Department of Environmental Sciences & Engineering, University of North Carolina, Chapel Hill, NC, ²Department of Genetics, University of North Carolina, Chapel Hill, NC, ³Division of Biochemical Toxicology, National Center for Toxicological Research, Jefferson, AR and ⁴Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock, AR.


#844  Poster Board Number...........................................420 CYTOKINE AND CHEMOKINE EXPRESSION ASSOCIATED WITH STEATOHEPATITIS AND HEPATOCYTE PROLIFERATION IN RATS FED ETHANOL VIA TOTAL ENTERAL NUTRITION. M. J. Ronis¹, A. Butura², S. Korourian¹, K. Shankar¹, C. Jo¹, P. Simpson¹, E. Albano¹, M. Ingelman-Sundberg² and T. M. Badger³. ¹Pharmacology & Toxicology, UAMS, Little Rock, AR, ²Karolinska Institute, Stockholm, Sweden and ³Universita de Torino, Novara, Italy.

#845  Poster Board Number...........................................421 THE INFLUENCE OF SEX STEROIDS IN ALCOHOLIC LIVER INFLAMMATION. R. Gallucci, E. Lee and B. Mickle. Pharmaceutical Sciences, University of Oklahoma HSC, Oklahoma City, OK.

#846  Poster Board Number...........................................422 OSTEOPONTIN—MEDITATED B1 AND B2 INTEGRIN SIGNALING: A MECHANISM FOR HIGHER HEPATIC NEUTROPHIL INFILTRATION AND LIVER INJURY IN FEMALE ALCOHOLIC LIVER DISEASE. A. Banerjee¹, S. K. Ramaiah¹, S-AdenosylLmethionine, P. Simpson¹, S. Korourian¹ and K. Shankar¹. ¹Pharmacology, Texas A&M University, College Station, TX and ²Pathobiology, Texas A&M University, College Station, TX.

#847  Poster Board Number...........................................423 COEXPOSURE OF MICE TO TROVAFLOXACIN AND LIPOPOLYSACCHARIDE RESULTS IN A UNIQUE GENE EXPRESSION PROFILE AND VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF)-DEPENDENT LIVER INJURY. R. A. Roth¹, P. J. Shaw¹, A. C. Dietwig¹, J. F. Waring¹, M. J. Liguori¹, E. A. Blomme¹, D. M. Briscoe¹ and P. E. Ganey¹. ¹Pharmacology & Toxicology, Michigan State University, East Lansing, MI, ²Mol. and Cell. Toxicol., Abbott Laboratories, Abbott Park, IL and ³Children’s Hospital, Harvard Medical School, Boston, MA.
Program Description (Continued)

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#848  
**Poster Board Number** .............................. 424  
HEMOSTATIC SYSTEM ACTIVATION CONTRIBUTES TO HEPATOTOXICITY IN MICE TREATED WITH TROFLOXACIN AND LIPOPOLYSACCHARIDE. A. M. Fullerton, P. J. Shaw, P. E. Ganey and R. A. Roth. Department of Pharmacology and Toxicology, Center for Integrative Toxicology, Michigan State University, East Lansing, MI.

#849  
**Poster Board Number** .............................. 425  
ROLE OF P38 MAPK KINASE IN TNF-α PRODUCTION AND LIVER INJURY IN HEPATOTOXIC INTERACTION OF LIPOPOLYSACCHARIDE AND RANITIDINE. X. Deng1, J. Lu1, L. Lehman-McKeeman1, E. Malie5, P. Ganey1 and R. Roth1. 1Michigan State University, East Lansing, MI, 2Bristol-Myers Squibb, Princeton, NJ and 3Medical University Graz, Graz, Austria.

#850  
**Poster Board Number** .............................. 426  
DETERMINANTS OF SENSITIVITY TO HALOTHANE-INDUCED HEPATOTOXICITY IN MICE. C. M. Dugan1, R. A. Roth1 and P. E. Ganey2. 1Cellular and Molecular Biology Program, Michigan State University, East Lansing, MI and 2Pharmacology and Toxicology, Michigan State University, East Lansing, MI.

#851  
**Poster Board Number** .............................. 427  
POSSIBLE ROLE OF OSTEOPONTIN IN THE IMMUNE RESPONSE AND LYMPHOCYTIC INFILTRATION DURING NON-ALCOHOLIC STEATOHEPATITIS IN A DIETARY MURINE MODEL. N. Banerjee1, A. Banerjee1, M. Shinohara2 and S. K. Ramiah3. 1Toxicology, Texas A&M University, College Station, TX and 2Harvard Medical School, Boston, MA.

#852  
**Poster Board Number** .............................. 428  
EFFECTS OF TCDD ON LIVER LIPID METABOLISM – MOUSE VERSUS RAT. M. K. Makley1, M. N. Kent1, N. V. Red2, G. L. Jahns3, N. J. DelRaso1, D. Boverhof1, L. Burgoon1, D. Jump1 and T. Zacharewski2. 1Biochem & Mol Biol, Wright St University Dayton, OH, 2BAE Systems, San Diego, CA, 3AFRL/RHPB, Wright-Patterson AFB, Dayton, OH and 4Biochem & Mol Biol, National Food Safety & Toxicol Ctr, Ctr Integrative Toxicol, Michigan St University East Lansing, MI.

#853  
**Poster Board Number** .............................. 429  
DIOXIN ALTERS INFLAMMATORY RESPONSES TO LIPOPOLYSACCHARIDE, P. E. Ganey, J. T. Olivero and R. A. Robert. Department of Pharmacology and Toxicology. Center for Integrative Toxicology, Michigan State University, East Lansing, MI.

#854  
**Poster Board Number** .............................. 430  
THE CONTRIBUTION OF PPAR-ALPHA TO HEPATIC RESPONSES IN A MOUSE MODEL OF INFLAMMATION-DIOXIN INTERACTION. J. T. Olivero, G. Hayley, R. Roth and G. E. Patricio. Department of Pharmacology and Toxicology. Center for Integrative Toxicology, Michigan State University, East Lansing, MI.

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Poster Board Number .............................. 431  

Poster Board Number .............................. 432  
REVEAL ALTERATIONS IN CHOLESTEROL METABOLISM IN TR-RATS. L. W. LeCureux, D. M. Nelson and L. D. Lehman-McKeeman. Discovery Toxicology, Bristol-Myers Squibb, Princeton, NJ.

Poster Board Number .............................. 433  
HEPATIC ALT 1 & 2 PROTEINS ARE DIFFERENTIALLY EXPRESSED FOLLOWING DEXAMETHASONE TREATMENT IN MICE. W. Reagan1, S. Park2, R. Goldstein3, D. Brees1, F. Rajamohan4, R. Yang5 and D. Gong6. 1Drug Safety Research & Development, Pfizer, Groton, CT and 2Division of Endocrinology, Diabetes, and Nutrition, University of Maryland, Baltimore, MD. Sponsor: M. Lawton.

Poster Board Number .............................. 434  
ATYPICAL HEPATOTOXICITY CAUSED BY PHOSPHOORTHIGLUCONATE IN RodentS. L. M. Banerjee, G. L. Jahns2, N. J. Bondy, D. E. Lefebvre, S. A. Hild and P. A. Duffy1. 1Global Safety Assessment, AstraZeneca Pharmaceuticals, Macclesfield, Cheshire, United Kingdom and 2Centre for Analytical Sciences, University of Sheffield, Sheffield, South Yorkshire, United Kingdom.

Poster Board Number .............................. 435  
INVESTIGATION OF THE DIFFERENTIAL HEPATIC CONCENTRATION OF AN ANTI-INFLAMMATORY COMPOUND AND ITS ASSOCIATION WITH PHOSPHOLIPIDOSIS IN RODENTS. H. Powell1, J. Eakin1, A. Bigley2, A. Marsden1, J. Bunch1, C. McLeod1, J. Evans1 and P. A. Duffy1. 1Global Safety Assessment, AstraZeneca Pharmaceuticals, Macclesfield, Cheshire, United Kingdom and 2Centre for Analytical Sciences, University of Sheffield, Sheffield, South Yorkshire, United Kingdom.

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#863 | #868
**Poster Board Number** | **Poster Board Number**
HIGH DIETARY INORGANIC PHOSPHATE AFFECTS LIVER DEVELOPMENT THROUGH ALTERING PROTEIN TRANSLATION, CELL CYCLE, AND ANGIogenesis in DEVELOPING MICE. C. Xu and M. Cho. Lab of Toxicology, College of Veterinary Medicine, Seoul National University, Seoul, South Korea. | EFFECT OF METHYLBENZENE SUBSTITUTION ON TOXIC EFFECTS ELICITED BY BENZO[A]ANTHRACENE DERIVATIVES IN LIVER CELL LINES. J. Topinka1, S. Marvanová, J. Vondráček2, K. Pěnčíková2, L. Trilcová2, P. Křemář2, Z. Nováková2, A. Milcová2 and M. Machalá2. 1Genetic Ecotoxicology, Institute of Experimental Medicine ASCR, v.v.i., Prague, Czech Republic, 2Chemistry and Toxicology, Veterinary Research Institute, Brno, Czech Republic and 3Cytokinetics, Institute of Biophysics, Brno, Czech Republic. Sponsor: H. Autrup.

**Poster Board Number** | **Poster Board Number**
GLUTATHIONE DEPLETION FOLLOWING INTRAPERITONEAL INJECTION OF 2-CHLOROACRYLONITRILE. P. E. Malichky, J. M. Mostowy, F. W. Fochtman, J. Bricker and D. A. Johnson. Mylan School of Pharmacy, Department of Pharmacology and Toxicology, Duquesne University, Pittsburgh, PA. | 4-AMINOBIPHENYL IN ARYLMAMINE N-ACETYLTRANSFERASE NAT1/NAT2 NULL MICE. D. M. Grant, K. S. Sugamori and D. Brenneman. Pharmacology and Toxicology, University of Toronto, Toronto, ON, Canada.

Tuesday Morning, March 18 9:00 AM to 12:30 PM

Exhibit Hall

**POSTER SESSION: MECHANISMS AND CHEMOPREVENTION OF PAH AND TOBACCO-RELATED CARCINOGENESIS**

Chairperson(s): Lu Wang, University of Mississippi, University, MS.

Displayed: 9:00 AM–12:30 PM

Attended: 11:00 AM–12:30 PM

#865 | #870
**Poster Board Number** | **Poster Board Number**

#866 | #871
**Poster Board Number** | **Poster Board Number**
DIETARY FAT MODULATION OF BENZO[A]PYRENE-INDUCED ADENOMAS IN COLON OF APC MINUS MICE. D. L. Harris1, A. Ramesh1, M. K. Washington1 and J. D. Morrow2. 1Cancer Biology, Meharry Medical College, Nashville, TN, 2Pathology, Vanderbilt University, Nashville, TN and 3Pharmacology and Division of Clinical Pharmacology, Vanderbilt University, Nashville, TN. | CURCUMIN LOWERS THE THRESHOLD OF PS3 ACTIVATION AND SUBSEQUENT INDUCTION OF DNA DAMAGE RECOGNITION PROTEINS XPC AND DDB2. E. N. Rogers1, G. Jiang1 and J. States1,2. 1Pharmacology & Toxicology, University of Louisville, Louisville, KY and 2Ctr Environmental Genomics & Integrative Biology, U. Louisville, Louisville, KY.

#867 | #872
**Poster Board Number** | **Poster Board Number**
CYPI1 AND CYPIA EXPRESSION IN PAHs INDUCED FUNDULUS LIVER TUMORS. L. Wang1, W. Dong2, C. Thornton1, A. M. Hailey1, A. Camus2 and K. L. Willett. 1Pharmacology and Environmental Toxicology, University of Mississippi, University, MS and 2Pathology, College of Veterinary Medicine, University of Georgia, University, GA. | FURAN-2-YL-3-PYRIDIN-2-YL-PROPENONE INHIBIT 7, 12-DIMETHYLBENZA[A]ANTHRACENE-INDUCED GENOTOXICITY IN MCF-7 CELLS. Y. Hwang1,2, E. Han1 and H. Jeong1,2. 1Pharmacy, Chosun University, Kwangju, South Korea and 2Research Center for Proteineous Materials, Chosun University, Kwangju, South Korea.

#867 | #873
**Poster Board Number** | **Poster Board Number**
ORAL CANCER CHEMOPREVENTION BY LYOPHILIZED STRAWBERRIES IN HAMSTER CHEEK POUCHES. B. M. Warner, B. C. Casto, T. J. Knobloch and C. M. Weghorst. College of Public Health and Comprehensive Cancer Ctr, Ohio State University, Columbus, OH. INHIBITION OF MMP SECRETION, INVASION AND GROWTH OF TONGUE CANCER CELL LINE SC-255 BY A NUTRIENT MIXTURE. M. Roomi, N. Roomi, V. Ivanov, M. Rath and A. Niedzwiecki. Dr. Rath Research Institute, Santa Clara, CA.
Program Description (Continued)

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#875
Poster Board Number ........................................511
THE EFFECT OF CIGARETTE SMOKE AND THE ANTIOXIDANTS RESVERATROL AND CURCUMIN ON A TWO-STAGE CELL TRANSFORMATION ASSAY. D. M. Brehyen1, T. Tae1, Y. Xu2 and M. Gaca1. 1R&D Centre, British American Tobacco, Southampton, United Kingdom and 2Covance Laboratories Inc, Vienna, VA. Sponsor: J. Seagrave.

#876
Poster Board Number ........................................512
CHEMOPREVENTION OF MURINE LUNG TUMOR PROGRESSION BY SULINDAC. S. T. Dance, N. D. Kock, J. E. Moore, R. B. Agostino, Jr., J. L. Mosley and M. S. Miller, Wake Forest University School of Medicine, Winston-Salem, NC.

#877
Poster Board Number ........................................513
3-METHYLTHIO-PROPIONIC ACID ETHYL ESTER ENHANCED DIFFERENTIATION IN WELL-DIFFERENTIATED HUMAN COLON CANCER CELLS. Y. Nakamur1, Y. Nakayama1, A. Tanaka2, T. Matsuo3, S. Okamoto4, K. Kagoshima, Japan, 3Biochemical Science and Technology, Kagoshima University, Kagoshima, Japan, 4Agricultural Science, Kagoshima University, Kagoshima, Japan and 1Pediatrics & Human Development, Michigan State University, East Lansing, MI.

Tuesday Morning, March 18
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: ALTERNATIVES TO MAMMALIAN MODELS

Chairperson(s): Ron Hardman, Duke University, Durham, NC and Judy Strickland, Integrated Laboratory Systems, Inc., Research Triangle Park, NC.

Displayed: 9:00 AM–12:30 PM

Attended: 9:00 AM–11:00 AM

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#878
Poster Board Number ........................................514

#879
Poster Board Number ........................................515
TOXICITY OF DOXORUBICIN AND ISOPROTERENOL DEPENDS ON THE DIFFERENTIATION STAGE OF H9C2 MYOBLASTS. S. Pereira1, V. Sardano1, A. Branco1, J. Holy2, C. Oliveira2, K. Wallace2 and P. Oliveira2. 1Ctr for Neurosciences and Cell Biology, University Coimbra, Coimbra, Portugal and 2Univ Minnesota, Duluth, Duluth, MN.

#880
Poster Board Number ........................................516

#881
Poster Board Number ........................................517
ETHANOL TERATOGENESIS IN JAPANESE MEDAKA: EFFECTS AT THE CELLULAR LEVEL. A. K. Dasmonhapatra1,2, M. Wu3, A. Chaudhary4 and I. A. Khan1. 1National Center for Natural Product Research, University of Mississippi, University, MS and 2Department of Pharmacology, University of Mississippi, University, MS.

#882
Poster Board Number ........................................518
FROM YEAST TO HUMANS: FUNCTIONAL GENOMICS IN THE MODELING OF ARSENIC AND HEAVY METAL TOXICITY IN YEAST AND ITS RELEVANCE TO HUMANS. W. J. Jo1, A. Logunov1, X. Ren2, M. Chang3, P. Wong4, H. Wintz5, L. Zhang5, M. T. Smith6 and C. D. Valpe7. 1Nutritional Sciences and Toxicology, University of California Berkeley, Berkeley, CA and 2School of Public Health, University of California Berkeley, Berkeley, CA.

#883
Poster Board Number ........................................519
GENOTOXICITY TESTING USING THE MICRONUCLEUS ASSAY IN THE HUMAN EPIDERM™ 3D SKIN MODEL. Y. Kaluzhnys1, V. Karetys2, R. Curren1, M. Aardema1, P. Hayden1, T. Hu1 and M. Klausner2. 1MatTek Corporation, Ashland, MA, 2Institute for In Vitro Science, Inc., Gaithersburg, MD and 3Procter & Gamble Co., Cincinnati, OH.

#884
Poster Board Number ........................................520
GERM-LINE STEM CELLS-GONOCYTES AS AN IN VITRO MODEL FOR MALE DEVELOPMENTAL TOXICITY: COMPARISON FROM CYTOTOXICITY TO GENOMIC RESPONSES TO PHTHALATES. X. Ye, S. Hong and E. M. Faustman. Environmental Health, IRARC, UW, Seattle, WA.

#885
Poster Board Number ........................................521
INTERLABORATORY VALIDATION OF PRECISION CUT LUNG SLICES AS PRE-STUDY TEST SYSTEM FOR INHALATION STUDIES. S. N. Boehn1, K. Sewald1, H. G. Kamp1, A. Braun1, B. van Ravenzwaay2 and R. Landsiedel3. 1Experimental Toxicology and Ecology, BASF, Ludwigshafen am Rhein, Germany and 2Fraunhofer Institute for Toxicology and Experimental Medicine, Hannover, Germany.

#886
Poster Board Number ........................................522
GENE EXPRESSION PROFILING OF THE HUMAN MACROPHAGE TRANSCRIPTOME IN RESPONSE TO THE RESPIRATORY SENSITIZER HEXAMETHYLENE DIISOCYANATE. S. Verstraeten1, R. Van Den Heuvel1, J. Hooyberghs1, I. Nelsissen1, H. Wittes1, P. Van Cauwenberge2 and G. Schoeters1. 1Environmental Toxicology, Flemish Institute for Technological Research, Mol, Belgium and 2Department of Otorhinolaryngology, Ghent University, Ghent, Belgium. Sponsor: R. Pieters.
**Program Description (Continued)**

### Abstract # 887

**Poster Board Number**: 887  

### Abstract # 888

**Poster Board Number**: 888  
**A GENETIC APPROACH TO ARSENIC SUSCEPTIBILITY. J. G. Muniz, D. Kane and I. Cartwright. Molecular Genetics, Biochemistry and Microbiology, University of Cincinnati, Cincinnati, OH. Sponsor: M. Center.**

### Abstract # 889

**Poster Board Number**: 889  
**EPIDEMGENETIC CYTOTOXICITY OF METALS ON MOUSE EMBRYONIC STEM CELLS. D. J. Gazarian and F. A. Barile. Pharmaceutical Sciences, St. John’s University College of Pharmacy, Queens, NY.**

### Abstract # 890

**Poster Board Number**: 890  
**DEVELOPMENT OF NORMAL HUMAN COLON CELL CULTURES TO IDENTIFY UNREGULATED DISINFECTION BY-PRODUCTS (DBPs) WITH CARCINOGENIC POTENTIAL. C. Jones, S. Thar, W. Ward, M. Moyer and A. Delangel. U.S. EPA, Research Triangle Park, NC and INCELL Corporation, San Antonio, TX.**

### Abstract # 891

**Poster Board Number**: 891  
**ICCVAM RECOMMENDATIONS ON THE USE OF FIVE IN VITRO PYROGEN TEST METHODS FOR ASSESSING THE POTENTIAL PYROGENICITY OF PHARMACEUTICALS AND OTHER PRODUCTS. R. McFarland, M. Wind, J. Kulpa-Eddy, R. Rice and W. Stokes. FDA, Washington, DC; CPSC, Bethesda, MD; USDA, Riverdale, MD and NIEHS/NIH/NIH/Research Triangle Park, NC.**

### Abstract # 892

**Poster Board Number**: 892  

### Abstract # 893

**Poster Board Number**: 893  

### Abstract # 894

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### Abstract # 895

**Poster Board Number**: 895  
**DRUG METABOLIZING ENZYME ACTIVITY IN HUMAN IN VITRO DERMAL (EPIDERM) AND AIRWAY (EPILAIRWAY) EPITHELIAL MODELS. P. J. Hayden, J. Bolmarcich, G. R. Jackson, G. Stolper and M. Klausner. MatTek Corp., Ashland, MA.**

### Abstract # 896

**Poster Board Number**: 896  
**WHEN ACCOUNTING FOR BIOAVAILABILITY IN VITRO MATTERS. N. I. Kramer, B. J. Blauhoer and J. M. Hermens. Institute for Risk Assessment Sciences, Utrecht University, Utrecht, Netherlands.**

### Abstract # 897

**Poster Board Number**: 897  

### Abstract # 898

**Poster Board Number**: 898  
**IN VITRO CYTOTOXICITY TEST METHODS FOR ESTIMATING RAT ACUTE ORAL TOXICITY: PREDICTION OF GHS ACUTE ORAL HAZARD CATEGORIES. M. Parisi, J. Strickland, S. Casati, R. Tice and W. Stokes. ILS, Inc., RTP, NC; ECVAM, Joint Research Center, Ispra, Italy and NICEATM, NIEHS, RTP, NC.**

### Abstract # 899

**Poster Board Number**: 899  
**AN ALTERNATIVE USE OF IN VITRO CYTOTOXICITY TEST DATA TO DETERMINE WHEN RAT ACUTE ORAL TOXICITY TESTING SHOULD START WITH THE LIMIT TEST. J. Strickland, M. Parisi, D. Allen, R. Tice and W. Stokes. ILS, Inc., NICEATM, RTP, NC; and NICEATM, NIEHS/NIH/DHHS, Research Triangle Park, NC.**

### Abstract # 900

**Poster Board Number**: 900  

### Abstract # 901

**Poster Board Number**: 901  
**NON INVASIVE HIGH RESOLUTION IN VIVO IMAGING OF ALPHA-NAPHTHYLISOThIOCYANATE (ANIT) INDUCED HEPATOBILIARY TOXICITY IN STI MEDAKA. R. Hardman, S. Kullman and D. E. Hinton. nicholas School of the Environment and Earth Sciences, Duke University, Durham, NC.**
Program Description (Continued)

Abstract #

#902

Poster Board Number........................................538

EFFECT OF SORAFENIB, SUNITINIB, IMATINIB AND DASATINIB ON MITOCHONDRIAL FUNCTION IN ISOLATED RAT LIVER AND HEART MITOCHONDRIA AND IN HEPG2 AND H9C2 CELLS. J. A. Dykens1, S. Nadanaciva1, J. Jamieson1, B. Hirukawa1, L. D. Marroquin1, J. Hynes3, R. Parent-Will1 and Y. Will1. ‘Exploratory Safety Differentiation, Pfizer Global Research & Development, Groton, CT, 1Mitosciences LLC, Eugene, OR, 2DSRD, Pfizer Global Research & Development, San Diego, CA and 3Luxcel Biosciences, Cork, Ireland.

#903

Poster Board Number........................................539

BIGUANIDE-INDUCED MITOCHONDRIAL DYSFUNCTION INCREASES LACTATE PRODUCTION AND REDUCES VIABILITY OF AEROBICALLY POISED HEPG2 AND HUMAN HEPATOCYTES IN CULTURE. L. D. Marroquin1, J. A. Dykens1, S. Nadanaciva1, J. Jamieson1 and Y. Will1. ‘Exploratory Safety Differentiation, Pfizer Global Research & Development, Groton, CT, 1Mitosciences LLC, Eugene, OR, 2DSRD, Pfizer Global Research & Development, San Diego, CA and 3Luxcel Biosciences, Cork, Ireland.

#904

Poster Board Number........................................540

ANALYSIS OF MITOCHONDRIAL FUNCTION BY MONITORING INTRACELLULAR OXYGEN CONSUMPTION. T. O’Riordan1, J. Hynes3, D. Papkovsky3 and Y. Will1. ‘Exploratory Safety Differentiation, Pfizer Global Research & Development, Groton, CT and 1Luxcel Biosciences, Cork, Ireland.

#905

Poster Board Number........................................541

A NOVEL METHOD FOR IDENTIFYING DRUG-INDUCED MTDNA DEPLETION AND MTDNA-ENCODED PROTEIN DEPLETION IN MITOCHONDRIA. R. Capaldi1, S. Nadanaciva1, J. H. Willis1, M. Barker2 and Y. Will1. ‘Exploratory Safety Differentiation, Pfizer Global Research & Development, Groton, CT and 1Mitosciences LLC, Eugene, OR.

#906

Poster Board Number........................................542

MITOCHONDRIAL LIABILITIES- A POSSIBLE EXPLANATION FOR IDIOSYNCRATIC HEPATOTOXICITY OBSERVED WITH NEFAZODONE, BUT NOT WITH BUSPIRONE AND TRAZODONE. S. Nadanaciva1, J. A. Dykens1, L. D. Marroquin1, J. D. Jamieson1, R. Capaldi1 and Y. Will1. ‘Exploratory Safety Differentiation, Pfizer Global Research & Development, Groton, CT, 1Mitosciences LLC, Eugene, OR and 2DSRD, Pfizer Global Research & Development, San Diego, CA.

#907

Poster Board Number........................................543

EFFECT OF MAINSTREAM CIGARETTE SMOKE GAS/VAPOR PHASE AND WET TOTAL PARTICULATE MATTER ON THE METABOLIC PATHWAYS OF HUMAN LUNG EPITHELIAL CELLS: THE ‘METABOLOMICS’ APPROACH. S. V. Vulimiri1, M. Misra1, J. T. Hamn2 and A. Berger2. 1A. W. Speers Research Center, Lorillard Tobacco Company, Greensboro, NC and 2Metabolon Inc., Durham, NC.

#908

Poster Board Number........................................544

CHARACTERIZATION OF A WHOLE SMOKE IN VITRO EXPOSURE SYSTEM, THE MIMIC SMOKE BURGHART -01 (MSB-01). M. J. Scian1, W. J. McKinney2 and J. S. Edmiston3. 1Philip Morris USA Post-Graduate Research Program, Richmond, VA and 2Philip Morris USA, Richmond, VA.

#909

Poster Board Number........................................545

IMPROVEMENT OF MONKEY (MACACA FASCICULARIS) HEMATOPOIETIC CLONOGENIC ASSAYS FOR TOXICOLOGICAL STUDIES. D. Parent-Massin1, G. Le Borgne1, N. becourt-Lhote1, B. Jehannin1, Y. Sibiri1 and N. Claude1. ‘UFR Sciences et techniques, Food Toxicology Laboratory, Brest, France and 1Institut de recherches Internationales, Servier, Courbevoie, France.

Tuesday Morning, March 18
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: REGULATORY RISK ASSESSMENT


Displayed: 9:00 AM–12:30 PM

Attended: 11:00 AM–12:30 PM

#910

Poster Board Number........................................550


#911

Poster Board Number........................................551


#912

Poster Board Number........................................552


#913

Poster Board Number........................................553

# Program Description (Continued)

**Abstract #**

* #914
  **POSTER BOARD NUMBER** 554
  **ADDRESSING UNCERTAINTY IN THE ESTIMATION OF HUMAN RISKS FROM TETRACHLOROETHYLENE EXPOSURE.**

* #915
  **POSTER BOARD NUMBER** 555

* #916
  **POSTER BOARD NUMBER** 556

* #917
  **POSTER BOARD NUMBER** 557
  **EVALUATION OF TOXICITY ASSOCIATED WITH ORAL EXPOSURE TO CHLOROFORM: COMPARISON OF POINTS OF DEPARTURE FOR USE IN THE DERIVATION OF AN ORAL REFERENCE DOSE (RFD).** K. Newhouse1, T. Berner1, D. Mukerjee1 and M. Follansbee1. IRIS/NCEA/ORL, U.S. EPA, Cincinnati, OH and 5Syracuse Research Co., Syracuse, NY.

* #918
  **POSTER BOARD NUMBER** 558
  **U.S. EPA INTEGRATED RISK INFORMATION SYSTEM (IRIS) REASSESSMENT OF 1, 1, 2, 2-TETRACHLOROETHANE.** G. W. Patton and T. Berner. ORD/NCEA/IRIS Program, U.S. EPA, Washington, DC.

* #919
  **POSTER BOARD NUMBER** 559

* #920
  **POSTER BOARD NUMBER** 560

* #921
  **POSTER BOARD NUMBER** 561
  **CONSIDERATION OF THERAPEUTIC AND TOXICITY DATA FOR ORAL COBALT ASSESSMENT.** H. Choudhury1, J. C. Lambert1 and J. Klotzbach1. ORD/NCEA, U.S. EPA, Cincinnati, OH and 5Toxicology, Syracuse Research Corporation, Syracuse, NY.

**Abstract #**

* #922
  **POSTER BOARD NUMBER** 562

* #923
  **POSTER BOARD NUMBER** 601

* #924
  **POSTER BOARD NUMBER** 602

* #925
  **POSTER BOARD NUMBER** 603
  **PROVISIONAL ADVISORY LEVEL (PAL) DEVELOPMENT FOR HCL AND HBR.** C. Wood1, D. Gardner1, M. McClanathan1, E. McConnell2, L. Koller3 and F. Adeshina4. 1Oak Ridge Nat Lab, Oak Ridge, TN, 2Inhalation Toxicology Associates, Savannah, GA, 3Retired; Centers for Disease Control and Prevention, Chamblee, GA, 4ToxPath, Inc., Raleigh, NC, 5Environmental Health and Toxicology, Corvalis, OR and 6U.S. EPA, Washington, DC.

* #926
  **POSTER BOARD NUMBER** 604
  **PROVISIONAL ADVISORY LEVELS (PALS) FOR RED PHOSPHORUS SMOKE.** K. Davidson1, D. Gardner2, C. Weese2 and F. Adeshina4. 1Oak Ridge National Laboratory, Oak Ridge, TN, 2Inhalation Toxicology Associates, Savannah, GA, 3USA CHPPM, Aberdeen Proving Ground, MD and 4U.S. EPA, Washington, DC.

* #927
  **POSTER BOARD NUMBER** 605
  **PROVISIONAL ADVISORY LEVEL (PAL) DEVELOPMENT FOR PERFLUOROSOBUTYLENE (PEFB).** P. B. Selby1, D. Dormann1, E. E. McConnell2 and F. Adeshina4. 1Oak Ridge National Laboratory, Oak Ridge, TN, 2North Carolina State University, Raleigh, NC, 3ToxPath Inc., Raleigh, NC and 4U.S. Environmental Protection Agency, Washington, DC.

* #928
  **POSTER BOARD NUMBER** 606
  **PROVISIONAL ADVISORY LEVELS (PALS) DEVELOPMENT FOR POLYTETRAFLUOROETHYLENE (PTFE), TETRAFLUOROETHYLENE (TFE), AND CARBONYL DIFLUORIDE (COF).** J. L. Rayner1, F. Adeshina2, D. Dormann3, G. Henningsen4 and P. McGinnis4. 1ORNl, Oak Ridge, TN, 2NCSU, Raleigh, NC, 3H&H Scientific Services, LLP, Evansville, IN, 4Syracuse Research Corp, Syracuse, NY and 5U.S. EPA, Washington, DC.
Program Description  (Continued)

Abstract #

#929  
**Poster Board Number .............................607**  
PROVISIONAL ADVISORY LEVELS (PALS) FOR PHOSGENE, D. F. Glass1, L. Koller2, M. McClanahan3 and F. Adeishvili4. 1Oak Ridge National Laboratory, Oak Ridge, TN. 2Environmental Health and Toxicology Consultant, Corvallis, OR. 3Retired: Centers for Disease Control and Prevention, Chambliss, GA and 4U.S. EPA, Washington, DC.

#930  
**Poster Board Number .............................608**  
USE OF GENETIC TOXICITY TEST BATTERY IN HAZARD IDENTIFICATION FOR POTENTIAL CARCINOGENICITY OF VETERINARY DRUGS AND FEED INGREDIENTS, D. Jagannath1 and T. Zhou2. 1DHHS, FDA/CVM, Rockville, MD and 2DHHS, FDA/CVM, Rockville, MD.

#931  
**Poster Board Number .............................609**  
MINIMAL RISK LEVELS FOR ORGANIC ARSENICALS, S. Chou1 and L. Ingerman2. 1Division of Toxicology and Environmental Medicine, Agency for Toxic Substances and Disease, Atlanta, GA and 2Syracuse Research Corporation, Syracuse, NY. Sponsor: B. Fowler.

#932  
**Poster Board Number .............................610**  

#933  
**Poster Board Number .............................611**  
INHALATION MINIMAL RISK LEVELS (MRLS) FOR ETHYLZENZENE, H. G. Abadin1, J. B. Taylor1 and J. M. Klitzbachi1. 1Toxicology and Environmental Medicine, ATSDR, Atlanta, GA and 2Environmental Science Center, Syracuse Research Corporation, Syracuse, NY.

#934  
**Poster Board Number .............................612**  
AIR TOXICS HOT SPOTS PROGRAM RISK ASSESSMENT GUIDELINES, PART II: TECHNICAL SUPPORT DOCUMENT FOR DESCRIBING AVAILABLE CANCER POTENCY FACTORS. J. D. Budroe, A. G. Salmon and M. A. Marty. Air Toxicology and Epidemiology Branch, Office of Environmental Health Hazard Assessment (OEHHA), Oakland, CA.

#935  
**Poster Board Number .............................613**  

#936  
**Poster Board Number .............................614**  
ESTIMATING ACCEPTABLE LEVELS OF EXPOSURE TO AIRBORNE SENSORY IRRITANTS USING THE RD, G. V. Alexeff, M. A. Marty and A. Salmon. OEHHA, Cal/EPA, Oakland, CA.

Tuesday Morning, March 18  
9:45 AM to 10:45 AM  
Exhibit Hall 4C-3

**EXHIBITOR HOSTED SESSION: PROGRESS IN ION CHANNEL SAFETY ASSESSMENTS**

Presented by: ChanTest, Inc.

Drug-induced ion channel dysfunction results in widespread adverse reactions. ChanTest provides toxicity screening, secondary confirmatory screening and selectivity profiling using Human Ion Channel Panels® and two automated patch clamp methods, FASTPatch® and SuperFASTPatch®. The ChanTest platform facilitates mechanistic studies and SARs to aid decision-making in drug development.

*up-to-date information at www.toxicology.org*
Tuesday Morning, March 18  
9:45 AM to 10:45 AM  
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: BUILDING A GLOBAL STANDARD GLP PRECLINICAL RESEARCH OPERATION IN CHINA  
Presented by: Charles River Laboratories  
The presentation will cover Charles River Laboratories’ initiative to establish a global standard GLP preclinical research operation in China. In recent years, China, particularly Shanghai, has experienced tremendous growth in the pharmaceutical and biotech industry. Charles Rivers’ objective is to support these companies’ research and development needs by providing preclinical services. The unique challenges and opportunities of operating a GLP preclinical operation in China will be discussed.

Tuesday Morning, March 18  
11:00 AM to 12:00 NOON  
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: THE FUTURE OF TELEMETRY  
Welcome to the future! A look at the newest products and options for the highest quality telemetry systems available. Come hear about systems that can accommodate both implanted and non-invasive telemetry, alarm notification, networking, remote control, database organization, new sensors and more.

Tuesday Morning, March 18  
11:00 AM to 12:00 NOON  
Exhibit Hall 4C-3

EXHIBITOR HOSTED SESSION: KEY CONTEMPORARY CONCEPTS IN NEUROTOXICITY SCREENS  
Presented by: NeuroScience Associates (NSA)  
The most fundamental objective in a neurotoxicity assessment is to assess for potential cell death (neurodegeneration) which is an excellent, but elusive indicator of neurotoxicity. This session will focus on the proper application of contemporary assessment principles (sacrifice schedules and sampling) that can efficiently expose neurodegeneration, enabling accurate safety screens.

Tuesday Afternoon, March 18  
12:00 NOON to 1:15 PM  
Room 3

POSTDOCTORAL ASSEMBLY LUNCHEON  
(Ticket Required)  
Amidst scrambling to attend all of the symposia, poster sessions, and social events at the meeting, this will be time for postdocs to kick back and relax! All postdoctoral fellows are invited to a casual, fun-filled luncheon organized by the Postdoctoral Assembly (PDA). We will announce the first recipients of the Best Postdoctoral Publication Awards and acknowledge the postdocs who received awards this year from Specialty Sections and Regional Chapters. The newly elected PDA Board members for 2008-2009 will also be introduced and will present a short overview of accomplishments and future directions for the PDA. This is a great opportunity for you to meet and congratulate your postdoctoral colleagues and check out opportunities to volunteer and assume leadership roles within SOT. There will be a drawing for prizes.

Tuesday Afternoon, March 18  
12:00 NOON to 1:30 PM  
See Daily Pocket Calendar on page 8 for room listings

SPECIALTY SECTIONS MEETINGS/LUNCHEONS: IN VITRO AND ALTERNATIVE METHODS, OCCUPATIONAL AND PUBLIC HEALTH

Tuesday Afternoon, March 18  
12:00 NOON to 2:00 PM  
Sheraton  
Cedar Room

REGIONAL CHAPTER MEETING/LUNCHEON: CENTRAL STATES
Program Description (Continued)

Tuesday Afternoon, March 18
12:00 NOON to 1:20 PM
Ballroom 6E

TOWN HALL MEETING: SOT STRATEGIC PLAN—DEFINING THE FUTURE OF SOT

Chairperson(s): George B. Corcoran, Wayne State University, Detroit, MI and Kenneth S. Ramos, University of Louisville, Louisville, KY

The future of toxicology is being debated on multiple fronts. As such, it is imperative for the Society to assess the needs and responsibilities of the membership in leading the evolution of the science and practice of toxicology. In 2005, Council determined that an in-depth review of our direction and organizational structure was warranted and that such an assessment should include broad representation of the membership. Between the summer of 2005 and January 2006, three strategy committees were established to advise Council on future directions in three major areas of Society activities and interests: Science, Communications, and Membership. These groups conducted strategy sessions and carefully reviewed the work of past groups including, the Liaison Task Force, the Recruitment and Retention Task Force, and the Communications Committee. The final reports of the three Strategy Committees were received by Council in April 2007, following member input on-line, at the 2007 Town Hall Meeting, and via correspondence. During the spring, summer and fall of 2007, over four 2-day meetings, Council consolidated strategy reports and member input and developed steps for implementation of a 3-year plan. In addition, areas of diverse opinion have been identified and slated for additional member input. The consolidated Council Strategic Plan, which has been posted on the SOT web site for comment, will be presented at the 2008 Town Hall Meeting. Join members of Council for the official roll-out of the plan to learn what to expect from SOT in 2008–2009 and to share your thoughts on how toxicologists can work together toward creating a safer and healthier world by advancing the science of toxicology.

Gathering Information and Putting the Plan to Paper, George Corcoran, Wayne State University, Detroit, MI

From Plan to Reality: What to Expect in 2008–2009, Kenneth Ramos, University of Louisville, Louisville, KY

Tuesday Afternoon, March 18
12:15 PM to 1:15 PM
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: CELL BASED ASSAYS AS AN ALTERNATIVE TO ANIMAL TESTING?

Presented by: Thermo Fisher Scientific

The session will explore the debate relating to cell based assays and the study of toxicity pathways as an alternative to animal testing. Using a series of case studies using High Content Analysis, in toxicology profiling, predictive toxicology and genotoxicity, we will provide evidence to sway the debate in favor of in vitro cell based assays.

Tuesday Afternoon, March 18
12:30 PM–1:20 PM
Ballroom 6B

DISTINGUISHED TOXICOLOGY SCHOLAR AWARD LECTURE: HALF A CENTURY OF PROGRESS IN NEUROTOXICOLOGY: PAST, PRESENT, AND FUTURE

Lecturer: Toshio Narahashi, Northwestern University Feinberg School of Medicine, Chicago, IL.

Progress in neurotoxicology has come a long way. This presentation highlights the progress in our laboratories during 59 years of my scientific careers. Studies of the mechanism of action of insecticides began flourishing in 1950s when many synthetic insecticides were developed. Our study in 1952 showed that DDT prolonged the depolarizing after-potential of the nerve, suggesting the sodium channel as a target site. This discovery eventually led to voltage clamp studies of DDT and pyrethroids demonstrating the prolonged openings of sodium channels being responsible for their toxic action (1967–). Only 1% of sodium channels needs to be modified by pyrethroids to cause hyperactivity of animals (1994–96). DDT and pyrethroids are unique in that they are more potent in killing insects and in modulating the nervous system at low temperatures than at higher temperatures (1954), and the mechanism lies in the temperature dependence of sodium channel prolongation (1998). Glutamate-gated chloride channels, which are present in insects but not in mammals, are a decisive factor in the selective toxicity of fipronil in insects over mammals (2003-05). We previously demonstrated that the reduced sensitivity of the nerve to insecticides played a significant role in the resistance of insects to insecticides (1958-65). This discovery led to the concept of kdr strains of insects, and eventually to the molecular identification of sodium channel mutations in pyrethroid resistance by many investigators. Another important development occurred in 1960 and 1964 when we discovered the selective and potent sodium channel blocking action of the pufferfish toxin, tetrodotoxin (TTX). This discovery caused explosive uses by many of TTX and other toxins/chemicals as tools for the studies of ion channels, a concept that was almost inconceivable before that time. It eventually led to the development of neuroreceptor/channel-based mechanistic studies of a wide variety of chemicals including neuroactive therapeutic drugs and environmental toxicants (1974). This field now represents one of the most important and popular research subjects in biomedical and toxicological sciences. For example, our recent studies of Alzheimer’s drugs have shown that they stimulate not only the cholinergic system but also the NMDA system, both of which are known to be down-regulated in the brain of Alzheimer’s disease patients (2001-07). Neurotoxicology is now progressing toward the molecular mechanisms of drug action. The role of environmental toxicants in causing certain neurodegenerative disorders is receiving much attention these days.
Program Description (Continued)

Abstract #

Tuesday Afternoon, March 18
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: PHARMACOKINETICS AND DISPOSITION

Chairperson(s): Sophia Fang, University of Rochester, Rochester, NY and Stephen Godin, University of North Carolina Chapel Hill, Chapel Hill, NC.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

Poster Board Number .............................................. 101
FEXOFENADINE AS A PROBE DRUG FOR TRANSPORTER ACTIVITY: DEVELOPMENT AND VALIDATION OF AN HPLC-MS/MS METHOD. C. A. Flynn, Y. Alnouti, B. Hagenbuch and G. Reed. Pharmacology, Toxicology, and Therapeutics, University of Kansas Medical Center, Kansas City, KS.

Poster Board Number .............................................. 102
DETERMINANTS OF TRAFFICKING AND FUNCTIONAL ACTIVITY OF THE HETEROERMIC ORGANIC SOLUTE TRANSPORTER, OSTα-OSTβ. N. Li and N. Ballatori. Environmental Medicine, University of Rochester School of Medicine, Rochester, NY.

Poster Board Number .............................................. 103
ABSORPTION AND DISTRIBUTION OF CHROMIUM(VI) AND CHROMIUM(III) IN MALE RATS AND MICE. K. J. Oix, Z. Gao, H. B. Hoffman, K. M. Pacheco and L. C. Ferguson. Lovelace Respiratory Research Institute, Albuquerque, NM.

Poster Board Number .............................................. 104
TOXICITY AND TISSUE DISTRIBUTION OF TITANIUM DIOXIDE (TiO2) NANOPARTICLES IN SUBCUTANEOUSLY AND INTRAVENTRALLY INJECTED MICE OVER 6 MONTHS. T. Umbreit, P. L. Goering, T. J. Miller, J. L. Weaver, S. Francke-Carroll, N. Sudief, J. Kaufman, J. Guthrie, J. Robertson, J. R. S. S. and E. M. Estratmeyer. CDRH/OSEL, FDA, Silver Spring, MD, CDCR/DAPR, FDA, Silver Spring, MD, CFSAN/OCD, FDA, College Park, MD, Univ of Missouri, Columbia, MO and CDCR/DPA, FDA, St. Louis, MO.

Poster Board Number .............................................. 105
CHARACTERIZATION OF PRESYSTEMIC ELIMINATION OF TRICHLOROETHYLENE (TCE) IN RATS FOLLOWING ENVIRONMENTALLY-RELEVANT EXPOSURES. Y. Liu, M. G. Bartlett, C. A. White, S. Muralidhara, J. V. Bruckner and J. W. Fisher. Department of Pharmaceutical & Biomedical Sciences, University of Georgia, Athens, GA and Interdisciplinary Program in Toxicology, University of Georgia, Athens, GA.

Poster Board Number .............................................. 106
INHALATION KINETICS OF JET FUEL COMPONENTS IN THE RAT. S. A. Martin, K. A. Martin, P. R. T. Tremblay and J. W. Fisher. Interdisciplinary Toxicology Program, University of Georgia, Athens, GA and Department of Environmental Health Science, University of Georgia, Athens, GA.


Program Description (Continued)

Abstract #

#956

Poster Board Number ..............................................114

SODIUM PERFLUOROHexaoATE PHARMACOKINETICS IN RATS DURING
AND AFTER 90-DAY ORAL GAVAGE
ADMINISTRATION. M. W. Himmelstein1, B.
P. Slezak2, R. C. Buck3, S. H. Korzeniowski3 and
E. Decker2. 1El DuPont de Nemours & Co. Inc.,
Wilmington, DE and 2MPI Research, State College,
PA.

#957

Poster Board Number ..............................................115

8-2 FLUOROTETELEMOR ALCOHOL: LIVER GLUTATHIONE STATUS, METABOLITE
KINETICS IN TISSUES, AND EXCRETION AND METABOLISM WITH DAILY ORAL
DOsing. W. Fasanos, M. P. Mawn1, D. L. Nabi1, X.
Hau1, B. Szostek1 and M. L. Gargas2. 1Investigative
Sciences, DuPont-Haskell, Newark, DE and 2The
Sapphire Group, Inc., Beavercreek, OH.

#958

Poster Board Number ..............................................116

EVALUATION OF BIOPERSISTENCE
POTENTIAL AMONG CLASSES OF
POLYFLUORINATED CHEMICALS USING A
MAMMALIAN SCREENING METHOD. T. L.
Seres, M. W. Himmelstein, C. Carpenter, R. C. Buck
and S. H. Korzeniowski. E.I. DuPont de Nemours &
Co. Inc., Wilmington, DE.

#959

Poster Board Number ..............................................117

EFFECT OF LOW TO MODERATE DOSES OF ETHYL ALCOHOL ON REACTION
TIMES. F. B. Swann, D. H. Petroni and W. J.
George. Division of Toxicology, Tulane University
School of Medicine, New Orleans, LA.

#960

Poster Board Number ..............................................118

DISPOSITION OF DICLOFENAC AND ITS
METABOLITES IN WILD-TYPE AND MRP3-
NULL MICE. R. J. Scialis1,2, J. E. Manauot3, L.
M. Aleksunes2, L. C. Commonsky2 and C. D. Klaussen3.
1University of Connecticut, Storrs, CT, 2Pfizer Global
Research and Development, Pfizer Inc., Groton, CT
and 3University of Kansas Medical Center, Kansas
City, KS.

#961

Poster Board Number ..............................................119

STEROSELECTIVITY IN DISPOSITION OF
BROMOCHLOROACETIC ACID (BCA) IN
FISCHER 344 RATS AND B6C3F1 MICE. S.
Hong1, J. D. Johnson1, S. Graves1, V. Godfrey1 and
C. Smith1. 1Battelle Memorial Institute, Columbus,
OH and 2NIH, Research Triangle Park, NC.

#962

Poster Board Number ..............................................120

SINGLE ADMINISTRATION GAVAGE
TOXIKINETIC STUDY OF 2
METHYLXITRAHYDROFURAN (MTHF) IN
FISCHER 344/N RATS AND B6C3F1 MICE. J.
D. Johnson1, S. P. Hong1, B. Harritos1, S. Graves1,
V. Godfrey1 and C. Smith1. 1Battelle, Columbus, OH and
2NIH, Research Triangle Park, NC.

#963

Poster Board Number ..............................................121

APPROACHES FOR SETTING AN
ANALYTICAL ASSAY LLOQ IN PRE-
CLINICAL TOXIKINETIC STUDIES. D.
M. Grant, J. Gremminger, M. Miller, J. Margolis
and L. Kendall. Pharmacokinetics, Dynamics and
Metabolism, Pfizer Inc, Groton, CT.

#964

Poster Board Number ..............................................122

ABSORPTION, DISPOSITION, AND
ELIMINATION OF 1-BUTYL-3-
METHYLPERYRIDINIUM CHLORIDE
(BMPy-Cl) FOLLOWING IV, ORAL
AND DERMAL ADMINISTRATION IN RATS.
Sipes. University of Arizona, Tucson, AZ.

#965

Poster Board Number ..............................................123

BIO DISTRIBUTION OF H-PIGMENT
YELLOW 74, A TATTOO INK PIGMENT,
FOLLOWING INTRADERMAL
ADMINISTRATION IN MICE TO MIMIC
TATTOOING. L. H. Couch, N. V. Gopee and P. C.
Howard. Biochemical Toxicology, National Center
for Toxicological Research, U.S. FDA, Jefferson,
AR.

#966

Poster Board Number ..............................................124

USE OF A PHYSIOLOGICALLY-BASED
PHARMACOKINETICS (PBPK) MODEL TO
PREDICT INTERNAL DOSIMETRY OF ZINC
PYRITHIONE (ZPT) IN RATS AND HUMANS.
G. L. Diamond1 and J. F. Nash.1. Syracuse Research
Corporation, Syracuse, NY and 2Procter & Gamble
Co., Cincinnati, OH.

#967

Poster Board Number ..............................................125

PHYSIOLOGICALLY BASED
PHARMACOKINETIC MODEL
DEVELOPMENT AND SIMULATIONS
FOR ETHYLENE DICHLORIDE (1,
2-DICHLOROETHANE) IN RATS. M.
Gargas and L. Sweeney. The Sapphire Group, Inc.,
Beavercreek, OH.

#968

Poster Board Number ..............................................126

ABSORPTION, DISTRIBUTION,
METABOLISM AND EXCRETION
OF INTRAVENOUSLY AND ORALLY
ADMINISTERED BIS-2-(BROMOMETHYL)
PROPANE-1, 3-DIOL IN MALE FISCHER-344
RATS. S. I. Hoehle, G. A. Knudsen, L. M. Jacobs,
R. K. Kaeuser and I. Sipes. Pharmacology, University of
Arizona, Tucson, AZ.

#969

Poster Board Number ..............................................127

STUDY OF THE AGGREGATE EFFECTS OF
INGESTION, INHALATION AND DERMAL
EXPOSURE TO THE INTERNAL DOSE OF
TOLUENE IN RATS. M. Gagne, G. Charest-
Tardif, K. Krishnan and R. Tardif. GRIS - Santé
environnementale et santé au travail, Université de
Montréal, Montréal, QC, Canada.

#970

Poster Board Number ..............................................128

PHARMACOKINETICS OF BIS-
METHYL SALICYLATE CARBONATE
(BMSc) AND ITS HYDROLYSIS TO
METHYL SALICYLATE (MS) AND
SALICYLIC ACID (SA) AFTER A SINGLE
ORAL (GAVAGE) DOSE TO RATS, D. I.
Draganov2, T. L. Johnson1, S. S. Dimond1 and J. Van
Miller1. 1Metabolism, WIL Research Laboratories,
L.L.C. Ashland, OH, 2GE Plastics, Pittsfield, MA and
3TRS, Charlottesville, VA.
Program Description (Continued)

Abstract # | Poster Board Number | Abstract # | Poster Board Number
--- | --- | --- | ---
#971 | #129 | #974 | #132
SINGLE INTRAVENTRICULAR ADMINISTRATION TOXICOLOGICAL STUDY (TKS) OF GLYOXYLIC ACID MONOHYDRATE (GXA) USING MALE AND FEMALE FISCHER 344 RATS, S. Graves1, J. Merrill1, S. P. Hong1, B. Burback1, J. D. Johnson1, V. Godfrey2 and C. Smith2. 1Battelle, Columbus, OH and 2NIEHS, NIH, Research Triangle Park, NC.

#972 | #130 | #974 | #133
EFFECT OF DRINKING WATER PRE-CONDITIONING ON TOXICOLOGICAL SENSITIVITY OF BROMOCHLOROACETIC ACID (BCA) IN FISCHER 344 RATS AND B6C3F1 MICE, V. Godfrey1, S. Hong1, J. D. Johnson1, S. Graves1 and C. Smith2. 1Battelle Memorial Institute, Columbus, OH and 2NIEHS, NIH, Research Triangle Park, NC.

#973 | #131 | #974 | #134
HUMAN GLUTATHIONE S-TRANSFERASE OMEGA IS INHIBITED BY TOCOPHEROL ESTERS, A. Sampayo-Reyes1, A. Hernandez2 and R. A. Zakharyan. 1Toxicology and Pharmacology, Centro de Investigaciones Biomedicas, Monterrey, Nuevo Leon, Nuevo Leon, Mexico, 2Department of Molecular and Cellular Biology, The University of Arizona, Tucson, AZ, and 3Departamento de Genética e Microbiología, Universitat Autònoma de Barcelona, Barcelona, Spain.

#974 | #132 | #974 | #135
KINETICS FOR ETHYLENE DICHLORIDE (EDC) AND ITS EFFECTS ON LIVER, KIDNEY AND LUNG GLUTATHIONE (GSH) IN RATS FOLLOWING INHALATION OR ORAL ADMINISTRATION, S. A. Saghir1, A. J. Clark, M. M. Goedeke, M. S. Carr, S. M. Krieger and D. L. Rick. The Dow Chemical Company, Midland, MI.

#975 | #133 | #975 | #136

#976 | #134 | #976 | #137

#977 | #135 | #977 | #138
THE USE OF “CLEAN” FUELS TO IMPROVE AIR QUALITY, T. W. Heiterberg1, C. A. Lapin2 and W. B. Bunn3. 1International Truck and Engine Corporation, Warrenville, IL and 2Lapin and Associates, Glendale, CA.

#978 | #136 | #978 | #139

#979 | #137 | #979 | #140
MANGANESE AND THE DEVELOPMENT OF REFERENCE EXPOSURE LEVELS TO PROTECT AGAINST 8-HOUR AND CHRONIC EXPOSURES TO ACROLEIN, A. Salmoni1, B. Winder2, J. Brown3 and M. Marty4. 1OEHHA, CalEPA, Sacramento, CA and 2OEHHA, Cal/EPA, Oakland, CA.

#980 | #138 | #980 | #141
THE DEVELOPMENT OF REFERENCE EXPOSURE LEVELS TO PROTECT AGAINST ACUTE, 8-HOUR AND CHRONIC EXPOSURES TO ACROLEIN, A. Salmoni1, B. Winder2, J. Brown3 and M. Marty4. 1OEHHA, CalEPA, Sacramento, CA and 2OEHHA, Cal/EPA, Oakland, CA.

#981 | #139 | #981 | #142

#982 | #140 | #982 | #143
CHEMICALS RISK ASSESSMENT UNDER THE NEW EUROPEAN REACH REGULATION, T. Pery and F. R. Tencalla. ToxMinds BVBA, Hoeliaart, Belgium.

#983 | #141 | #983 | #144
INTEGRATION OF LIFE-STAGE AND EXPOSURE DURATION ASSESSMENTS INTO DERIVATION OF STANDARDS, H. Goedten, P. Moyer and C. Greene, Minnesota Department of Health, St. Paul, MN.

#984 | #142 | #984 | #145
TOXICOLOGY CONSIDERATIONS FOR PRECLINICAL DEVELOPMENT OF ANTICANCER DRUGS, P. Colombo, M. Cattoni, R. Pulci and M. Brughera. Accelerata, Preclinical Development, Nerviano Medical Sciences, Nerviano, Milano, Italy.

#985 | #143 | #985 | #146
PROGRESSING FROM THE MOUSE BIOASSAY FOR SHELLFISH TOXIN TESTING IN CANADA, A. Guy and G. Griffin. Canadian Council on Animal Care, Ottawa, ON, Canada. Sponsor: A. Goldberg.
Program Description (Continued)

Abstract #

#986  
**Poster Board Number ..........................204**

EXTRAPOLATING HUMAN EFFECT THRESHOLDS FROM ANIMAL TOXICITY DATA FOR THE DERIVATION OF IMMEDIATELY DANGEROUS TO LIFE AND HEALTH VALUES. A. Parker¹, A. Maier², G. Dotson³ and C. L. Geraci¹. ¹Toxicology Excellence for Risk Assessment, Cincinnati, OH and ²EID, CDC/NIOSH, Cincinnati, OH.

#987  
**Poster Board Number ..........................205**

DEVELOPMENT OF AN IMPROVED STRATEGY FOR THE DERIVATION OF SKIN NOTATIONS. G. Dotson¹, A. Maier², B. Gadagbui³ and C. L. Geraci¹. ¹EID, CDC/NIOSH, Cincinnati, OH and ²Toxicology Excellence for Risk Assessment, Cincinnati, OH.

#988  
**Poster Board Number ..........................206**

THE NICEATM-ICCVM FIVE YEAR PLAN: CREATING A PATH FORWARD TO REDUCE, REFINED AND REPLACE ANIMAL TESTING. A. Poland¹, M. Wind¹, W. Stokes¹, D. Allen¹, S. Fitzpatrick¹, J. Kolpa-Eddy², D. Hattan³, A. Jacobs¹, D. McCarley¹, A. Rispin¹, M. Snyder¹ and C. Sprankle¹. ¹NCEATM, RTP, NC, ²ILS, Inc., NICEATM, RTP, NC, ³FDA, Rockville, MD, ⁴USDA, Riverdale, MD, ⁵FDA, College Park, MD, ⁶FDA, Silver Spring, MD, ⁷EPA, Washington, DC and ⁸OD, NIH/DHHS, Bethesda, MD.

Abstract #

Tuesday Afternoon, March 18
1:00 PM to 4:30 PM
Exhibit Hall

**POSTER SESSION: APPLICATIONS OF BIOLOGICAL MODELING**

Chairperson(s): Kannan Krishnan, University of Montreal, Montreal, QC, Canada.

Displayed: 1:00 PM–4:30 PM

Attendee #

#992  
**Poster Board Number ..........................210**

AUTOMATED SELF-SIMILARITY ANALYSIS OF AIRWAYS IN THE SPRAGUE DAWLEY RAT. B. Neralidik¹, D. R. Einstein¹, C. Wallis¹, N. Pollisar¹, J. Carson¹, A. Kuprat¹ and R. Corley². ¹Biological Monitoring and Modeling, Pacific Northwest National Laboratory, Richland, WA, ²The Mountain-Whisper-Light Statistical Consulting, Seattle, WA and ³Priamite Center, University of Davis, Davis, WA.

#993  
**Poster Board Number ..........................211**

SIMULATION OF INSPIRATORY AIRFLOW IN THE B6C3F1 MOUSE NASAL PASSAGES. J. S. Kimbell¹, E. A. Gross¹ and J. D. Schroeter. The Hamner Institutes for Health Sciences, Research Triangle Park, NC.

#994  
**Poster Board Number ..........................212**

DOSIMETRY PREDICTIONS OF INHALED HEXAMETHYLENEDIISOCYANATE IN THE HUMAN RESPIRATORY TRACT. J. D. Schroeter, B. Asgharian, J. S. Kimbell and M. E. Andersen. The Hamner Institutes for Health Sciences, Research Triangle Park, NC.

#995  
**Poster Board Number ..........................213**

NANOPARTICLE DEPOSITION IN THE RAT NASAL CAVITY: PREDICTION OF DOSE TO THE OLFATORY EPITHELIUM. G. J. Garcia, K. Nazrioudost and J. S. Kimbell. Computational Biology Division, The Hamner Institutes for Health Sciences, Research Triangle Park, NC.

#996  
**Poster Board Number ..........................214**

A MODEL OF NANOPARTICLE TRANSPORT AND DEPOSITION IN THE NASAL AND LUNG AIRWAYS OF HUMANS AND RATS. B. Asgharian¹, O. T. Price¹, B. A. Wong² and E. Tewksbury². ¹Division of Computational Biology, The Hamner Institutes for Health Sciences, Research Triangle Park, NC and ²Division of Biological Sciences, The Hamner Institutes for Health Sciences, Research Triangle Park, NC.

#997  
**Poster Board Number ..........................215**

# Poster Board Number ................................. 216
Abstract #
#998 A HIERARCHICAL ALGORITHM FOR COMPUTING DISTRIBUTIONS OF HUMAN BLOOD: AIR PARTICULATION COEFFICIENTS (PB) OF TOLUENE, P. Thomas and K. Krishnan. SEEST, Université de Montréal, Montréal, QC, Canada.

# Poster Board Number ................................. 217
Abstract #
#999 PREDICTING NERVE AGENT TISSUE/BLOOD PARTITION COEFFICIENTS USING ALGORITHMS ACCOUNTING FOR ACCESSIBLE TISSUE FRACTION, T. R. Sterner and P. J. Robinson. HF, Wright-Patterson AFB, OH.

# Poster Board Number ................................. 218
Abstract #
#1000 EVALUATION OF POTENTIAL BIOACCUMULATION OF UNMETABOLIZED COMPOUNDS BY DE NOVO ESTIMATION OF MAMMALIAN PHYSIOLGY/BASED PHARMACOKINETICS, M. Bartels1, D. L. Rick1, E. R. Lowe1, T. McMullin1, S. E. Erhardt1 and K. Woodburn2. 1Toxicology, Dow Chemical, Midland, MI and 2Toxicology, Dow Corning, Midland, MI.

# Poster Board Number ................................. 219
Abstract #

# Poster Board Number ................................. 220
Abstract #

# Poster Board Number ................................. 221
Abstract #

# Poster Board Number ................................. 222
Abstract #
#1004 PHYSIOLOGICALLY-BASED PHARMACOKINETIC MODELING OF P-METHOXYTOLUENE IN MALE AND FEMALE SPRAGUE-DAWLEY RATS, G. Humelin, K. Krishnan and R. Tardif. GRIS, Santé environnementale et santé au travail, Université de Montréal, Montréal, QC, Canada.

# Poster Board Number ................................. 223
Abstract #
#1005 PBPK MODELING OF CHLOROZOXAZONE AND ITS 6-HYDROXY METABOLITE IN HUMANS, K. Krishnan1, T. Adamou1, L. Erstad2, M. Warholm2 and G. Johanson2. 1SEST, University of Montreal, Montreal, QC, Canada and 2Karolinska Institutet, Stockholm, Sweden.
Program Description (Continued)

Abstract #  #1014

Poster Board Number .................................232

PREDICTING LACTATIONAL AND EARLY POST-WEANING EXPOSURES IN RATS USING BIOLOGICALLY BASED PHARMACOKINETIC MODELING. M. Yoon1 and H. A. Barton2. 1Research Associateship Program, National Research Council, RTP, NC and 2National Center for Computational Toxicology, U.S. Environmental Protection Agency, RTP, NC.

Abstract #  #1015

Poster Board Number .................................233

UTILIZING PK/PD RELATIONSHIPS FOR INHIBITION OF SOD1 EXPRESSION IN BRAIN AND SPINAL CORD (CNS) OF RATS AND MONKEYS TO PREDICT HUMAN ASO DOSE. R. S. Geary1, G. Hung2, S. P. Henry2, R. Boyd1 and F. Bennett1. 1ISIS Pharmaceuticals, Inc. Carlsbad, CA and 2Northern Biomedical Research, Inc., Muskegon, MI.

Abstract #  #1016

Poster Board Number .................................234

PHYSIOLOGICALLY-BASED PHARMACOKINETIC MODELING OF AN ALKYLBENZENE MIXTURE IN CHILDREN OF VARIOUS AGE GROUPS. T. Adamou1, S. Haddad1 and K. Krishnam1. 1Biological sciences, Université du Québec à Montréal, Montréal, QC, Canada and 2GRIS/TOXHUM, Université de Montréal, Montréal, QC, Canada.

Abstract #  #1017

Poster Board Number .................................235

PBPK MODELS FOR MIXTURES OF DIOXIN-LIKE CHEMICALS. M. Easterling1, N. J. Walker2, F. M. Parham2 and C. J. Portier2. 1Constella Group, Durham, NC and 2National Institute of Environmental Health Sciences, RTP, NC.

Tuesday Afternoon, March 18

1:00 PM to 4:30 PM

Exhibit Hall

NANOTECHNOLOGY

POSTER SESSION: NANOPARTICLES: TARGET ORGANS

Chairperson(s): Margaret Kraeling, U.S. Food and Drug Administration, College Park, MD.

Displayed: 1:00 PM–4:30 PM

Attended: 2:45 PM–4:30 PM

Abstract #  #1018

Poster Board Number .................................236

EFFECT OF DYNAMIC BLOOD PARTITIONING DURING LATE GESTATION ON CHLORPYRIFOS DOSIMETRY. T. S. Poet1, E. Lowe1, J. L. Mattsson1, M. J. Bartels1 and C. Timchalk1. 1Biological Monitoring and Modeling, Pacific Northwest Nat’l Lab, Richland, WA and 2The Dow Chemical Company, Midland, MI.

Abstract #  #1019

Poster Board Number .................................237

A DISCRETE TIME MODEL TO ANALYZE THE EFFECTS OF TOXICANTS ON THE GROWTH OF C. ELEGANS NEMATODES IN A MEDIUM THROUGHPUT SETTING. M. Smith1, W. Boyd1, S. McBride1, G. Kissling2, J. H. Freedman1 and C. Portier2. 1Constella, Durham, NC, 2National Institutes of Health (NIH)/National Institute of Environmental Health Sciences(NIEHS)/Laboratory of Molecular Toxicology, Research Triangle Park, NC and 3Duke University/Nicholas School of the Environment and Earth Sciences, Durham, NC.

Abstract #  #1020

Poster Board Number .................................238

Program Description (Continued)

Abstract #  

#1026  
**Poster Board Number** ..................304  
1. Applied Biotechnology Branch, RHPB, Air Force Research Labs, Wright Patterson, OH and 2Oak Ridge National Laboratory, Oak Ridge, TN.

#1027  
**Poster Board Number** ..................305  
**BIOLOGICAL INTERACTIONS OF QUANTUM DOT NANOPIERCATIONS IN SKIN AND IN HUMAN EPIDERMAL KERATINOCYTES, L. W. Zhang, W. W. Yu, V. L. Colvin and N. A. Monteiro-Riviere.**  
‘Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC and 3Department of Chemistry, Rice University, Houston, TX.

#1028  
**Poster Board Number** ..................306  
**ION-PAIRING EFFECTS ON SKIN ABSORPTION OF CHARGED NANOPIERCATIONS, X. Xiao, N. A. Monteiro-Riviere and J. E. Riviere.**  
Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.

#1029  
**Poster Board Number** ..................307  
**EVALUATION OF QUANTUM DOT NANOPIERCATION PENETRATION IN HUMAN SKIN, N. A. Monteiro-Riviere and A. O. Inman.**  
Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.

#1030  
**Poster Board Number** ..................308  
**COMPARISON OF NINE VIABILITY METHODS IN HUMAN EPIDERMAL KERATINOCYTES TREATED WITH DIFFERENT NANOPIERCATIONS, A. O. Inman and N. A. Monteiro-Riviere.**  
Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.

#1031  
**Poster Board Number** ..................309  
**INDUCTION OF AP-1-MAPKS AND NF-KB SIGNAL PATHWAYS BY TUNGSTEN CARBIDE-COBALT PARTICLES, M. Ding, J. Zhao, L. Bowman, S. Leonard, Y. Lu, E. Kissin, A. Murray, V. Vallyathan, V. Castranova and A. Shvedova.**  
Pathology and Physiology Research Branch, National Institute for Occupational Safety and Health, Morgantown, WV.

#1032  
**Poster Board Number** ..................310  
**IN VITRO PENETRATION OF DENDRIMER NANOPIERCATIONS INTO HUMAN SKIN, M. E. Kraelig, O. A. Ogunsola and R. L. Bronaugh.**  

#1033  
**Poster Board Number** ..................311  
**INTRAVENOUS ADMINISTRATION OF GADOLINIUM MODIFIED NANOPIERCATIONS TO SPRAGUE-DAWLEY RATS, K. L. Steinmetz, L. Rausch and B. MacQueen.**  
Biosciences and Physical Sciences Divisions, SRI International, Menlo Park, CA.

**#1034**  
**Poster Board Number** ..................312  
**INDUCTION OF MATRIX METALLOPROTEINASE 2 AND 9 BY HUMAN MONOCYTES IN RESPONSE TO DIFFERENT TYPES OF METAL NANOPIERCATIONS, Q. Zhang, R. Wan, Q. Yang, Y. Mo and D. J. Tollerud.**  
Environmental and Occupational Health Sciences, University of Louisville, Louisville, KY.

**#1035**  
**Poster Board Number** ..................313  
1. Center for Neurosciences and Cell Biology, Department of Zoology, University of Coimbra, Coimbra, Portugal, 2Applied Biotechnology, Air Force Research Laboratory/HEPB-Wright Patterson Air Force Base, AFRL, Dayton, OH and 3MAR. Mitochondrial Research Group, Department of Zoology, University of Coimbra, Coimbra, Portugal.

**#1036**  
**Poster Board Number** ..................314  
**INFORMATION OF ENDOCYTOSIS IN UPTAKE OF PHOSPHATIDYLSEIERINE-COATED SINGLE-WALLED CARBON NANOPIERCATIONS BY RAW 264.7 MACROPHAGES, W. Feng, N. V. Konduru, Y. Y. Tsurina, K. Clark, D. B. Stolz, H. Bayir, B. Fadeel, A. A. Shvedova and V. E. Kagan.**  
1. Center for Free Radical and Antioxidant Health, Department of EOH, University of Pittsburgh, Pittsburgh, PA, 2Department of Critical Care Medicine, University of Pittsburgh, Pittsburgh, PA and 3Department of Cell Biology & Physiology, University of Pittsburgh, Pittsburgh, PA. 4Institute of Environmental Medicine, Karolinska Institute, Stockholm, Sweden and 5Division of Pathology/Physiology, NIOSH, Morgantown, WV.

**#1037**  
**Poster Board Number** ..................315  
**INHALED MULTIWALLED CARBON NANOPIERCATION INDUCTION OF IMMUNOMODULATORY CYTOKINES AND STRESS ASSOCIATED ENZYMES IN VIVO, L. Mitchell, F. Lauer, A. Gigliotti, R. Vander Wal, S. Burchiel and J. McDonald.**  
1. Lovelace Respiratory Research Institute, Albuquerque, NM, 2College of Pharmacy, University of New Mexico, Albuquerque, NM and 3NMCR, NASA-Glenn Research Center, Cleveland, OH.

**#1038**  
**Poster Board Number** ..................316  
U.S. EPA, RTP, NC.

**#1039**  
**Poster Board Number** ..................317  
**CYTOTOXIC EFFECT OF SILICA NANOPIERCATIONS IN HUMAN IMMUNOLOGICAL CELLS, J. A. Torres-Hernandez, D. A. Lawrence and J. G. Ault.**  
1. Texas Southern University, Houston, TX and 2Wadsworth Center New York State Department of Health, Albany, NY.
Program Description (Continued)

Abstract #

#1040  Poster Board Number ...........................................318  STUDY OF HEPATOTOXICITY OF BIOMATERIALS IN BABB-WEBSTER MICE TREATED WITH CARBON NANOTUBES, A. K. Patlolla, B. Knighten, D. McAllister and P. Tchouwou. Jackson State University, Jackson, MS.

#1041  Poster Board Number ...........................................319  ASSESSING IN VITRO RESPONSES OF MURINE SPLENO CYTES TO DANSYL-SILAN XANE NANO PARTICLES THROUGH FLOW CYTOMETRIC METHODS, J. F. Nyland, J. Bai, H. E. Katz and E. K. Silbergeld. 1Environmental Health Sciences, Johns Hopkins Univ SPH, Baltimore, MD and 2Materials Science, Johns Hopkins University, Baltimore, MD.

#1042  Poster Board Number ...........................................320  NEUROTOXICITY ASSESSMENT OF SILVER-25 NANO PARTICLES: AN IN VITRO AND IN VIVO STUDY, M. F. Rahman, J. Wang, T. A. Patterson, H. M. Duhart, G. D. Newport, S. M. Hussain, J. J. Sclager and S. F. Ali. 1Neurochemistry Laboratory, Division of Neurotoxicology, NCTR/FDA, Jefferson, AR and 2Applied Biotechnology Branch, Human Toxicological Research, Air Force Research Laboratory, Wright-Patterson AFB, OH.

#1043  Poster Board Number ...........................................321  EXPRESSION CHANGES OF DOPAMINERGIC SYSTEM-RELATED GENES IN PC12 CELLS INDUCED BY MN, AG, OR CU NANO PARTICLES, J. Wang, M. F. Rahman, H. M. Duhart, T. A. Patterson, S. M. Hussain, J. J. Sclager and S. F. Ali. 1Division of Neurotoxicology, NCTR, Jefferson, AR and 2Applied Biotechnology Branch, Air Force Research Laboratory, Wright-Patterson AFB, OH.

#1044  Poster Board Number ...........................................322  TRANSCRIPT PROFILES OF METAL OXIDE NANO PARTICLE-TREATED COLON CANCER CELLS, P. J. Moos, M. Honegger, K. Olsewski, N. Cutter and J. M. Verath. Pharmacology & Toxicology, University of Utah, Salt Lake City, UT.

#1045  Poster Board Number ...........................................323  ENHANCEMENT OF PLATELET ACTIVATION AND THROMBUS FORMATION BY SILVER NANO PARTICLES, E. Jun, O. Bar, K. Lim, E. Chebl and J. Chung. College of Pharmacy, Seoul National University, Seoul, South Korea.

#1046  Poster Board Number ...........................................324  CYTOTOXICITY OF MICRO AND NANO METALLO-OXIDE: A COMPARATIVE STUDY, B. Viviani, A. Fachi, F. Bresciani, M. Boraso, S. Bartasaggi, E. Corsini, C. L. Galli and M. Marinovich. Department of Pharmacological Sciences, University of Milan, Milan, Italy.

#1047  Poster Board Number ...........................................325  INTERACTIONS OF NANO- AND MICRO-SIZED MESOPOROUS SILICA PARTICLES WITH PRIMARY HUMAN MONOCYTE-DERIVED MACROPHAGES, B. Fadeel, E. Witas and A. Garcia-Bennett. 1Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden and 2Department of Engineering Sciences, Uppsala University, Uppsala, Sweden. Sponsor: V. Kagan.

#1048  Poster Board Number ...........................................326  TOXICITY OF SILICON NANOPARTICLES AND MICROPARTICLES, J. Choi, O. Q. Zhang, V. M. Hitchins, E. M. Stratmeyer, P. L. Goering, R. Vyta and N. Wang. 1Center for Devices and Radiological Health, U.S. Food and Drug Administration, Silver Spring, MD, 2Biochemical Science Division, National Institute of Standards and Technology, Gaithersburg, MD and 3Department of Chemical and Biomolecular Engineering, Univ of Maryland, College Park, MD.

#1049  Poster Board Number ...........................................327  EFFECT OF CARBON NANOPARTICLE EXPOSURE ON RENAL BARRIER EPITHELIAL CELLS IN VITRO, F. A. Witman, A. D. Amos, E. A. Chernoff, D. Hong, X. Lai, H. N. Ringham and B. L. Blazer-Yost. 1Cellular & Integrative Physiology, Indiana University School of Medicine, Indianapolis, IN and 2Biological, Indiana University Purdue University - Indianapolis, Indianapolis, IN.


#1051  Poster Board Number ...........................................329  INDUCTION OF METALLOTHIEIN IN PORCINE KIDNEY CELLS BY QUANTUM DOTS, C. B. McLeland, S. E. McLeland and S. T. Stern. Nanotechnology Characterization Laboratory, National Cancer Institute, Frederick, MD. Sponsor: N. Walker.

#1052  Poster Board Number ...........................................330  TOXICITY OF CARBON AND METAL BASED NANOPARTICLES IN HEPG2 CELLS, R. C. Casabar, P. Phadke-Gupta, A. Wallace, J. J. Sclager and S. M. Hussain. 1Applied Biotechnology Branch, RHPB, Air Force Research Labs, Wright Patterson, OH and 2Department of Environmental and Molecular Toxicology, North Carolina State University, Raleigh, NC.

#1053  Poster Board Number ...........................................331  SILVER NANOPARTICLES DISRUPT GDNF SIGNALING IN MALE GERM-LINE STEM CELLS, L. K. Braydich-Stolle, B. Lucas, R. C. Murdock, A. M. Schrand, T. Lee, J. J. Sclager, S. M. Hussain and M. Hofmann. 1Applied Biotechnology Branch, RHPB, Air Force Research Labs, Wright Patterson, OH, 2Department of Veterinary Biosciences, University Of Illinois at Urbana Champaign, Urbana, IL and 3Institute for Genomic Biology, University Of Illinois at Urbana Champaign, Urbana, IL.

#1054  Poster Board Number ...........................................332  SILVER NANTOXICITY IS MEDIATED BY 2-MERCAPTOETHANOL IN JURKAT CELLS, K. Szczublewski, S. LeMay, E. Romer, C. Sulewics, J. Schaler and S. Hussain. 1Applied Biotechnology Branch, RHPB, Air Force Research Labs, Wright Patterson, OH, 2Avecect, Springfield, OH and 2Pharmacology and Toxicology, Wright State University, Springfield, OH.

up-to-date information at www.toxicology.org
Program Description (Continued)

#1055
Poster Board Number 333
FUNCTIONALLY CHARGED NANOSIZE PARTICLES DIFFERENTIALLY ACTIVATE BV2 MICROGLIA. B. Veronezi1, L. Liu2, S. Hester1, W. Ward1, J. Tajuba1, M. Pooler4, C. Swartz1, N. Saleh1, G. V. Lowry4 and S. A. Simon4.

#1056
Poster Board Number 334
QUANTITATIVE DETERMINATION OF C60 FULLERENE BY LC-MS/MS AND ITS TISSUE DISTRIBUTION FOLLOWING ORAL ADMINISTRATION TO RATS. R. Kubota1, M. Tahara1, K. Shimizu1, H. Tokunaga1, A. Hirose2, M. Enomoto and T. Nishimurad1. Division of Environmental Chemistry, National Institute of Health Sciences, Tokyo, Japan and Division of Risk Assessment, Biological Safety Research Center, National Institute of Health Sciences, Tokyo, Japan.

Tuesday Afternoon, March 18
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: BREAST CANCER: MECHANISMS, BIOMARKERS, AND CHEMOPREVENTION

Chairperson(s): Melanie Flint, University of Pittsburgh Cancer Institute, Pittsburgh, PA and Thu Nguyen, Kansas State University, Manhattan, KS.

Displayed: 1:00 PM-4:30 PM

Attended: 1:00 PM-2:45 PM

#1057
Poster Board Number 335
THE EQUINE ESTROGEN METABOLITE, 4-HYDROXYEQUilenIN, ACTIVATES ESTROGEN RECEPTOR-MEDIATED GENE TRANSCRIPTION AND ENHANCES GENOTOXICITY IN ER ALPHA(+) CELLS. K. Peng2, Z. Wang1, M. Chang1, J. Frazer1, B. Dietz1, G. R. Thatcher1 and J. L. Bolton1. Medical Chemistry, University of Illinois at Chicago, Chicago, IL, Metabolism and Pharmacokinetics, LG Life Sciences, Daejeon, South Korea and Physiology and Biophysics, University of Illinois at Chicago, Chicago, IL.

#1058
Poster Board Number 336
ESTROGEN RECEPTOR ALPHA SELECTIVELY MEDIATES OXIDATIVE DNA DAMAGE INDUCED BY THE EQUINE CATECHOL ESTROGEN 4-HYDROXYEQUilenIN IN ER ALPHA POSITIVE BREAST CANCER CELLS. Z. Wang, L. Yuan, K. Peng, B. Dietz, G. R. Thatcher, R. B. van Breemen and J. L. Bolton. Department of Medicinal Chemistry & Pharmacognosy, University of Illinois at Chicago, Chicago, IL.

#1059
Poster Board Number 337
MECHANISM OF ESTROGEN CARCINOGENESIS: DEPURINATING DNA ADDUCTS AND CELLULAR TRANSFORMATION FROM REACTIVITY OF ELECTROPHILIC OXIDATIVE METABOLITES. I. Kastrati1, P. D. Edisringhe, J. L. Bolton and G. R. Thatcher. Medicinal Chemistry, University of IL at Chicago, Chicago, IL.

#1060
Poster Board Number 338
COMBINED EFFECTS OF ESTROGEN AND IONIZING RADIATION ON EPIGENETIC PROCESSES IN RAT MAMMARY GLAND. K. Kutanz1, V. Tryndyak2, I. Pogriny2 and O. Kovalchuk1. University of Lethbridge, Lethbridge, AB, Canada and NCTR, Jefferson, AR.

#1061
Poster Board Number 339
ROLE OF THE ARYL HYDROCARBON RECEPTOR IN MAMMARY TUMOR PROGRESSION. S. Narasimhan1 and D. H. Sherr2,3. Department of Pathology and Laboratory Medicine, Boston University Medical Center, Boston, MA and Department of Environmental Health, Boston University School of Public Health, Boston, MA.

#1062
Poster Board Number 340
EXPOSURE TO SERUM FROM SOY-FED RATS RESULTS IN PROTEASOME-MEDIATED DEGRADATION OF ARYL HYDROCARBON RECEPTOR IN FGFR-4 CELLS. R. Singh1, T. M. Budgery2 and M. J. Ronis1. Pharmacology & Toxicology, UAMS, Little Rock, AR and Physiology & Biophysics, UAMS, Little Rock, AR.

#1063
Poster Board Number 401
MOLECULAR DETERMINATION OF STRESS HORMONE-MEDIATED DRUG RESISTANCE TO PALITAXEL IN BREAST CANCER. M. Flint1, B. L. Hood1, G. Kim1, J. N. Sutton1,2 and T. P. Conrads1. Pharmacology, University of Pittsburgh Cancer Institute, Pittsburgh, PA and BRIMS center, Cambridge, MA.

#1064
Poster Board Number 402
EPIGENETIC DysREGULATION IN ESTROGEN-INDUCED BREAST CARCINOGENESIS. O. Kovalchuk1, K. Kutanz1, V. Tryndyak2 and I. Pogriny2. University of Lethbridge, Lethbridge, AB, Canada and Biochemical Toxicology, NCTR, Jefferson, AR.

#1065
Poster Board Number 403
COMPARISON OF BIOMARKERS IN HUMAN BREAST CANCER CASES AND RAT MAMMARY TUMORS. P. Krishnan1,2, K. Yan1,2, J. Tubbs3,2, B. Li2 and H. Kleiner1,2. Pharmacology, Toxicology and Neuroscience, LSU Health Sciences Center, Shreveport, LA and Department of Surgical Oncology, LSU Health Sciences Center, Shreveport, LA and Feist Weiller Cancer Center, LSU Health Sciences Center, Shreveport, LA.
Program Description (Continued)

Abstract #

#1066

Poster Board Number: 404

DEVELOPMENT OF BREAST CANCER IN HAMSTERS AS A MODEL TO TEST ONColytic VIroTHErapy. M. Coburn1, J. Podduturi1, J. M. Mathis3 and H. E. Kleiner3, 1Pharmacology, Toxicology and Neuroscience, LSUMed Shreveport, Shreveport, LA, 2Cellular Biology and Anatomy, LSUMed Shreveport, Shreveport, LA and 3Veist-Weiller Cancer Center, LSU-HSC Shreveport, Shreveport, LA.

#1067

Poster Board Number: 405

MODULATION OF XENOBIOTIC-METABOLIZING ENZYMES BY CHEMOPREVENTIVE AND CHEMOTHERAPEUTIC COMPOUNDS TO SUPPRESS MAMMARY DNA ADDUCTS AND TUMORS. S. R. Kondraganti, L. Wang, W. Jiang, K. Mathis and B. Mowry, Pediatrics, Baylor College of Medicine, Houston, TX.

#1068

Poster Board Number: 406

ANTI-TUMOR EFFECT OF SUSTITUTED QUINOLINES. T. A. Nguyen, S. Kim and T. Ohira, Diagnostic Medicine, Kansas State University, Manhattan, KS.

#1069

Poster Board Number: 407

THE MAMMARY EPITHELIAL CELL SPECIFIC ROLE OF PEROXISOME PROLIFERATOR-ACTIVATED RECEPTOR (PPAR)γ IN DMBA-MEDIATED BREAST TUMOURIGENESIS. C. J. Nicoll1,2, J. M. Roche2 and N. Peterson2, 1Pathology & Molecular Medicine, Queen’s University, Kingston, ON, Canada, 2Pharmacology & Toxicology, Queen’s University, Kingston, ON, Canada and 3Division of Cancer, Biology & Genetics, CRI, Queen’s University, Kingston, ON, Canada.

#1070

Poster Board Number: 408

EXPOSURE TO TCDD DURING PREGNANCY DELAYS DEVELOPMENT OF DMBA-INDUCED MAMMARY TUMORS. B. A. Vorderstrasse and T. Wang, Pharmaceutical Sciences, Washington State University, Pullman, WA.

Tuesday Afternoon, March 18
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: INHALATION TOXICOLOGY

Chairperson(s): James Wagner, Michigan State University, East Lansing, MI and Jon Hotchkiss, The Dow Chemical Company, Midland, MI.

Displayed: 1:00 PM–4:30 PM

Attended: 2:45 PM–4:30 PM

#1071

Poster Board Number: 409

COMPARATIVE EFFECTS OF SUBCHRONIC INHALATION EXPOSURE OF RODENTS TO DIESEL AND GASOLINE ENGINE EMISSIONS, HARDWOOD SMOKE, AND SIMULATED DOWNWIND COAL EMISSIONS. J. L. Mauderly1, E. G. Barret1, M. J. Campen1, A. P. Gigliotti2, J. D. McDonald2, J. Seagrave1, M. D. Reed3 and S. K. Seilkop1, 1Lovelace Respiratory Research Institute, Albuquerque, NM and 2SKS Consulting Services, Siler City, NC.

Abstract #

#1072

Poster Board Number: 410

SUBCHRONIC EPIDEMIC EXPOSURE OF RATS TO DIESEL PLUS OZONE INDUCES MINIMAL CARDIOPULMONARY EFFECTS. M. C. Schladweiler1, A. D. Ledbetter2, J. Shannahan2, J. Wallenborn3, A. Nyska4, D. Malarkey5, J. Richards6, H. Tong7, R. B. Devlin8 and U. P. Kodavanti9, 1NHEERL/ETD, U.S. EPA, Durham, NC, 2Curriculum in Toxicology, UNC Chapel Hill, NC, 3SPH, UNC, Chapel Hill, NC and 4Toxicologic Pathology, Timrat, Israel and 5NIEHS, Durham, NC.

#1073

Poster Board Number: 411

INHIBITION OF TYROSINE PHOSPHATASE ACTIVITY INITIATES RECEPTOR SIGNALING IN AIRWAY EPITHELIAL CELLS EXPOSED TO DIESEL EXHAUST PARTICLES. T. Tal8, P. A. Bromberg9, R. Silbajoris10 and J. M. Samej10, 1Curriculum in Toxicology, UNC Chapel Hill, Chapel Hill, NC, 2CEMALB, UNC Chapel Hill, Chapel Hill, NC and 3NHEERL, U.S. EPA, Chapel Hill, NC.

#1074

Poster Board Number: 412


#1075

Poster Board Number: 413

URBAN PARTICULATE MATTER ACTIVATES CALPAIN AND TRIGGERS THE UNFOLDED PROTEIN RESPONSE. T. L. Watters8, B. Hamilton8, R. Martin9 and R. A. Coulombe10, 1Toxicology Graduate Program, Utah State University, Logan, UT and 2Department of Civil and Environmental Engineering, Utah State University, Logan, UT.

#1076

Poster Board Number: 414

90-DAY INHALATION TOXICITY STUDY WITH DISK-SHAPED MANGANUM POTASSIUM TITANATE PARTICLES (TERRACESS PS) IN RATS. S. Sakai1, K. Inada1, A. K. Tanaka1, D. P. Kelly1, G. Sykes2 and K. P. Lee1, 1Otsuka Chemical Co, Osaka, Japan and 2Haskell Laboratory, DuPont Co., Newark, DE, 3PharmPath, West Grove, PA and 4Path.Conslt., Newark, DE. Sponsor: S. Loveless.

#1077

Poster Board Number: 415

CLASSIFICATION OF AEROSOLIZED MINERAL BASE OILS UNDER THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS (GHS), W. Dolbey, F. Whitman and M. Amoroso, ExxonMobil Biomedical Sciences, Inc., Paulsboro, NJ.
Program Description (Continued)

Abstract #

#1078 Poster Board Number ...........................................416

IN VIVO EVALUATION OF LUNG STRUCTURE AND MAGNETIC RESONANCE IMAGING (MRI) FOLLOWING ELASTASE INDUCED EMPHESMA IN RATS. R. E. Jacob1, K. M. Gideon1, K. R. Minard1 and C. Timchalk1. Pacific Northwest National Laboratory, Richland, WA and ‘Batelle’ Toxicology NW, Richland, WA.

#1079 Poster Board Number ...........................................417

PROGRESSIVE PULMONARY AND PLEURAL EFFECTS OF INDIUM PHOSPHIDE IN B6C3F1 MICE: PARTICULATE INDUCED PLEURAL FIBROSIS AND PROLIFERATION. P. Kirby1, C. Shines1, G. Taylor2, R. Bouqueret, H. Price2, J. Everitt1 and D. Morgan3. Inhalation Toxicology, NIOSH, Durham, NC, ‘Aliion, Durham, NC and ‘Consultant, Durham, NC.

#1080 Poster Board Number ...........................................418

TOXICOLOGICAL CHARACTERIZATION OF INHALED CUSTOM PEPTIDES. K. McNally1, A. S. Aslam1, E. Devemy2 and O. Blaschuck3. Inhalation Toxicology, ITR Laboratories Canada Inc., Baie D’Urfé, QC, Canada and ‘Urology Department, McGill University, Montreal, QC, Canada. Sponsor: B. Proctor.

#1081 Poster Board Number ...........................................419

INHALATION OF STAINLESS STEEL WELDING FUME RESULTS IN DISSIMILAR INFLAMMATORY RESPONSES IN THE LUNGS OF A/J AND C57BL/6J MICE. P. C. Zeiller-Erdely1, S. Stone1, M. Donlin, A. Moseley, J. Carton1, B. T. Chen, D. G. Frazer1, S. Young1 and J. M. Antonini. HELD, NIOSH, Morgantown, WV.

#1082 Poster Board Number ...........................................420


#1083 Poster Board Number ...........................................421

USE OF A MOUSE MODEL TO EVALUATE PULMONARY INFLAMMATION CAUSED BY FLOOR DUST FROM A WATER-DAMAGED BUILDING. S. Young, J. M. Cox-Ganser, M. Wolfarth, J. M. Antonini. V. Castranova and J. Park. NIOSH, Morgantown, WV.

#1084 Poster Board Number ...........................................422


#1085 Poster Board Number ...........................................423


#1086 Poster Board Number ...........................................424

THE PROTECTIVE EFFECT OF THE UPPER AIRWAYS AGAINST WATER SOLUBLE IRRITANT GAS EXPOSURE – A CASE STUDY OF ACUTE AMMONIA EXPOSURE. J. Kind, P. Nony and D. Hewitt. Center for Toxicology and Environmental Health, North Little Rock, AR.

#1087 Poster Board Number ...........................................425

LUNG RESPONSE TO COARSE PM: BIOASSAY IN MICE. L. C. Wegesser and J. A. Love. Pulmonary and Critical Care Medicine, School of Medicine, CCRBM, University of California, Davis, CA.

#1088 Poster Board Number ...........................................426

OZONE EXPOSURE EXACERBATES EOSINOPHILIC AND EPITHELIAL CELL RESPONSES IN SINUS AND NASOLacrIMAL Duct AIRWAYS IN ALLERGIC RATS. J. G. Wagner1, M. E. Swinkey1, J. R. Hartkem1 and D. B. Peden1. ‘Michigan State University East Lansing, MI and ‘Univ N Carolina, Chapel Hill, NC.

#1089 Poster Board Number ...........................................427

EFFECTS OF IN VITRO EXPOSURE OF HUMAN RESPIRATORY EPITHELIAL CELLS TO FORMALDEHYDE. C. R. O’Lenick1, K. G. Sexton2, K. Delbruijne1, S. Ebersviller1, S. Casper1, L. Jaspers2 and H. Jeffries1. ‘Environmental Science Engineering, UNC-CH, Chapel Hill, NC and ‘CEMALB, UNC-CH, Chapel Hill, NC.

#1090 Poster Board Number ...........................................428

NASAL UPTAKE OF DIACETYL AND BUTYRIC ACID VAPORS. J. B. Morris1 and A. F. Hubbs1. ‘Toxicology Program, University of Connecticut, Storrs, CT and ‘NIOSH, CDC, Morgantown, WV.

#1091 Poster Board Number ...........................................429

COMPARING THE TOXICITY OF FRESH AND AGED DIESEL EXHAUST USING SEPARATE PARTICLE AND GASEOUS EXPOSURE SYSTEMS. K. de Bruin1, S. Ebersviller1, K. G. Sexton2, C. Olenick1, R. Woodside1, S. Casper1, L. Jaspers2 and H. Jeffries1. ‘Environ Sciences & Eng, University of North Carolina, Chapel Hill, NC and ‘CEMALB, University of North Carolina at Chapel Hill, Chapel Hill, NC.

#1092 Poster Board Number ...........................................430

NASAL UPTAKE OF NAPHTHALENE IN THE F344 RAT. B. Simmons1, J. B. Morris1 and A. Buckpitt1. ‘Toxicology Program, University of Connecticut, Storrs, CT and ‘Mol Biosciences, UC Davis, Davis, CA.
Program Description (Continued)

Abstract # | Poster Board Number | Abstract # | Poster Board Number
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#1093 | AMBIENT PARTICULATE MATTER SUPPRESSES ALVEOLAR MACROPHAGE CYTOKINE RESPONSE TO LIPOPOLYSACCHARIDE. K. Sawyer1, M. C. Madden1 and A. J. Ghio2. 1Environmental Science and Engineering, University of North Carolina at Chapel Hill, Chapel Hill, NC and 2National Health Effects Research Laboratory, U.S. EPA, RTP, NC.
#1094 | THE ROLE OF SPARC IN ASBESTOS-INDUCED PULMONARY FIBROSIS. A. M. Smartt, M. Brezinski, A. Brave Rock and E. A. Putnam, Biomedical & Pharmaceutical Sciences/Center For Environmental Health Sciences, University of Montana, Missoula, MT. Sponsor: M. Pershouse.
#1095 | TOXICOLOGIC EFFECTS OF ACUTE 1, 2-DICHLOROETHANE (ETHYLENE DICHLORIDE; EDC) INHALATION IN F344 RATS. J. A. Hothickus, K. A. Johnson, A. K. Andrus, S. M. Krieger and J. P. Maurissen. Toxicology, Environmental Research and Consulting, The Dow Chemical Company, Midland, MI.
#1096 | BIOAEROSOL EMISSIONS FROM COMPOSTING GROUNDS INDUCE CYTOTOXICITY AND INFLAMMATORY RESPONSES IN RAW264.7 MACROPHAGES. M. Roponen1, K. Huttunen1, H. Rintala1, P. Kaarakainen1, A. Nevalainen1 and M. Hirvonen1, 2. 1Department of Environmental Health, National Public Health Institute, Kuopio, Finland and 2Department of Environmental Science, University of Kuopio, Kuopio, Finland. Sponsor: M. Viluksela.
#1097 | COMPARISON OF LUNG INJURY FOR JP-8 VERSUS S-8 JET FUELS AT THRESHOLD CONCENTRATIONS. M. McLaughlin, J. Vargas, R. Camponovo, S. S. Wong, K. Le and M. Witten. Center for Toxicology & Department of Pediatrics, The University of Arizona, Tucson, AZ.
#1098 | EXTRAPULMONARY TISSUE DISTRIBUTION OF METALS FOLLOWING REPEATED LUNG EXPOSURES TO WELDING FUMES WITH DIFFERENT ELEMENTAL PROFILES. J. M. Antonini, J. R. Roberts, K. Siriram, S. A. Benkovic, J. P. O’Callaghan and D. B. Miller. NIOSH, Morgantown, WV.
#1099 | DESIGN OF AN INHALATION EXPOSURE SYSTEM TO STUDY SPOT WELDING FUME CHARACTERISTICS AND BIOLOGICAL EFFECTS. A. A. Afshari, J. M. Antonini, V. Castranova, R. Boylstein, R. Kanwal and D. G. Frazer. NIOSH, Morgantown, WV.

Abstract # | Poster Board Number | Abstract # | Poster Board Number
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#1100 | A NOVEL METHOD FOR THE CHEMICAL CHARACTERIZATION OF GENERATED JET FUEL VAPOR AND AEROSOL FOR ANIMAL STUDIES. R. T. Tremblay1, S. A. Martin1, L. D. Fechter1 and J. W. Fisher1. 1Environmental Health Science Department, University of Georgia, Athens, GA and 2Loma Linda VA Medical Center, Loma Linda, CA.
#1101 | SELECTIVITY OF NEUROPEPTIDE RELEASE FROM PULMONARY CAPSAICIN-SENSITIVE AFFERENTS IN RELATION TO DIESEL EXHAUST EXPOSURE. S. S. Wong2, N. N. Sun1, J. Keith1, C. L. Lozada1 and M. Witten1. Center for Toxicology & Department of Pediatrics, The University of Arizona, Tucson, AZ, 2Center for Toxicology and Department of Cell Biology & Anatomy, The University of Arizona, Tucson, AZ and 3School of Veterinary Medicine, University of Wisconsin-Madison, Madison, WI.

Tuesday Afternoon, March 18
1:00 PM to 4:30 PM
Exhibit Hall

STEM CELL BIOLOGY AND TOXICOLOGY

POSTER SESSION: SIGNAL TRANSDUCTION AND GENE REGULATION

Chairperson(s): Heekyong Bae, Michigan State University, East Lansing, MI and Stacey Harper, Oregon State University, Corvallis, OR.

Displayed: 1:00 PM – 4:30 PM

Attended: 1:00 PM – 2:45 PM

Abstract # | Poster Board Number | Abstract # | Poster Board Number
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#1103 | CIGARETTE SMOKE CONDENSATE DOWNREGULATION OF LYSYL OXIDASE TRANSCRIPTION MEDIATED BY INACTIVATION OF NUCLEAR FACTOR I. W. Li, S. Gao, Y. Zhao, P. Toselli and P. Stone. Biochemistry, Boston University School of Medicine, Boston, MA.
Program Description (Continued)

Abstract #

#1105 Poster Board Number ........................................503

#1106 Poster Board Number ........................................504
PROTECTIVE EFFECT OF CAFFEIC ACID PHENETHYL ESTER ON TERT-BUTYL HYDROPEROXIDE-INDUCED OXIDATIVE HEPATOTOXICITY. Y. Chung¹, J. Choi¹, K. Lee² and H. Jeong³. ¹Division of Food Science, Jinja International University, Jinja, South Korea, ²Pharmacy, Chosun University, Kwangju, South Korea and ³Research Center for Proteinaceous Materials, Chosun University, Kwangju, South Korea.

#1107 Poster Board Number ........................................505
METALLOTROPINE-III ENHANCES VASCULAR ENDOTHELIAL GROWTH FACTOR EXPRESSION THROUGH THE ACTIVATION OF HIF-1ALPHA. H. H. Kim¹² and H. Jeong³. ¹Pharmacy, Chosun University, Kwangju, South Korea and ³Research Center for Proteinaceous Materials, Chosun University, Kwangju, South Korea.

#1108 Poster Board Number ........................................506
OSTEOPONTIN REGULATES MOUSE VASCULAR SMOOTH MUSCLE CELL DIFFERENTIATION VIA AN EXTRACELLULAR SIGNALING TRANSDUCTION PATHWAY. H. Guo¹, M. C. Steffen¹, T. Fan² and K. S. Ramos³. ¹Biochemistry, University of Louisville, Louisville, KY and ²Chemistry, University of Louisville, Louisville, KY.

#1109 Poster Board Number ........................................507
GENE EXPRESSION DIFFERENCES IN P53-DEFICIENT DAY-9 MOUSE EMBRYOS. H. Hosako, G. S. Martin, M. Barrier, S. H. Safe and P. E. Mirkes. Veterinary Physiology & Pharmacology, Texas A&M University, College Station, TX.

#1110 Poster Board Number ........................................508
TCDD DISRUPTS THE WNT SIGNALING PATHWAY IN THE DEVELOPING MOUSE KIDNEY. E. MacAulay¹²-P. C. Boutros¹ and P. A. Harper¹. ¹Pharmaceutical Sciences, University of Toronto, Toronto, ON, Canada, ²Development & Stem Cell Biology, Hospital for Sick Children, Toronto, ON, Canada and ³Pharmacology, University of Toronto, Toronto, ON, Canada. Sponsor: D. Grant.

#1111 Poster Board Number ........................................509
TCDD ALTERS VASCULAR REMODELING IN RAT PLACENTA. R. Ishimura¹, T. Kawakami¹, S. Ohshako¹ and C. T. Tokuyama¹. ¹Division of Environment Health Sciences, CDBIM, The University of Tokyo, Graduate School of Medicine, Tokyo, Japan and ²Environmental Health Sciences Division, National Institute for Environmental Studies, Tsukuba, Japan.

#1112 Poster Board Number ........................................510
EPICALLOTECTHELIN-3-GALLATE PREVENTS OBESITY-RELATED FATTY LIVER BUT IS HEPATOTOXIC AT HIGH DOSES. J. D. Lambert¹, M. Bose¹, S. Sang¹, J. Ju¹, K. R. Reuhl² and C. S. Yang³. ¹Chemical Biology, Rutgers, The State University of New Jersey, Piscataway, NJ and ²Pharmacology and Toxicology, Rutgers, The State University of New Jersey, Piscataway, NJ.

#1113 Poster Board Number ........................................511
TOXIC ENDOVASCULAR ACCUMULATION IN THE LUNG LEADS TO TRPV1-MEDIATED ER STRESS AND ACUTE LUNG INJURY. K. C. Thomas, C. E. Deering, G. S. Yost and C. A. Reilly. Pharmacology and Toxicology, University of Utah, Salt Lake City, UT.

#1114 Poster Board Number ........................................512
EFFECT OF OLEANDRIN ON BINDING AND ACTIVITY OF NA-K-ATPASE IN CRUDE CARDIAC MEMBRANE PREPARATION. A. K. Tiwary¹,², P. Fuchsner³ and J. N. Pesutto³. ¹Graduate Group in Pharmacology and Toxicology, University of California, Davis, CA, ²California Animal Health and Food Safety Laboratory, University of California, Davis, CA and ³Veterinary Molecular Biosciences, University of California, Davis, CA.

#1115 Poster Board Number ........................................513
CHANGES IN MITOGEN-ACTIVATED PROTEIN KINASE IN CEREBELLAR GRANULE NEURONAL CULTURES BY POLYBROMINATED DIPHENYL ETHERS. C. Fan¹ and P. R. Kodavanti. ¹Neurotoxicology Division, U.S. EPA, RTP, NC and ²Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC.

#1116 Poster Board Number ........................................514
EFFECT OF GINSENOIDES RD AND RF ON ALTERING INTRACELLULAR GLUTATHIONE METABOLISM OF C6 GLIOMA CELLS. W. Y. Ng and M. S. Yang. Biology, Hong Kong Baptist University, Kowloon, Hong Kong, China.

#1117 Poster Board Number ........................................515
BREVETOXIN-INDUCED BRONCHOCONSTRICTION AND ANTAGONISM IS MODULATED BY THE ANTI-PARALLEL CHARACTER OF SYNTHETIC SIDE CHAINS: CHARACTERISTICS FOR SUCCESSFUL PULMONARY DRUG DESIGN. D. Baden¹, S. Michelliza¹, M. Wolf¹, H. Jacocks¹ and W. Abraham¹. ¹Center for Marine Science, UNCW, Wilmington, NC and ²Department of Research, Mount Sinai Medical Center, Miami Beach, FL.

#1118 Poster Board Number ........................................516
COMPARISON OF GENE EXPRESSION PROFILES IN LIVER OF RATS TREATED WITH RIDDELLIN AND COMFREY. X. Mei¹, J. Guo¹, S. L. Dial¹, J. C. Fusco¹ and T. Chen¹. ¹Division of Genetic and Reproductive Toxicology, National Center for Toxicological Research, Jefferson, AR and ²Division of Systems Toxicology, NCTR, Jefferson, AR.
#1119
Poster Board Number ......................................517
RED TIDE TOXIN PRODUCES IN VITRO DEPOLARIZATION OF HUMAN AIRWAY SMOOTH MUSCLE. I. Richards and M. M. Bourgeois. Environmental and Occupational Health, University of South Florida, Tampa, FL.

#1120
Poster Board Number ......................................518
BIPHASIC REGULATION OF IL2 GENE EXPRESSION IN NAIVE CD4+ T CELLS: RATE LIMITING ROLES FOR TNF-α RECEPTOR SIGNALING AND CHROMATIN STRUCTURE. S. C. Mekarns and R. H. Schwartz. Laboratory of Cellular and Molecular Immunology, NIAID/NIH, Bethesda, MD.

#1121
Poster Board Number ......................................519
REGULATION OF TUMOR NECROSIS FACTOR-α AND INTERLEUKIN-1β-MEDIATED TNF RECEPTOR EXPRESSION AND PROINFLAMMATORY RESPONSES IN LUNG EPITHELIAL CELLS. S. Superstein1, G. S. Pryhuber2 and J. N. Finkelstein1,2,3. 1Environmental Medicine, University of Rochester, Rochester, Rochester, NY, 2Pediatrics, University of Rochester, Rochester, NY, and 3Radiation Oncology, University of Rochester, Rochester, NY.

#1122
Poster Board Number ......................................520
INHIBITORY EFFECT OF THE SAPONINS DERIVED FROM ROOTS OF PLATYCODON GRANDIFLORUM ON ANAPHYLACTIC REACTION AND MAST CELL ACTIVATION. E. Han1,2, Y. Chung3 and H. Jeong3,4. 1Pharmacy, Chosun University, Kwangju, South Korea, 2Research Center for Proteinaceous Materials, Chosun University, Gwangju, South Korea and 3Division of Food Science, Jeju International University, Jeju, South Korea.

#1123
Poster Board Number ......................................521
IN VIVO AND IN VITRO MECHANISTIC ANALYSES OF LIPOPOLYSACCHARIDE (LPS)-INDUCED HEPATOTOXICITY DEMONSTRATE SIMILAR TOXICITY PATTERNS. B. Guster1, N. Zalek2, P. Hewitt2, D. Müller2, D. L. Abramovita3, D. N. Halbert3 and A. Vladimirov1. 1Ingenuity Systems, Redwood City, CA, 2Merck KGaA, Darmstadt, Germany, 3Institute of Pharmacology and Toxicology, University of Jena, Jena, Germany and 4Entelos, Foster City, CA.

#1124
Poster Board Number ......................................522
SUPPRESSIVE EFFECTS OF PHORBOL-12-MYRISTATE-ACETATE ACTIVATED CYCOOXYGENASE-2 EXPRESSION BY DIHYDROARTESMININ IN MACROPHAGES. H. Park1,2, E. Han1,2 and H. Jeong3,4. 1Pharmacy, Chosun University, Kwangju, South Korea and 2Research Center for Proteinaceous Materials, Chosun University, Gwangju, South Korea.

#1125
Poster Board Number ......................................523
DEOXYXIVALENOL-INDUCED MAP KINASE ACTIVATION MEDIATED VIA THE RIBOSOME CAN INDUCE ROBUST PROINFLAMMATORY GENE EXPRESSION AND APOPTOSIS IN MONOCERNAL PHAGOCYTES. H. Bae1,2 and J. J. Pesukal1,2. 1Food Science and Human Nutrition, Michigan State University, East Lansing, MI, 2Center for Integrative Toxicology, Michigan State University, East Lansing, MI and 3Microbiology and Molecular Genetics, Michigan State University, East Lansing, MI.

#1126
Poster Board Number ......................................524
UNFOLDED PROTEIN RESPONSE INDUCED IN MACROPHAGES BY THE TRICHOThECENE DEOXYXIVALENOL-Y. Shi1,2 and J. J. Pesukal1,2,3. 1Food Science and Human Nutrition, Michigan State University, East Lansing, MI, 2Center for Integrative Toxicology, Michigan State University, East Lansing, MI and 3Microbiology and Molecular Genetics, Michigan State University, East Lansing, MI.

#1127
Poster Board Number ......................................525
SUPPRESSION OF MAST CELL-MEDIATED ALLERGIC REACTION BY ANOMUM XANTHOIDES. S. Kim. Pharmacology, Kyungpook National University Medical School, Daegu, South Korea.

#1128
Poster Board Number ......................................526
HIGH-THROUGHPUT SCREEN FOR SMALL MOLECULE HEDGEHOG SIGNALING INHIBITORS RELEVANT TO HUMAN EXPOSURE. R. J. Lipinski1,2 and W. Bushman2,3. 1Molecular and Environmental Toxicology Center, University of Wisconsin-Madison, Madison, WI and 2Surgery, University of Wisconsin-Madison, Madison, WI.

#1129
Poster Board Number ......................................527
TRANILAST INHIBITS TRANSCRIPTIONAL ACTIVITY OF HYPOXIA INDUCIBLE FACTOR. A. Lulla and S. Park. Pharmaceutical Sciences, St. John’s University, Queens, NY.

#1130
Poster Board Number ......................................528

#1131
Poster Board Number ......................................529
Program Description (Continued)

Abstract #

Tuesday Afternoon, March 18
1:00 PM - 4:30 PM
Exhibit Hall

*Oxidative Signaling and Redox Biology*

**Poster Session: Reproductive System**

Chairperson(s): Marion Miller, University of California Davis, Davis, CA and Erin Hines, U.S. EPA, Durham, NC.

Displayed: 1:00 PM - 4:30 PM

Attended: 2:45 PM - 4:30 PM

#1132  Poster Board Number .................. 532
**Validation of InhIn B Elisa, R. Kak and D. J. Stanislaus. Reproductive Toxicology, Safety Assessment, GlaxoSmithKline, King of Prussia, PA. Sponsor: S. Lerman.**

#1133  Poster Board Number .................. 533
**Oxidative Stress Damage Caused by Fluoride Exposure Decreased the In Vitro Fertilization in Rat Spermatozoa, J. A. Izquierdo-Vega1, M. Sanchez-Gutierrez2 and L. M. Del Razo3. 1Toxicology, Cinvestav-IPN, Mexico D.F, Mexico, 2FES-Cuartitlan, UNAM, State of Mexico, Mexico and 3Academic Area of Medicine, UAEH, Pachuca, Hidalgo, Mexico.**

#1134  Poster Board Number .................. 534
**Determination of Peak Hormone Levels Following a Single Intramuscular Injection of Human Chorionic Gonadotrophin (HCG) in Dogs, B. Han1, R. T. Dunn1, M. A. Kuhlman1 and I. Pyrah1. 1Amgen, Thousand Oaks, CA and 2Covance, Inc. Sponsor: G. Parker.**

#1135  Poster Board Number .................. 535
**Effects of Restricted Feeding on Pregnancy Outcome and Blood Parameters in Rabbits, Y. Asano. Bozo Research Center, Tagata-gun, Shizuoka, Japan. Sponsor: S. Tsuda.**

#1136  Poster Board Number .................. 536

#1137  Poster Board Number .................. 537
**The Effects of In Vivo Exposure of Methoxychlor to Immature Rats on Serum Progesterone and Estradiol Levels and the Ex Vivo Formation of Progesterone by Theca-Interstitial Cells, Y. Akgul1, R. C. Derk2 and E. P. Murono1. 1Physiology and Pharmacology, West Virginia University, Morgantown, WV and 2PPRB, NIOSH, Morgantown, WV. Sponsor: Y. Castranova.**

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**Poster Board Number .................. 538
**Analysis of Cytogenetic and Developmental Effects on Pre-Implantation Mouse Embryos After Maternal Exposure to Trichlorfon, Y. Tian1, Z. Shufang1, G. Yu1, S. Li1, S. Rong1, Z. Yijin1, H. Song1 and S. Xiaoqing2. 1Environmental Health Department, Shanghai Jiao Tong University School of Medicine, Shanghai, China, 2Shanghai Institute for Pediatric Research, Shanghai XinHua Hospital affiliated to Shanghai Jiaotong University School, Shanghai, China and 3Department of Epidemiology, Shenyang Medical College, Shenyang, China.**

**Poster Board Number .................. 539
**Consequences of Prenatal PFOA Exposure on Mouse Mammary Gland Growth and Development in F1 and F2 Offspring, S. S. White1, A. P. Hines1, J. P. Stanko2 and S. E. Fenton2. Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC and 3U.S. EPA, ORD, NHEERL, Reproductive Toxicology Division, RTP, NC.**

**Poster Board Number .................. 540
**Neonatal Exposure to DES Induces DoSE-Dependent Delayed Effects at Doses Showing Estrogenic Activity in Female Donryu Rats, M. Yoshida1, A. Maekawa1 and A. Nishikawa2. 1Department of Pathology, National Institute of Health Sciences, Tokyo, Japan and 2Chemical Management Center, National Institute of Technology and Evaluation, Tokyo, Japan.**

**Poster Board Number .................. 541
**Ovarian Follicle Counting Using Proliferating Cell Nuclear Antigen (PCNA) and Semi-Automated Image Analysis in Sprague Dawley Rats, A. K. Remick1, C. L. Swanson1, K. L. Scully1, V. C. Roseman and C. A. Picut1. 1WIL Research Laboratories-Biotechnics, LLC, Hillsborough, NC and 2Media Cybernetics, Bethesda, MD. Sponsor: G. Parker.**

**Poster Board Number .................. 542

**Poster Board Number .................. 543
**Oral Bioavailability and Kinetics of Benzo(a)Pyrene Disposition in Ovarian Tissues of F-344 Rats, A. Ramesh1 and A. E. Archibong1. 1Cancer Biology, Meharry Medical College, Nashville, TN and 2Obstetrics & Gynecology, Meharry Medical College, Nashville, TN.**
Program Description (Continued)

Abstract # | #1144 | Poster Board Number | MODULATION OF INTRATESTICULAR FUNCTION IN F-344 RATS BY BENZ(A)PYRENE. A. E. Archibong1, M. S. Niazi1, C. M. Brooks1, S. I. Roberson1, A. Ramesh2 and D. D. Lunstra3. Obstetrics & Gynecology, Meharry Medical College, Nashville, TN, 2Cancer Biology, Meharry Medical College, Nashville, TN and 3Animal Reproduction Division, USDA Meat Animal Research Center, Clay Center, NE.

Abstract # | #1145 | Poster Board Number | EVALUATION OF OVOTOXICITY INDUCED BY 7, 12-DIMETHYLBENZ(A)ANTHRACENE AND ITS 3, 4-DIOL METABOLITE UTILIZING A RAT IN VITRO OVARIAN CULTURE SYSTEM. Y. Igawa1, J. Sipes2 and P. B. Hoyer2. Pharmacology, University of Arizona, Tucson, AZ, 3Physiology, University of Arizona, Tucson, AZ and 4Biopharma Center, Asubio Pharmaceutical Co., Ltd., Gunma, Japan.

Abstract # | #1146 | Poster Board Number | CIGARETTE SMOKE AND BENZ(A)PYRENE CAUSE FOLLICLE LOSS IN VIVO AND IN VITRO AT PHYSIOLOGICALLY RELEVANT CONCENTRATIONS. A. Mulligan Tuttle and W. G. Foster. McMaster University, Hamilton, ON, Canada.

Abstract # | #1147 | Poster Board Number | GLUCOCORTICOID RECEPTOR ACTIVATION RESTRAINTS THE GROWTH-PROMOTING EFFECT OF TCDD ON MAMMARY EPITHELIAL CELLS. T. Wang1, B. Lawrence2 and B. A. Vorderstrasse3. Pharmacological Sciences, Washington State University, Pullman, WA and 4Department of Environmental Medicine, University of Rochester, Rochester, NY.

Abstract # | #1148 | Poster Board Number | EFFECTS OF MOTORCYCLE EXHAUST AND COTREATMENT WITH VITAMIN E ON SPERM CONTENT AND INTERLEUKIN-6 EXPRESSION IN RAT TESTIS. T. Ueng, Y. Liu and P. Chan. Institute of Toxicology, National Taiwan University, Taipei, Taiwan.

Abstract # | #1149 | Poster Board Number | DOES BUTYL ISOCYANATE PLAY A ROLE IN THE TUBULIN DEPOLYMERIZING ACTION OF THE FUNGICIDE BENOMYL? A. Rodriguez and M. G. Miller. Environmental Toxicology, UC Davis, Davis, CA.

Abstract # | #1150 | Poster Board Number | ASSESSMENT OF THE EFFECTS OF MONOETHYLHEXYLPHthalATE (MEHP) AND MONOBUTYL PHthalATE (MBP) ON GENE EXPRESSION IN FETAL RAT TESTES EXPLANT CULTURES BY TRANSCRIPTION PROFILING. S. Plummer1, F. Chauvigne2, B. Beaulieu, Rennes, France.

Abstract # | #1151 | Poster Board Number | THE EFFECT OF INDIVIDUAL VS GROUP HOUSING ON GROWTH, ONSET OF PUBERTY, AND REPRODUCTIVE ORGAN DEVELOPMENT IN MICE. S. S. Dimond1,2. 1Department of Environmental Health and Toxicology, State University of New York at Albany, Albany, NY and 2Environmental, Health and Safety Department, SABIC Innovative Plastics, Bedford, NH.

Abstract # | #1152 | Poster Board Number | EFFECT OF METHOXYCHLOR METABOLITE HPTE IN RAT OVARIAN GRANULOSA CELLS. C. N. Harvey3, M. Esmail4, M. Urumcu2,5 and R. Zechow2,1. Joint Graduate Program of Toxicology, Rutgers University/UMDNJ, Piscataway, NJ, 2Department of Animal Sciences, Rutgers University, New Brunswick, NJ and 4Department of Physiology and Biophysics, Robert Wood Johnson Medical School, Piscataway, NJ.

Abstract # | #1153 | Poster Board Number | CELL CYCLE REGULATORS IN MOUSE OVARIAN ANTRAL FOLLICLES ARE ALTERED BY METHOXYCHLOR EXPOSURE. R. K. Gupta, H. H. Yao and J. A. Flaws. Veterinary Biosciences, University of Illinois, Urbana, IL.

Abstract # | #1154 | Poster Board Number | DOSE DEPENDENT EFFECTS OF SERTOLI CELL TOXICANTS 2, 5-Hexanedione, Carbendazim, and Mono-(2-ethylhexyl) phthalate in Adult Rat Testis. J. S. Moffir, B. H. Bryant, C. L. Auricenna, R. T. Glenn, H. Yamasaki, M. A. Sandorf, S. J. Hall and K. Reidelheide. Pathology & Laboratory Medicine, Brown University, Providence, RI.

Abstract # | #1155 | Poster Board Number | REPRODUCTIVE AND DEVELOPMENTAL EFFECTS OF GESTATIONAL EXPOSURE TO PERFLUOROOCANOC ACID IN MALE CD-1 MICE. J. P. Stanko1, E. P. Hines1, S. S. White1,2, G. R. Klinefelter1, L. F. Strader1, J. D. Suarez2 and S. E. Fenton3. INHERL,U.S. EPA, Research Triangle Park, NC and 4Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC.

Abstract # | #1156 | Poster Board Number | ADULT OUTCOMES OF GESTATIONAL OR ADULT EXPOSURE TO PERFLUOROOCANOC ACID (PFOA) IN FEMALE CD-1 MICE. E. P. Hines1, S. S. White2, J. P. Stanko1 and S. E. Fenton3. Reproductive Toxicology, DDB, ORD, NHEERL, U.S. EPA, Durham, NC and 4Curriculum in Toxicology, UNC, Chapel Hill, NC.

Abstract # | #1157 | Poster Board Number | EVALUATION OF TWO-GENERATION REPRODUCTIVE TOXICITY OF FLAME RETARDANT HEXABROMOCYCLODECAN (HBCD) IN RATS. M. Eno1, S. Fujiji1, M. Hirata-Koizumi1 and M. Matsumoto1. Division of Risk Assessment, National Institute of Health Sciences, Tokyo, Japan and 2Safety Research Institute for Chemical Compounds Co., Ltd., Sapporo, Japan.
Abstract #

**Poster Board Number 558**

**EFFECTS OF IN UTERO AND LACTATIONAL EXPOSURE TO 2,3,7,8-TETRAChLORoDIENzo-P-DIOXIN (TCDD) ON REPRODUCTIVE FUNCTION IN MALE RHESUS MONKEYS**, A. Arima, T. Tateishi, K. Hanaki, Y. Nishida, J. Okayama, T. Iahara, R. Nagata, S. Kubota, T. Fukusato, H. Sumida, M. Yasuda, S. Kaminura. 1Drug Safety Research Laboratories, Shin Nippon Biomedical Laboratories, Ltd., (SNBL), Kagoshima, Japan, 2Department of Life Science, Graduate School of Arts and Sciences, University of Tokyo, Tokyo, Japan, 3Department of Pathology, Teikyo University School of Medicine, Tokyo, Japan, 4Department of Clinical Radiology, Faculty of Health Sciences, Hiroshima International University, Hiroshima, Japan, and 5Laboratory of Theriogenology, Hiroshima International University, Higashihiroshima, Japan and 6Laboratory of Theriogenology, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan. Sponsor: R. Naguni.

**Poster Board Number 559**

**ATSDR’S ACUTE MINIMAL RISK LEVEL FOR HEPTACHLOR, Z. A. Rosemond, L. Ingerman and C. V. Smith. 1Division Of Toxicology and Environmental Medicine, Agency for Toxic Substances and Disease Registry, Atlanta, GA and 2Environmetal Science Center, Syracuse Research Corporation, Syracuse, NY. Sponsor: R. Williams.**

**Poster Board Number 560**

**ABSENCE OF DEVELOPMENTAL TOXICITY IN EMBRYOFETAL AND PRE- AND POSTNATAL DEVELOPMENT STUDIES IN CYNOMOLGUS MACAQUES FOLLOWING ANTAGONISM OF IL-12/23 ACTIVITY WITH USTEKinUMAB (CONTINUED)**, A. Schantz, J. Marini, D. Graden, T. Tateishi, K. Hanaki, Y. Nishida, J. Okayama, T. Iahara, R. Nagata, S. Kubota, T. Fukusato, H. Sumida, M. Yasuda, and S. Kaminura. 1Drug Safety Research Laboratories, Shin Nippon Biomedical Laboratories, Ltd., (SNBL), Kagoshima, Japan, 2Department of Life Science, Graduate School of Arts and Sciences, University of Tokyo, Tokyo, Japan, 3Department of Pathology, Teikyo University School of Medicine, Tokyo, Japan, 4Department of Clinical Radiology, Faculty of Health Sciences, Hiroshima International University, Hiroshima, Japan, and 5Laboratory of Theriogenology, Hiroshima International University, Higashihiroshima, Japan and 6Laboratory of Theriogenology, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan. Sponsor: R. Naguni.

**Poster Board Number 561**

**SUBLETHAL TCDD EXPOSURE DURING EARLY STAGES OF DEVELOPMENT INDUCES CRANIOFACIAL, CARDIAC, AND REPRODUCTIVE ANOMALY IN ADULT ZEBRAFISH, T. King Heiden, J. Spitsbergen, K. M. Xiong, W. Heideman, and R. E. Peterson**. 1Biostatistics, Virginia Commonwealth University, Richmond, VA and 2Laboratory of Theriogenology, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan. Sponsor: R. Naguni.

**Poster Board Number 562**


**Poster Board Number 563**

**BASELINE VARIABILITY AND TOXICITY EFFECTS ON MOTOR FUNCTION IN AGING BROWN NORWAY RATS, R. C. MacPhail, J. D. Farmer and K. A. Jarema. NHEERL, U.S. EPA, Research Triangle Park, NC.**

**Poster Board Number 564**

**VALIDATION OF A MORBIDITY SCORE IN A STUDY OF BOTULINUM TOXIN A, R. Ellis, C. Dennings, J. Benson and B. Tibbetts**. 1Biosciences, Virginia Commonwealth University, Richmond, VA and 2Love Lace Respiratory Research Institute, Albuquerque, NM. Sponsor: R. Naguni.

**Poster Board Number 565**

**DNA ADDUCT FORMATION OF LOW DOSE 13C2H2 LABELED METHYL METHANE SULPHONATE, E. F. Tita, G. Boysen, V. Afonin, L. Collins and J. A. Swenberg**. 1Pharmacology and Preventive Medicine, University of North Carolina, Chapel Hill, NC and 2Laboratory of Theriogenology, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan. Sponsor: R. Naguni.

**Poster Board Number 566**


**Poster Board Number 567**

**1:00 PM–4:30 PM**

**568 EFFECTS OF IN UTERO AND LACTATIONAL EXPOSURE TO 2,3,7,8-TETRAChLORoDIENzo-P-DIOXIN (TCDD) ON REPRODUCTIVE FUNCTION IN MALE RHESUS MONKEYS**, A. Arima, T. Tateishi, K. Hanaki, Y. Nishida, J. Okayama, T. Iahara, R. Nagata, S. Kubota, T. Fukusato, H. Sumida, M. Yasuda, and S. Kaminura. 1Drug Safety Research Laboratories, Shin Nippon Biomedical Laboratories, Ltd., (SNBL), Kagoshima, Japan, 2Department of Life Science, Graduate School of Arts and Sciences, University of Tokyo, Tokyo, Japan, 3Department of Pathology, Teikyo University School of Medicine, Tokyo, Japan, 4Department of Clinical Radiology, Faculty of Health Sciences, Hiroshima International University, Hiroshima, Japan, and 5Laboratory of Theriogenology, Hiroshima International University, Higashihiroshima, Japan and 6Laboratory of Theriogenology, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan. Sponsor: R. Naguni.

**Poster Board Number 559**

**ATSDR’S ACUTE MINIMAL RISK LEVEL FOR HEPTACHLOR, Z. A. Rosemond, L. Ingerman and C. V. Smith. 1Division Of Toxicology and Environmental Medicine, Agency for Toxic Substances and Disease Registry, Atlanta, GA and 2Environmetal Science Center, Syracuse Research Corporation, Syracuse, NY. Sponsor: R. Williams.**

**Poster Board Number 560**

**ABSENCE OF DEVELOPMENTAL TOXICITY IN EMBRYOFETAL AND PRE- AND POSTNATAL DEVELOPMENT STUDIES IN CYNOMOLGUS MACAQUES FOLLOWING ANTAGONISM OF IL-12/23 ACTIVITY WITH USTEKinUMAB (CONTINUED)**, A. Schantz, J. Marini, D. Graden, T. Tateishi, K. Hanaki, Y. Nishida, J. Okayama, T. Iahara, R. Nagata, S. Kubota, T. Fukusato, H. Sumida, M. Yasuda, S. Kaminura. 1Drug Safety Research Laboratories, Shin Nippon Biomedical Laboratories, Ltd., (SNBL), Kagoshima, Japan, 2Department of Life Science, Graduate School of Arts and Sciences, University of Tokyo, Tokyo, Japan, 3Department of Pathology, Teikyo University School of Medicine, Tokyo, Japan, 4Department of Clinical Radiology, Faculty of Health Sciences, Hiroshima International University, Hiroshima, Japan, and 5Laboratory of Theriogenology, Hiroshima International University, Higashihiroshima, Japan and 6Laboratory of Theriogenology, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan. Sponsor: R. Naguni.

**Poster Board Number 561**

**SUBLETHAL TCDD EXPOSURE DURING EARLY STAGES OF DEVELOPMENT INDUCES CRANIOFACIAL, CARDIAC, AND REPRODUCTIVE ANOMALY IN ADULT ZEBRAFISH, T. King Heiden, J. Spitsbergen, K. M. Xiong, W. Heideman, and R. E. Peterson**. 1Biostatistics, Virginia Commonwealth University, Richmond, VA and 2Laboratory of Theriogenology, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan. Sponsor: R. Naguni.

**Poster Board Number 562**


**Poster Board Number 563**

**BASELINE VARIABILITY AND TOXICITY EFFECTS ON MOTOR FUNCTION IN AGING BROWN NORWAY RATS, R. C. MacPhail, J. D. Farmer and K. A. Jarema. NHEERL, U.S. EPA, Research Triangle Park, NC.**

**Poster Board Number 564**

**VALIDATION OF A MORBIDITY SCORE IN A STUDY OF BOTULINUM TOXIN A, R. Ellis, C. Dennings, J. Benson and B. Tibbetts**. 1Biosciences, Virginia Commonwealth University, Richmond, VA and 2Love Lace Respiratory Research Institute, Albuquerque, NM. Sponsor: R. Naguni.

**Poster Board Number 565**

**DNA ADDUCT FORMATION OF LOW DOSE 13C2H2 LABELED METHYL METHANE SULPHONATE, E. F. Tita, G. Boysen, V. Afonin, L. Collins and J. A. Swenberg**. 1Pharmacology and Preventive Medicine, University of North Carolina, Chapel Hill, NC and 2Laboratory of Theriogenology, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan. Sponsor: R. Naguni.

**Poster Board Number 566**

Program Description (Continued)

Abstract #

#1168  Poster Board Number ........................................607

#1169  Poster Board Number ........................................608

#1170  Poster Board Number ........................................609
ORAL BIOAVAILABILITY OF CYCLOTRIMETHYLENETRINITRAMINE (RDX) FROM CONTAMINATED SITE SOILS IN RATS. L. C. Crouse, M. W. Michie, M. A. Major, G. J. Leach and G. Reddy. U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD.

#1171  Poster Board Number ........................................610
IN VIVO BIOAVAILABILITY OF ARSENIC IN COAL COMBUSTION BY-PRODUCTS. L. J. Bradley1, G. M. Fent2 and S. W. Casteel3. 1ENSRL, Westford, MA and 2Veterinary Medical Diagnostic Laboratory, University of Missouri, Columbia, MO.

#1172  Poster Board Number ........................................611
REDUCTION OF STRAWBERRY PESTICIDE RESIDUES USING CALYX REMOVAL AND A WATER RINSE. Y. Li, M. M. Bigelow, Z. Chen, H. Vega and R. I. Krieger. Environmental Toxicology Program, PCEP, Department Entomology, University of California, Riverside, Riverside, CA.

#1173  Poster Board Number ........................................612

#1174  Poster Board Number ........................................613
PHASE I TO II CROSS-INDUCTION OF XENOBIOTIC METABOLIZING ENZYMES: A POTENTIAL SOURCE FOR HORMETIC RESPONSES. Q. Zhang1, J. Př1 and M. E. Andersen2. 1Computational Biology, The Hamner Institute for Health Sciences, RTP, NC and 2Translational Biology, The Hamner Institutes for Health Sciences, RTP, NC.

#1175  Poster Board Number ........................................614
INTEGRATION OF BENCHMARK DOSE ANALYSIS WITH GENOMIC DATA TO ASSESS THE FUNCTIONAL EFFECTS OF CHEMICAL EXPOSURE. B. C. Allen1, A. Nong2, L. Yang, H. J. Clewell3, M. E. Andersen4 and R. S. Thomas1. 1Bruce Allen Consulting, Chapel Hill, NC and 2The Hamner Institute for Health Sciences, Research Triangle Park, NC.

Abstract #

#1176  Poster Board Number ........................................615
ACUTE INHALATION TOXICITY: PHYSIOLOGICAL TIME AND SPECIES-SPECIFIC HALF-LIFE AS DETERMINANTS OF ANIMAL-TO-HUMAN EXTRAPOLATION OF TOXICOLOGICALLY EQUIVALENT COMBINATIONS OF AIR CONCENTRATION AND DURATION. L. R. Rhomberg. Gradient Corporation, Cambridge, MA.

#1177  Poster Board Number ........................................616
BENCHMARK DIVERSE INFORMATION SOURCES TO ESTIMATE VARIABILITY OF GENOTYPES AND PHENOTYPES OF CYP450 ENZYMES IN METABOLISM OF CHLORPYRIFOS. W. C. Griffith, E. M. Vigoren and E. M. Faustman. Univ of Washington, Seattle, WA.

#1178  Poster Board Number ........................................617
VALUE OF INFORMATION ANALYSIS INTEGRATING DIVERSE INFORMATION SOURCES TO ESTIMATE VARIABILITY OF GENOTYPES AND PHENOTYPES OF CYP450 ENZYMES IN METABOLISM OF CHLORPYRIFOS. W. C. Griffith, E. M. Vigoren and E. M. Faustman. Univ of Washington, Seattle, WA.

#1179  Poster Board Number ........................................618
DEVELOPMENT OF WEIGHTED DISTRIBUTIONS OF REPS FOR DIOXIN-LIKE COMPOUNDS: IMPLICATIONS FOR RISK ASSESSMENT. L. C. Haw1, M. J. DeVito2, J. N. Walker1, L. S. Birnbaum1, K. M. Unice1, P. Scott1, M. A. Harris1, J. A. Tachovsky1, W. H. Farland1, B. Finley1 and D. F. Susanok1. ChemRisk, Austin, TX, 1U.S. EPA, RTP, NC, 2NIHES, RTP, NC, 3ChemRisk, Pittsburg, PA, 4ChemRisk, Houston, TX, 5 Colorado State University, Fort Collins, CO and 6ChemRisk, San Francisco, CA.

#1180  Poster Board Number ........................................619
ASSESSING THE ADEQUACY OF THE DEFAULT INTERINDIVIDUAL VARIABILITY FACTOR (IVF) USING A PHYSIOLOGICALLY-BASED STEADY-STATE (PBSS) ALGORITHM. M. Valcke1,2 and K. Krishnan1. 1Université de Montréal, Montréal, QC, Canada and 2Institut national de santé publique du Québec, Montre, QC, Canada.

#1181  Poster Board Number ........................................620
TUMOUR DATA FROM HAN WISTAR RAT DIETARY AND ORAL GAVAGE TUMORIGENICITY STUDIES, COMPLETED OVER THE PERIOD OF 1994 TO 2006. W. N. Hooks1, C. J. Groom2, M. Lauren3 and I. Taylor2. 1Division of Toxicology, Huntingtonon Life Sciences, Huntingdon, Cambridgeshire, United Kingdom and 2Department of Pathology, Huntington Life Sciences, Huntingdon, Cambridgeshire, United Kingdom. Sponsor: C. Hardy.

#1182  Poster Board Number ........................................621
RAT STRAIN DIFFERENCES IN NASAL TISSUE RESPONSE AND METABOLISM. M. Mannix, A. N. Bachman, L. K. Low, J. Lewis and M. G. Bird. ExxonMobil Biomedical Sciences, Annandale, NJ.
Program Description (Continued)

Abstract #  Poster Board Number ..............................................622

DOSAGE-RESPONSE COMPARISONS OF SINGLE VS. REPEATED EXPOSURES IN DEVELOPMENTAL TOXICITY STUDIES. J. A. Davis¹, J. S. Gift², G. M. Woodall¹, M. Narotsky² and G. L. Fourment¹. ¹NCEA, U.S. EPA, Research Triangle Park, NC and ²NHEERL, U.S. EPA, Research Triangle Park, NC.

Poster Board Number ..............................................623


Poster Board Number ..............................................624

THE IMPORTANCE OF ASBESTOS FIBER LENGTH AS A PREDICTOR OF POTENCY FOR ASBESTOS-RELATED DISEASE. A. D. Phelka¹, J. A. Clarke¹, D. J. Faustman¹ and B. L. Finley¹. ¹ChemRisk, Boulder, CO and ¹ChemRisk, San Francisco, CA.

Poster Board Number ..............................................625

SKIN SENSITIZATION TO HAIR DYE ACTIVES: USE OF SKIN PENETRATION DATA IN A QUANTITATIVE RISK ASSESSMENT APPROACH. C. Goebel¹, C. Ryan¹, P. Kern¹, K. Smith¹, T. Sieber², H. Rothe¹ and G. F. Gerberick¹. ¹CPS, Wella Service GmbH, Darmstadt, Germany; ²Wella-Cosmital, Marly, Switzerland and ¹Procter & Gamble Co., Cincinnati, OH.

Poster Board Number ..............................................626

A NOVEL FRAMEWORK FOR ASSESSING RISK FROM FORMALDEHYDE-RELEASING BIOCIDES. N. M. Berdasco, M. Arnold, P. J. Spencer and B. D. Landenberger. Toxicology and Environmental Research and Consulting, The Dow Chemical Company, Midland, MI.

Poster Board Number ..............................................627


Poster Board Number ..............................................628

CASE STUDIES FOR THE DEVELOPMENT OF A PATHOPHYSIOLOGICAL PROGRESSION MODEL. D. G. Dodge¹, L. T. Haber¹, E. Kopras¹, J. E. Goodman¹, I. Pagan¹, J. S. Gift¹ and L. R. Rhomberg¹. ¹Gradient Corp, Seattle, WA; ²TERA, Cincinnati, OH; ³University of Cincinnati, Cincinnati, OH; ¹Gradient Corp, Cambridge, MA and U.S. EPA NCEA, Research Triangle Park, NC.

Poster Board Number ..............................................629

REMOVING CENSORSHIP BIAS FROM CORRELATION ESTIMATES OF DATA SETS CENSORED BY LIMITS OF DETECTION. E. M. Vigoren, F. Krogstad, W. C. Griffith and E. M. Faustman. Institute for Risk Analysis and Risk Communication, University of Washington, Seattle, WA.

Poster Board Number ..............................................630

THE POWER TO DETECT A DIFFERENCE: DETERMINING SAMPLE SIZE REQUIREMENTS FOR EVALUATION OF REPRODUCTIVE/DEVELOPMENTAL EFFECTS FROM EXPOSURE TO COMPLEX MIXTURES OF DISINFECTION BYPRODUCTS. J. Simmons¹, C. Dingus¹, L. K. Teuschler², G. E. Rice² and M. G. Narotsky³. ¹NHEERL/ORD, U.S. EPA, Research Triangle Park, NC; ²Battelle, Columbus, OH and ³NCEA/ORD, U.S. EPA, Cincinnati, OH.

Poster Board Number ..............................................631

GEOSPATIAL CONSIDERATIONS IN CALCULATING 95% UPPER CONFIDENCE LIMITS ON THE MEAN. M. E. Schuck¹, K. Goff², S. M. Roberts³ and J. K. Tolson⁴. ¹GeoSyntec Consultants, Tampa, FL and ²University of Florida, Gainesville, FL.

Poster Board Number ..............................................632

ASSESSMENT OF THE RELAVENT OF CARBONIC SOIL METABOLITES. E. Freeman¹, V. Clayton¹, S. Long¹, U. Wanner¹, C. Pratt¹ and R. Cardona¹. Chemtura Corporation, Middlebury, CT and ¹Crop Protection, Chemtura Europe Limited, Slough, United Kingdom.

Poster Board Number ..............................................633


Poster Board Number ..............................................634

BIOREACTIVITY OF LEACHATE FROM MUNICIPAL SOLID WASTE LANDFILLS — ASSESSMENT OF TOXICITY. L. Koshy¹, T. Jones¹ and K. Berntzel¹. School of Biosciences, Cardiff University, Cardiff, United Kingdom and ¹School of Earth, Ocean and Planetary Sciences, Cardiff University, Cardiff, United Kingdom. Sponsor: T. Gordon.

Poster Board Number ..............................................635

XENOBIOTIC METABOLISM RESEARCH AND ITS APPLICATION TO HUMAN AND ECOLOGICAL EXPOSURE AND RISK ASSESSMENT. J. F. Kenneke¹, C. S. Mazur¹, W. M. Henderson¹, A. W. Garrison¹, S. E. Ritter¹, T. J. Sack¹, C. C. Brown¹ and J. K. Avants¹. ¹of Research & Development, National Exposure Research Laboratory, U.S. Environmental Protection Agency, Athens, GA, ²Student Services Authority, Athens, GA and ³Senior Service America Incorporated, Athens, GA. Sponsor: C. Taylor.

Poster Board Number ..............................................636

BIOMONITORING EQUIVALENTS: CASE STUDIES. D. W. Pyatt¹, L. L. Ayward¹ and S. M. Hays¹. ¹Summit Toxicology, LLP, Falls Church, VA; ²Summit Toxicology, LLP, Lafayette, CO and ³Summit Toxicology, LLP, Lyons, CO.
Program Description (Continued)

Abstract #  
#1198  
**Poster Board Number ...............................................#1202**  
A FRAMEWORK FOR EVALUATING SERUM DIOXIN DATA DERIVED FROM BIOMONITORING STUDIES. J. D. Urban1, L. C. Haw1, L. F. Scott2, P. S. Scott1, D. F. Sasaki1, J. A. Tachovsky1, K. M. Uniec1 and M. A. Harris1, ChemRisk, Austin, TX, ChemRisk, Houston, TX and ChemRisk, Pittsburgh, PA.

#1199  
**Poster Board Number ...............................................#1200**  
Biomonitoring Equivalents: Technical Issues and Guidelines – Report from the Expert Workshop. S. M. Hays1 and L. L. Aylward1, Summit Toxicology, LLP, Falls Church, VA and 2Summit Toxicology, LLP, Lyons, CO.

Tuesday Afternoon, March 18  
1:00 PM to 4:30 PM  
Exhibit Hall

**POSTER SESSION: LIVER II: IN VITRO**

Chairperson(s): Craig Thomas, Lilly Research Labs, Greenfield, IN and Blair Bradford, University of North Carolina Chapel Hill, Chapel Hill, NC.

**Displayed:** 1:00 PM–4:30 PM  
**Attended:** 2:45 PM–4:30 PM

Abstract #  
#1200  
**Poster Board Number ...............................................**  
COMPARISON OF HUMAN CYP INDUCTION BETWEEN IN VIVO AND IN VITRO STUDIES USING PXR MICE WITH HIGHLY REPOPULATED HUMANIZED LIVER. M. Kakani1, C. Yamasaki1, A. Tachibana1, Y. Yoshizane1, S. Ninomiya2 and C. Tateno1. 1Study Service Department, PhoenixBio Co., Ltd., Higashihiroshima, Japan and 2INSERM U. 620, INRA, Université de Rennes 1, Rennes, France, 3Agence Française de Sécurité Sanitaire des Aliments, Fougeres, France and 4BIOPREDIC International, Rennes, France. Sponsor: B. International.

#1201  
**Poster Board Number ...............................................**  
DEVELOPMENT AND VALIDATION OF A HEPATOCYTE ASSAY THAT DETECTS REACTIVE METABOLITE CYTOTOXICITY. D. D. Baker1, Y. LaForge2, M. Hickman1, M. Abbasian1, O. Laskin1, A. P. Li2 and P. J. Lapinskas1. 1Exploratory Toxicology, Signal Pharmaceuticals, Inc., Portland, OR and 2ADME-TOX Research Institute, Daiichi Pure Chemicals, Co., Ltd., Tokai, Japan. Sponsor: T. Miyaoaka.

#1202  
**Poster Board Number ...............................................**  
FUNCTIONAL STABILITY OF HUMAN HEPATOMA HEPIRG CELLS AND THEIR USE FOR CHRONIC TOXICITY AND GENOTOXICITY STUDIES. R. Josse1, C. Aninat1, D. Glaise2, J. Poul1, R. Li1, C. Gugen-Guillouzo3 and A. Guillouzo3. 1INSERM U. 620, Université de Rennes 1, Rennes, France; 2INSERM U. 522, Hôpital de Pontchaillou, Rennes, France; 3Agence Française de Sécurité Sanitaire des Aliments, Fougeres, France and 4BIOPREDIC International, Rennes, France. Sponsor: B. International.

#1203  
**Poster Board Number ...............................................**  
APPLICATION OF A NEW HEPATOCYTES PRESERVATION TECHNOLOGY USING A UNIQUE MATRIX TO IN VITRO TOXICOLOGY ASSAYS. T. Yamamoto1, M. Kobayashi1, T. Tomari1, B. Griffiths2, A. Watson2, K. Suzuki1, T. Ebihara2, P. Evans3, N. Ishii4, N. Tashiro5 and N. Tsutsui6. 1Mitsubishi Tanabe Pharmacology Corporation, Kisarazu, Chiba, Japan; 2Abellix Limited, Cardif, United Kingdom, 3GeneFrontier Corporation, Chuo-ku, Tokyo, Japan; 4Cardiff School of Biosciences, Cardiff University, Cardiff, United Kingdom and 5Kashima Laboratory, Mitsubishi Chemical Safety Institute LTD, Sunayama, Ibaraki, Japan. Sponsor: J. Sugimoto.

#1204  
**Poster Board Number ...............................................**  

#1205  
**Poster Board Number ...............................................**  

#1206  
**Poster Board Number ...............................................**  
AN IN VITRO SCREENING APPROACH FOR PREDICTING HEPATOTOXICITY. R. J. Ochalski, S. Culp, G. Kennu, Y. Dragan and M. Ottino. AstraZeneca, Wilmington, DE.

#1207  
**Poster Board Number ...............................................**  

#1208  
**Poster Board Number ...............................................**  
MICROARRAY ANALYSIS OF TROVALOXACIN-INDUCED GENE EXPRESSION CHANGES IN HUMAN HEPATOCYTES COMPARED TO HEPATOCYTES ISOLATED FROM RATS TREATED WITH LPS. E. Sparkenbaugh1, P. Shaw1, P. E. Ganey2, R. A. Roth1, A. Ditewig2, E. G. Blomme1, M. Liguori2 and C. O’Day. AstraZeneca, Wilmington, DE. Sponsor: L. King.

#1209  
**Poster Board Number ...............................................**  
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<td>(O. S. El-Tawil, A. H. Abou-Hadeed, A. A. Shalaby and S. M. Mouneir)</td>
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<td>4-HYDROXYNONENAL AND 4-OXONONENAL MAY CONTRIBUTE TO HEPATOSTATOSIS BY DISRUPTING CELLULAR MICROtUBULeS.</td>
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<td>APPLICATION OF STEATOSIS ASSAY FOR THE ASSESSMENT OF HUMAN HEPATOTOXICITY: ONO-NT-126, A THROMBOXANE RECEPTOR ANTAGONIST, INHIBITS MITOCHONDRIAL BETA-OXIDATION AND INDUCES STEATOSIS</td>
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<td>Research Laboratories, Ono Pharmaceutical CO., LTD., Fukai, Japan and Discovery Technology Laboratory, Medical Research Laboratories, Ono Pharmaceutical CO., LTD., Osaka, Japan.</td>
<td>(TCDD) ON THE EXPRESSION OF APOPTOSIS-RELATED GENES IN MOUSE LIVER AND PRIMARY RAT HEPATOcyTES. M. Chopra, M. Chopra and D. Schrenk. Food Chemistry &amp; Toxicology, University of Kaiserslautern, Kaiserslautern, Germany.</td>
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Program Description (Continued)

Abstract #    Abstract #

Tuesday Afternoon, March 18    #1229
1:00 PM to 4:30 PM    #1230
Exhibit Hall

POSTER SESSION: ASSESSMENT OF ECOLOGICAL TOXICOLOGY

Chairperson(s): Louis Trombetta, St. Johns University, New York, NY and Michael Hemmer, U.S. EPA, Gulf Breeze, FL.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

#1223

Poster Board Number .........................701

#1224

Poster Board Number .........................702

#1225

Poster Board Number .........................703

#1226

Poster Board Number .........................704
EFFECTS OF CADMIUM ON GROWTH AND METAMORPHOSIS OF AFRICAN CLAWED FROG, B. SHARMA1 and R. Patiño1. 1Natural Resource Management, Texas Tech University, Lubbock, TX and 2USGS Texas Cooperative Fish and Wildlife Research Unit, Texas Tech University, Lubbock, TX.

#1227

Poster Board Number .........................705
BIOACCUMULATION OF MERCURY FROM MERCURY CONTAMINATED SOILS BY THE EARTHWORM LUMBRICUS TERRESTRIS. A. C. Nichols, D. A. Steffy and A. J. McLaughlin. Physical and Earth Sciences, Jackson State University, Jackson, MS.

#1228

Poster Board Number .........................706
TIERED TESTING APPROACH TO DETERMINE POTENTIAL ANDROGENIC RECEPTOR EFFECTS OF THE HUMAN PHARMACEUTICAL, INSPIRA®, IN FISH. M. A. Moen1, L. A. Constantine1, J. F. Erickson1, J. C. Cook2 and D. B. Huggett2. 1PDM - Environmental Sciences, Pfizer, Inc., Groton, CT, 2DSRD - Investigative Toxicology, Pfizer, Inc., Groton, CT and 3Department of Biological Sciences, University of North Texas, Denton, TX.

#1229

Poster Board Number .........................707
PROTEOMICS IN ECOTOXICOLOGY: PROTEIN EXPRESSION PROFILING TO SCREEN CHEMICALS FOR ANDROGENIC ACTIVITY. M. J. Hammer1, K. A. Salinas1, P. A. Harris1, J. W. Ng1 and C. C. Walker2. 1Gulf Ecology Division, NHEERL, ORD, U.S. Environmental Protection Agency, Gulf Breeze, FL and 2National Marine Fisheries Service, NOAA, Pascagoula, MS. Sponsor: W. Benson.

#1230

Poster Board Number .........................708
PROTEOMIC RESPONSES IN THE GILL AND MUSCLE OF ZEBRAFISH FOLLOWING IBUPROFEN EXPOSURE. P. Adhikari, B. Venables and D. B. Huggett. University of North Texas, Denton, TX.

#1231

Poster Board Number .........................709
PROTEOMIC AND GENE EXPRESSION CHANGES IN THE FATHEAD MINNOW LIVER IN RESPONSE TO FLUTAMIDE AND TRENBOLONE WATERBORNE EXPOSURE. C. J. Martynuk1, D. Villeneuve2, G. T. Ankle3 and N. D. Denslow4. 1Center for Environmental and Human Toxicology, University of Florida, Gainesville, FL and 2U.S. EPA, Duluth, MN.

#1232

Poster Board Number .........................710
HEPATIC GENE EXPRESSION IN RAINBOW TROUT (ONCORHYNCHUS MYKISS) EXPOSED TO DIFFERENT HYDROCARBON MIXTURES. S. Hook1, M. A. Lampi1, E. J. Febbo2, J. A. Ward1 and T. F. Parkerton2. Battelle, PNWD, Sequim, WA and 2ExxonMobil Biomedical Sciences, Annandale, NJ.

#1233

Poster Board Number .........................711
SPECIFIC AHR AND ERALPHA IN VITRO TOXICITY OF CRUDE AND REFINED PETROLEUM PRODUCTS. C. Vrabie1, A. J. Murt1,2, M. O. Jonker3 and M. van den Berg3. 1Institute for Risk Assessment Sciences, Utrecht University, Utrecht, Netherlands, 2Toxicology, Wageningen University, Wageningen, Netherlands and 3Wageningen Imarens, Wageningen, Netherlands.

#1234

Poster Board Number .........................712
EFFECT OF MICROCYSTIS AERUGINOSA LIPOPOLYSACCHARIDE (LPS) ON NEONATAL RAT BRAIN MICROGLIA RELEASE OF SUPEROXIDE ANION, THROMBOXANE B2, TUMOR NECROSIS FACTOR-α AND MATRIX METALLOPROTEINASE-9. A. M. Meyer1, M. A. Holland1, M. L. Hall1, B. P. Jacobsen2 and J. P. Berry3. 1Pharmacology, Midwestern University, Downers Grove, IL, 2Abbott Laboratories, Abbott Park, IL and 3Chemistry and Biochemistry, Florida International University, Miami, FL.

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Poster Board Number .........................713
Program Description (Continued)

Abstract #

#1236 Poster Board Number .........................714
EFFECTS OF POLYBROMINATED
DIPHENYLLERITH (DE-71) EXPOSURE ON
STERIOGENOSIS IN JUVENILE XENOPUS
(SILURANA) TROPICALLS, D. J. Fort1, R.
L. Rogers1, P. D. Guiney2 and J. A. Weeks2, 1Fort
Environmental Laboratories, Stillwater, OK and 2S.C.
Johnson & Son, Racine, WI.

#1237 Poster Board Number .........................715
MONITORING OF ENVIRONMENTAL
POLYCYCLIC AROMATIC
HYDROCARBONS (PAH) IN FISH,
VEGETATION AND SOIL FROM THE
CUCHARILLAS MARSHLAND, CATANO,
PUERTO RICO. P. Nieves1,2, J. Marengo1, W.
L. Lopez1, C. Yepez1 and B. Zayas1, 1School of
Environmental Affairs, Universidad Metropolitana,
San Juan, PR and 2School of Science and
Technology, Universidad Metropolitana, San Juan,
PR. Sponsor: D. Herreno.

#1238 Poster Board Number .........................716
ASSESSMENT OF PERFLUORINATED
CHEMICALS (PFCs) DEVELOPMENTAL
TOXICITY USING EMBRYONIC
ZEBRAFISH. L. Duong1, A. Benninghoff1 and R.
Tanggu1,2, 1Environmental Science, Oregon State
University, Corvallis, OR and 2Environmental and
Molecular Toxicology, Oregon State University,
Corvallis, OR.

#1239 Poster Board Number .........................717
THE DISPOSITION AND REPRODUCTIVE
TOXICITY OF PBDE-47 AND
PERFLUOROCANONIC ACID IN FISH
AFTER ORAL DOSING. R. Schulz1, D.
Haskell1, S. Lema1 and P. Swanson1, 1Battelle PND,
Sequim, WA and 2NOAA NWFSC, Seattle, WA.

#1240 Poster Board Number .........................718
COMPARISON OF PREDICTED AND
EXPERIMENTALLY DERIVED VALUES
FOR THE DURATION OF THE EXPOSURE
PHASE IN FISH BIOCONCENTRATION
STUDIES. K. Barrett1, W. Davies1, A. D.
Langford-Pollard2 and D. Kirkpatrick1, 1Programme
Management, Huntingdon Life Sciences,
Huntingdon, Cambs, United Kingdom and
2Environmental Sciences, Huntingdon Life Sciences,
Huntingdon, Cambs, United Kingdom. Sponsor: S.
Dean.

#1241 Poster Board Number .........................719
COMPARING THE TOXICITY AND
BIOACCUMULATION POTENTIAL OF
BULK AND NANO ALUMINUM OXIDE
USING EISENIA FETIDA. J. Coleman, D. R.
Johnson, A. J. Beldin and J. A. Steevens2, 1U.S.
Army Engineer Research and Development Center,
Vicksburg, MS.

#1242 Poster Board Number .........................720
DIALYLYL SULFIDE INCREASES
DIETHYLSTILBESTROL EXPOSED MCF10A
CELL VIABILITY AND REDUCES DNA
SINGLE STRAND BREAKS. M. McCuskill, A.
Aheade-Cole2, O. Newell, A. Tucker and R. Thomas,
College of Pharmaceutical Sciences, Florida A&M
University, Tallahassee, FL.

Abstract #

#1243 Poster Board Number .........................721
EFFECT OF THE CYPIA INHIBITOR
FLUORANTHENES ON THE
BIOTRANSFORMATION OF BENZOFURAN
PYRENE IN TWO POPULATIONS OF
FUNDULUS HETEROCLITUS WITH
DIFFERENT EXPOSURE HISTORIES. L.
1Duke University, Durham, NC and 2University of
Mississippi, University, MS.

#1244 Poster Board Number .........................722
INVESTIGATION OF THE LACK
OF CYTOCHROME P450 1A1 GENE
EXPRESSION IN PADDLEFISH (POLYDON
SPATHULA). L. Sardina, R. Fitzmorris and D.
Gundersen, Environmental Science, Pacific
University, Forest Grove, OR.

#1245 Poster Board Number .........................723
REPRODUCTIVE TOXICITY OF
NORETHINDRONE TO JAPANESE
MEDAKA. J. V. Storey, P. Paulos, T. LaPoint and D.
B. Huggett. University of North Texas, Denton, TX.

#1246 Poster Board Number .........................724
CHARACTERIZATION OF METABOLIC
ENZYMES AND METABOLIC STABILITY
IN RAINBOW TROUT CRYOPRESERVED
HEPATOCYTES AND 59 LIVER FRACTIONS.
K. M. Johanning1, J. Sahi2, J. Rebecca1, J. Wright1,
1CellDirect, Inc., Austin, TX and 2Battelle, Pacific
Northwest National Laboratory, Sequim, WA.

#1247 Poster Board Number .........................725
TOXICOGENOMIC RESPONSES OF
RAINBOW TROUT EXPOSED TO
CONTAMINANTS. S. E. Hook and I. R. Schultz.
Battelle PND, Sequim, WA.

#1248 Poster Board Number .........................726
SIMULTANEOUS ANALYSIS OF DOMOIC
ACID KINETICS AND ELISA ASSAYS TO
GUIDE PUBLIC HEALTH DECISIONS
FOR MULTIPLE SHELLFISH SPECIES. F.
Krogstad, E. Dusek, E. M. Vigoren, M. S. Parker, W.
C. Griffith, C. A. Simerstad and E. M. Faustman.
University of Washington, Seattle, WA.

#1249 Poster Board Number .........................727
BIOMARKERS OF EXPOSURE AND
TOXICITY IN ECOLOGICAL RECEPORS.
M. A. Kelley1, A. Gillespie1, B. Duncan1, T.
McDonald1, G. Zhou1 and K. C. Donnelly1. 1Texas
A&M University, College Station, TX and 2U.S. EPA
Region 10, Seattle, WA.

#1250 Poster Board Number .........................728
AN EXAMINATION OF HYPOTHESES FOR
THE MECHANISM OF TRIBUTYLIN-
INDUCED IMPOSEX. R. M. Sternberg, A.
K. Hotchkiss and G. A. LeBlanc, Environmental
and Molecular Toxicology, North Carolina State
University, Raleigh, NC.
Program Description (Continued)

Tuesday Afternoon, March 18
1:30 PM to 4:30 PM
Hyatt
E. Anderson Amphitheater

K–12 PARCELUS GOES TO THE CLASSROOM—THE TEAM PROJECT: TOXICOLOGISTS EDUCATING AND MENTORING STUDENTS

Chairperson(s): Katie Sprugel, Amgen, Seattle, WA and Vanessa Fitsanakis, King College, Bristol, TN

Continuing the tradition of providing public outreach in conjunction with the Annual Meeting, the Committee on K–12 Education will host a symposium for high school students by videoconferencing from the Annual Meeting to classrooms around the state of Washington. Twelve groups of students will present their projects to one another and to a panel of toxicologists in a morning and an afternoon session. Other students will have the opportunity to submit an electronic version of their project for a virtual poster session. The presentations will educate other students about a health or environmental health issue of importance to the students or their community. Toxicologists from SOT will also serve as mentors in the months preceding the meeting as the students develop their presentations.

Tuesday Afternoon, March 18
1:30 PM to 4:30 PM
Exhibit Hall 4C-3

EXHIBITOR HOSTED SESSION: COVANCE: OUTSOURCING PRECLINICAL SAFETY ASSESSMENT—HOW TO CREATE A STRATEGY FOR SUCCESS

Presented by: Covance

The consideration to outsource your preclinical safety assessment studies cannot be approached without consideration of many factors—your strengths and resources, identifying what you need in an outsourcing partner, your timelines and options to successfully meet your milestones, and deciding on the right combination of available options. Learn more about critical considerations that will contribute to your success in developing the right outsourcing strategy for your program.

Tuesday Afternoon, March 18
1:30 PM to 2:30 PM
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: GLOBAL METABOLOMICS ANALYSIS IN DRUG DISCOVERY AND DEVELOPMENT

Presented by: Metabolon, Inc.

Small molecule biomarkers are the most common approach to diagnose and monitor human disease. Detection of endogenous biochemicals and xenobiotics also provides solutions for compound profiling and optimization, toxicology, drug discovery, and drug safety. Metabolon’s analytical mass spectrometry platform and proprietary data analysis software provides a method for the detection and identification of small molecules across a wide array of sample types. An overview of the technology and numerous case study examples will be provided.

Tuesday Afternoon, March 18
1:30 PM to 4:15 PM
Room 605

© OXIDATIVE SIGNALING AND REDOX BIOLOGY

SYMPOSIUM SESSION: ENDOTHELIAL DYSFUNCTION: MORE THAN JUST A ‘NO NO̓ PHENOMENON

Chairperson(s): Matthew Campen, Lovelace Respiratory Research Institute, Albuquerque, NM and Daniel Conklin, University of Louisville, Louisville, KY.

Endorsed by:
Inhalation and Respiratory Specialty Section®
Mechanisms Specialty Section

Various environmental and anthropomorphic toxins can cause direct or indirect injury to the vasculature, resulting in endothelial cell dysfunction. Endothelial dysfunction is thought to be an early marker of vascular injury and precedes overt macro- and microvascular pathology (e.g., atherosclerosis, peripheral artery disease, angiopathy), and may even be a crucial factor in end-stage lung disease. Endothelial dysfunction has been measured in many forms such as decreased endothelium-dependent relaxation, increased expression of endothelial cell adhesion molecules (e.g., ICAM-1, VCAM-1, selectins, etc.), increased circulating endothelial-derived products (e.g., sICAM-1, ET-1, vWF, etc.), and increased vascular permeability. Endothelial dysfunction is often linked to a generalized decrease in bioavailable or bioactive nitric oxide (NO), which could result from diminished eNOS expression, decreased eNOS activity due to decreased co-factor availability or protein uncoupling, and/or increased superoxide production, which can sequester NO to form peroxynitrite. In addition, as toxicants combine with pre-existing disease conditions to amplify vascular oxidative stress, endothelial dysfunction is typically evidenced by increased superoxide production, increased iNOS and cytokine expression, and increased protein modification by peroxynitrite, which could result in protein inactivation. Despite inconsistencies among methodologies across laboratories, and some variation among findings, data largely indicate that a variety of inhaled and ingested xenobiotics can adversely impact endothelial function, especially in the setting of pre-existing disease.

Abstract #

Tuesday Afternoon, March 18
1:30 PM to 4:15 PM
Room 605

#1251 1:30
ENDOTHELIAL DYSFUNCTION: MORE THAN JUST A ‘NO NO̓ PHENOMENON.
M. J. Campen1 and D. J. Conklin2.1Cardiovascular and Respiratory Physiologist, Lovelace Respiratory Research Institute, Albuquerque, NM and 2Institute of Molecular Cardiology, University of Louisville, Louisville, KY.

#1252 1:41
MECHANISMS OF ENDOTHELIAL DYSFUNCTION: RELEVANCE TO INHALED PM. S. Rajagopalan. Ohio State University Medical Center, Columbus, OH. Sponsor: D. Conklin.

#1253 2:03
EFFECTS OF INHALED DIESEL EXHAUST ON VASCULAR OXIDATIVE STRESS AND ENOS FUNCTION. T. L. Knuckles1, S. Lucas1, A. Lund1, T. Cherng2, N. Kanagy2 and M. Campen1.1Lovelace Respiratory Research Institute, Albuquerque, NM and 2University of New Mexico, Albuquerque, NM.

#1254 2:25
REGULATION OF ENDOTHELIAL CELL ADHESION MOLECULES BY ACROLEIN, AN ENVIRONMENTAL ALDEHYDE. S. E. D’Souza1, S. D. Sithu2, E. N. Vladykovskaya3, D. J. Conklin1, A. Bhatnagar1 and S. Srivastava1.1Physiology, University of Louisville, Louisville, KY and 2Molecular Cardiology, University of Louisville, Louisville, KY.
The orderly formation of the CNS requires a multitude of complex, integrated and simultaneously occurring processes. Neural progenitor cells expand through proliferation, commit to different cell fates, exit the cell cycle, and generate different neuronal and glial cell types. New neurons then migrate to specified areas and establish synaptic connections. A similar neurogenic process has been identified in certain regions of the adult brain. Gestational, postnatal and/or adult exposure to well-known environmental neurotoxicants, pharmacological agents and drugs of abuse produce persistent alterations in behavioral, cognitive, sensory and motor functions that likely reflect a disruption of these processes of CNS development. This symposium will provide a framework for understanding the orchestrated events of neurogenesis - especially the coordination of proliferation and cell fate specification - and will address the adverse effects of known neurotoxicants on neurogenesis in the brain and retina. The speakers will provide an integrated overview of these processes and molecular mechanisms in several different brain regions; present the molecular mechanisms of how low-level gestational lead exposure produces a selective increase in neurogenesis and cell proliferation of late-born retinal neurons ( rods and bipolar cells), but not glial cells, which results in both a novel retinal phenotype and function in children and adult animals; discuss the mechanisms of how ethanol exposure during different life stages produces long-term changes in hippocampal neurogenesis, survival and cognitive function; describe the mechanisms of chronic lead exposure during early life on cell proliferation, survival and phenotypic differentiation of progenitor cells in the hippocampus and how these changes compromise synaptic plasticity and cognition.
Program Description (Continued)

Abstract #
Tuesday Afternoon, March 18
1:30 PM to 4:15 PM
Room 602

SYMPOSIUM SESSION: NOVEL BIOMARKERS OF DRUG-INDUCED TOXICITY: OUTCOMES OF PREDTOX AND THE PREDICTIVE SAFETY TESTING CONSORTIUM

Chairperson(s): I Rosembloom, Rosembloom Consulting, LLC, Newtom, NJ and Denise Robinson-Gravatt, Pfizer, Inc., Groton, CT.

Endorsed by:
Drug Discovery Toxicology Specialty Section
Regulatory and Safety Evaluation Specialty Section*
Toxicologic and Exploratory Pathology Specialty Section

There is general agreement regarding the potential for safety biomarkers to provide earlier and more sensitive or specific indicators of preclinical and clinical safety, to improve understanding of mechanisms of toxicity, and to speed up and/or reduce the cost of preclinical drug safety evaluation. It is also increasingly recognized that the path to establishing new biomarkers is time and resource intensive, and will be more efficiently progressed through collaborative approaches. To this end, several consortia have been created to jointly develop the necessary data to advance novel safety biomarkers. The European Commission’s PredTox Project, involving pharmaceutical companies, universities and regulatory agencies in Europe has focused on the usefulness of “omic” technologies in preclinical safety testing, and the value of combining results from omics technologies with the results from more conventional toxicology methods. Likewise, the Predictive Safety Testing Consortium (PSTC) has been established as a collaboration between the pharmaceutical industry, the FDA, and the Critical Path Institute, with the mission to efficiently qualify new biomarkers of drug-induced toxicity for application in drug development and regulatory decision-making. Both of these efforts have made use of the combined resources of the participants to rapidly discover (PredTox) and qualify (PSTC) new safety biomarkers. The involvement of regulatory scientists assures progress toward predictive biomarkers that are relevant for preclinical and investigative clinical application and regulatory decision-making. The Symposium will showcase progress of the working groups of PredTox and the PSTC toward novel assays of nephrotoxicity, hepatotoxicity, vascular injury, and non-genotoxic carcinogenicity, as well as an overview of the regulatory review process for these assays within the Pilot Process for Biomarker Qualification initiative at the FDA.


#1265 1:40 FIRST REGULATORY SUBMISSION OF NEWLY QUALIFIED ACCESSIBLE BIOMARKERS OF NEPHROTOXICITY VIA A NEW ROLLING QUALIFICATION PROCESS. J. P. Vonderscher1 and F. D. Sistare2. 1Exploratory Development, Novartis, Basel, Switzerland and 2Safety Assessment, Merck, White House Station, NJ.

#1266 2:00 NOVEL BIOMARKERS OF HEPATOTOXICITY. P. Wier1 and K. Kolaja2. 1Safety Assessment, GlaxoSmithKline Pharmaceuticals, King of Prussia, PA and 2Investigative Toxicology, Roche, Palo Alto, CA.

#1267 2:20 QUALIFYING NOVEL BIOMARKERS OF VASCULAR INJURY. M. Lawton1 and R. Snyder2. 1Investigative Toxicology, Pfizer Global Research and Development, Groton, CT and 2Genetic and Molecular Toxicology, Schering-Plough Research Institute, Summit, NJ.

Abstract #
Tuesday Afternoon, March 18
1:30 PM to 4:15 PM
Room 6C

NANOTECHNOLOGY

WORKSHOP SESSION: DERMAL TOXICOLOGICAL ASSESSMENT OF NANOMATERIALS AND NANODEVICES

Chairperson(s): Dave Hobson, H&H Scientific Services, LLP, Boerne, TX and Robert Osterberg, Aclairo Pharmaceutical Development Group, Inc., Vienna, VA.

Endorsed by:
Dermal Toxicology Specialty Section*
Nanotoxicology Specialty Section
Regulatory and Safety Evaluation Specialty Section

Developments in nanotechnology are creating a rapidly increasing number and variety of engineered nanomaterials and nanodevices with potential for dermal applications in topical drug and cosmetic product formulations. Dermal exposures associated with various industrial applications, occupations and environmental releases related to these developments may also occur. The small size and large surface area of nanomaterials provides for unique properties of these materials in addition to their chemical composition that allow them to advance or enhance technology in an expanding number and variety of applications such as consumer goods (foods, household goods, cosmetics, textiles, etc.), drugs and drug delivery systems and diagnostic systems. Dermal exposures to nanomaterials have potential to enhance or modify the efficacy of therapeutics and skin protectants as well as show toxicity that is differential to that expected due to chemical composition and from materials that normally could not gain entrance to the body via dermal routes that are relatively unique to nanomaterials. While some nanomaterials appear to be safe at this time, it is becoming evident that nanomaterials may become differentially activated biologically and exhibit pharmacologically and toxicologically significant properties that are not evident in micro or macroparticulate forms for the same materials that must be taken into account in the design of dermal toxicological studies. The results of different investigations being conducted internationally clearly indicate that the biological activity and pharmacokinetics of nanoparticles are different from non-nanoparticles. These differences can change the protein binding, cellular uptake, distribution and the pathologies of materials for which toxicities are already understood and may make prediction of dermal toxicity even more difficult and complex than presently exists with current testing methodologies. Current data demonstrate that nanomaterials should be tested using specific modifications to existing procedures or using
new methods specifically developed to optimize the assessment of toxicological effects of these nanomaterials.


#1273 1:45 SAFETY CONSIDERATIONS FOR THE DEVELOPMENT OF NANOMATERIALS AND NANODEVICES WITH TOPICAL EXPOSURE POTENTIAL. D. Hobson, H&H Scientific LLP, Boerne, TX.

#1274 2:15 Fda Perspective on topical nanomaterials in cosmetics. R. Bronaugh. Fda, College Park, MD.


#1276 3:15 STUDY DESIGN CONSIDERATIONS FOR THE EVALUATION OF SKIN EXPOSURES AND BIODISTRIBUTION TO ENGINEERED NANOPIERCUTANEOUS METALS. N. A. Montero-Riviere. North Carolina State University, Raleigh, NC.


Tuesday afternoon, March 18
1:30 PM to 4:15 PM
Room 608

WORKSHOP SESSION: HOST SUSCEPTIBILITY AND CHEMICAL SAFETY TESTING; NEW APPROACHES TO ESTIMATE RISKS IN THE HUMAN POPULATION (ITS)

Chairperson(s): Ivan Rusyn, University of North Carolina Chapel Hill, Chapel Hill, NC and John French, NIEHS, Research Triangle Park, NC.

Endorsed by:
Carcinogenesis Specialty Section*
Drug Discovery Toxicology
Regulatory and Safety Evaluation
Toxicologic and Exploratory Pathology

The focus of classical toxicology is on dose-response relationships and mode-of-action paradigms. Yet, the effects of many drug and environmental chemical exposures are context dependent, with genetic diversity between individuals a major variable that is usually overlooked in safety testing. Recent advances in our basic understanding of the genetic diversity of the human genome, as well as genomes of model organisms used in toxicity and safety assessment testing, not only provide an improved basis for species comparisons, but also serve as a lead into designing new approaches for understanding and estimating the risks in a genetically diverse population. The presentations and discussion in this session will highlight 1) new initiatives being considered for improvement of chemical testing at the National Toxicology Program based on host susceptibility and high throughput testing systems; 2) the use of genetic differences between isogenic mouse strains to develop knowledge applicable to human populations studies with regard to assessment of organ-specific toxicity of xenobiotics; 3) experimental models that explore the relationship between highly conserved mouse and human genes that affect responses to environmental agents; 4) the utility of densely-genotyped mouse and human lymphoblast cell lines to discover genetic polymorphisms that may be critical to population-wide responses to environmental agents; and 5) a perspective for introducing the aspect of genetic diversity and the relative value into drug safety evaluation of pharmacuti-
Reduction of protein-bound metal/metalloid ions [Ni or Cr(VI)ions] inside cells leads to oxidative radical generation, and 8-OH-dG damage in DNA. Studies of metal ions in yeast cells indicate that many metal ions cause substantial global de-regulation of gene expression in yeast. In mammalian cells, Ni(II)ions cause chromosome aberrations and amplification of oncogenes, leading to over-expression of proto-oncogene mRNAs and proteins of mutated oncogene products. Ni(II)ions also cause chromatin condensation and inhibition of histone demethylases. This then leads to DNA methylation and silencing of many genes, including tumor suppressor genes. The combination of activation of oncogenes and inactivation of tumor suppressor genes by metal ions, leads to loss of transcription, epigenetic events, global disruption of gene expression, and neoplastic transformation of cells, hence carcinogenesis.

#1284 1:30 MOLECULAR MECHANISMS AND MOLECULAR BIOLOGY OF METAL CARCINOGENESIS: CHEMISTRY, MOLECULAR GENETICS, EPIGENETICS, AND ABERRATIONS IN GENE EXPRESSION. J. R. Landolfo1,2, A. DeSilva2,3, H. K. Lee3, N. Garg1,2 and D. Fleck1,2, 1Department of Molecular Microbiology and Immunology, University of Southern California, Los Angeles, CA, 2Department of Pathology, University of Southern California, Los Angeles, CA and 3USC/Norris Comprehensive Cancer Center, University of Southern California, Los Angeles, CA.

#1285 1:35 MOLECULAR TOXICOLOGY OF TRANSITION METALS: FROM YEAST TO MAN. J. H. Freedman. LMT, NIEHS, NIH, DHHS, Research Triangle Park, NC.

#1286 2:05 CHEMISTRY AND BIOLOGY OF CHROMIUM CARCINOGENESIS. A. Zhitkovich. Brown University, Providence, RI.

#1287 2:35 INSOLUBLE NICKEL COMPOUNDS INDUCE GENOTOXIC AND EPIGENETIC EVENTS, GLOBAL DISRUPTION OF GENE EXPRESSION, AND MORPHOLOGICAL/NEOPLASTIC TRANSFORMATION OF 10T1/2 MOUSE EMBRYO CELLS. J. R. Landolfo1, A. DeSilva2, H. K. Lee3, N. Garg1,2 and D. Fleck1,2. 1Department of Molecular Microbiology and Immunology, University of Southern California, Los Angeles, CA, 2Department of Pathology, University of Southern California, Los Angeles, CA and 3USC/Norris Comprehensive Cancer Center, University of Southern California, Los Angeles, CA.

#1288 3:05 EPIGENETIC MECHANISMS OF NICKEL ION CARCINOGENESIS BY INHIBITION OF HISTONE DEMETHYLASES (H3K9). M. Costa1,2 and H. Chen1. 1Env Med, New York University School of Medicine, New York and 2Pharmacology, New York University Cancer Institute, New York University Schools of Medicine, New York.

#1289 3:35 INTERACTIONS AMONG ARSENIC, CADMIUM, AND LEAD IN CAUSING TOXICITY AND CARCINOGENESIS. B. A. Fowler1, G. Wang2 and M. H. Whitaker1. 1Agency for Toxic Substances and Disease Registry, Atlanta, GA, 2M. D. Anderson Cancer Center, Houston, TX and 3ToxServices LLC, Washington, DC.

4:05 QUESTIONS FROM THE AUDIENCE.
tuesday

Tuesday Afternoon, March 18
1:30 PM to 4:15 PM
Room 618

ROUND TABLE SESSION: HUMAN HEALTH RISK ASSESSMENT FOR PHARMACEUTICALS IN THE ENVIRONMENT (PIE)

Chairperson(s): Hal Zenick, U.S. EPA, Research Triangle Park, NC, and Daniel Caldwell, Johnson & Johnson, New Brunswick, NJ.

Endorsed by:
Mixtures Specialty Section
Occupational and Public Health Specialty Section*
Risk Assessment Specialty Section

Numerous studies have documented the presence of low levels of mixtures of emerging contaminants, including human and veterinary medicines, in surface water. These findings are gaining increasing attention. Scientists and the media are questioning the potential impact of these substances on human health and on environmental species. Several issues need to be considered. For example, what are the pathways of entry of human and veterinary medicines to the environment and how can potential exposures be derived from monitoring and modeling data. Significant water reuse in certain regions of the U.S. and the current state of water treatment underscore the importance of valid exposure assessments related to PIE. Preclinical and clinical toxicology, pharmacology and metabolic data generated during the process of drug development and registration can be used to support human health risk assessments. The Federal Interagency PIE Working Group has been formed to identify some of the key definitional issues, data gaps, research priorities and collaborations. Additionally, there are U.S. EPA mandates and regulations that could be applied and critical considerations need to be defined. The session addresses these issues and provides an interactive discussion.

#1295 3:45 APPROACHES TO TOXICITY TESTING FOR REPRODUCTIVE AND DEVELOPMENTAL TOXICITY: USE OF SURROGATES, J. L. Bassière, Toxicology, Amgen, Inc., Thousand Oaks, CA.

Tuesday Afternoon, March 18
1:30 PM to 4:15 PM
Room 618

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#1298 2:00 TREATMENT AND TREATABILITY OF PHARMACEUTICALS IN WATER TREATMENT PLANTS. D. Sedlak, Civil and Environmental Engineering, University of California, Berkeley, CA. Sponsor: E. Hayes.


3:40 PANEL DISCUSSION.
Program Description (Continued)

Abstract #  
#1307 3:15 POTENTIAL GENERATION OF CANCER STEM CELLS DURING ARSENIC-INDUCED MALIGNANT TRANSFORMATION OF HUMAN URINARY PROGENITOR CELLS. E. J. Tokar1, M. W. Webber2 and M. Waiwakes1. 1Inorganic Carcinogenesis Section, LCC, NCI at NIEHS, Research Triangle Park, NC, and 2Michigan State University, East Lansing, MI.

#1308 3:35 CHRONIC LOW-DOSE ARSENIC EXPOSURE ALTERS KEY REGULATORS OF INNATE IMMUNE RESPONSE IN VIVO. C. D. Kozal2, T. H. Hampton2, J. C. Davey1, J. A. Gosse2, A. P. Nomikos2, L. A. Warnke1, M. A. Ihnat3 and J. W. Hamilton4. 1Department of Pharmacology & Toxicology, Dartmouth Medical School, Hanover, NH, 2Center for Environmental Health Sciences, Dartmouth College, Hanover, NH and 3Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK.

#1309 3:55 INTERPLAY BETWEEN CELLULAR METHYL METABOLISM AND ADAPTIVE EFFLUX DURING CHRONIC ARSENIC EXPOSURE IN HUMAN CELLS. J. Coppin and M. Waiwakes. Inorganic Carcinogenesis Section, LCC, NCI at NIH, Research Triangle Park, NC.

Tuesday Afternoon, March 18  
1:30 PM to 4:15 PM  
Room 6E

PLATFORM SESSION: MECHANISMS OF HYPERSENSITIVITY

Chairperson(s): Jean Regal, University of Minnesota Medical School Duluth, Duluth, MN and Rebecca Dearman, Manchester University, Manchester, United Kingdom.

#1310 1:30 THE IMPACT OF GLYCOSYLATION ON IG E ANTIBODY RESPONSES. R. Almond1, R.J. Dearman2, B. F. Flanagan1 and I. Kimber. 1University of Liverpool, Liverpool, United Kingdom and 2Faculty of Life Sciences, University of Manchester, Manchester, GREATER MANCHESTER, United Kingdom.

#1311 1:54 LIMITING ALLERGEN EXPOSURE DURING DEVELOPMENT: DIFFERENTIAL EFFECT ON ASTHMA SYMPTOMS IN A MOUSE MODEL. J. F. Regal1, A. L. Greene1, M. S. Rutherford1, R. R. Regal2, M. Duan2, V. Haynes1 and M. Mohrman. 1Biochemistry & Molecular Biology, University of Minnesota Medical School Duluth, Duluth, MN, 2Veterinary & Biomedical Sciences, University of Minnesota, St. Paul, MN and 3Mathematics & Statistics, University of Minnesota, Duluth, MN.

#1312 2:18 LOCAL ANTIBODY CLASS SWITCHING IN THE NASAL MUCOSA OF MICE WITH TD T RHINITIS. V. J. Johnson1, K. Fluharty1, J. S. Reynolds2, M. I. Luster1 and B. Yucsesoy. 1Toxicology and Molecular Biology Branch, NIOSH/CDC, Morgantown, WV and 2Pathology and Physiology Research Branch, NIOSH/CDC, Morgantown, WV.

#1313 2:42 EVALUATION OF IRRITANCY AND THE SENSITIZATION POTENTIAL OF METAL WORKING FLUIDS AND METAL WORKING FLUID COMPONENTS. S. Anderson1, K. Brown2, L. Butterworth1, A. Fedorowicz1, D. Beezhold1, A. E. Munson1 and B. J. Meade1. 1NIOSH, Morgantown, WV and 2NIOSH, Cincinnati, OH.


#1315 3:30 HEME-OXYGENASE 1 AND NADPH QUINONE OXIDOREDUCTASE 1: NEW TARGET GENES TO PREDICT THE SENSITIZING POTENTIAL OF CHEMICALS? M. Pallardy1, N. Ade1, L. Bochet1, H. Assaf-Vandecasteele1, S. Kerdine-Römer1 and J. Ourlin. 1Toxicologie, INSERM UMR-S 749, Université Paris-Sud 11, Chatenay-Malabry, France and 2Direction des laboratoires et des controles, AFSSAPS, Vendargues, France.

#1316 3:53 ZINC DIETHYLDITHIOCARBAMATE ALLERGENICITY: POTENTIAL HAPtenATION MECHANISMS. J. Chipinda1, J. M. Hetrick1, R. H. Simoyi2 and P. D. Siegel. 1NIOSH/HELD, CDC, Morgantown, WV and 2Chemistry, Portland State University, Portland, OR.

Tuesday Afternoon, March 18  
1:30 PM to 4:15 PM  
Room 615

PLATFORM SESSION: MECHANISMS OF PESTICIDE TOXICITY

Chairperson(s): David Dix, U.S. EPA, Research Triangle Park, NC and Mary Beth Genter, University of Cincinnati, Cincinnati, OH.

#1317 1:30 ATROPINE BUT NOT METHYLATROPINE CORRECTS PARAoxON-INDUCED RESPIRATORY DISTURBANCES. H. Pascal1, L. Pronzo1a, M. Kayouka1, C. Pope1 and F. Batel. 1INSERM U705 - UMR CNRS/INSERM 7157, Université Paris V - VII, Paris, France and 2Department of Physiological Sciences, Oklahoma State University, Stillwater, OK.

#1318 1:49 TISSUE CHOLINESTERASE ACTIVITIES DO NOT EXPLAIN REDUND OF PARAoxON-INDUCED RESPIRATORY TOXICITY AFTER PRALIDOxINE IN RATS. C. Martin1, P. Houze1, T. Ducarte2, C. Pope1 and F. J. Baud. 1INSERM U705, UMR CNRS/INSERM 7157, Université Paris V - VII, Paris, France and 2Animalerie Centrale, Faculté de Pharmacie Paris V, Paris, France.

#1319 2:08 ALL ORGANOPHOSPHATES ARE NOT THE SAME: DEVELOPMENTAL EXPOSURES TO DIAzinON OR PARATHION PRODUCE DIFFERENT CELL SIGNALING OUTCOMES. A. A. Aigun, F. J. Seidler and T. A. Slotkin. Pharmacology & Cancer Biology, Duke Univ Med Ctr, Durham, NC.

#1320 2:27 CRITICAL MOLECULAR PATHWAYS OF NEUROGENESIS IN CHLORPYRIFOS RESPONSE. M. Vredevoogd, Y. Xu, S. Hong and E. M. Faustman. Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.

up-to-date information at www.toxicology.org
Program Description (Continued)

Abstract #

#1321 2:45 EFFECTS OF ATRAZINE ON NEUROENDOCRINE FUNCTION IN WISTAR RATS. C. D. Foradori1, L. R. Hinds1, W. H. Hanneman1, M. E. Legare1, C. M. Clay1 and R. J. Handa1, 1Environmental Health, Colorado State University, Fort Collins, CO and 2Biomedical Sciences, Colorado State University, Fort Collins, CO.

#1322 3:03 PROTEOMIC ANALYSIS OF DIAMINOCHLOROTRIAZINE (DACT) ADDUCTS IN WISTER RAT PITUITARY GLANDS AND LBT2 RAT PITUITARY CELLS. G. Dooley1, K. Reardon2, J. Prenti2, M. Legare1, C. Foradori1, J. Tessari1 and W. Hanneman1. 1Environmental and Radiological Health Sciences, Colorado State University, Fort Collins, CO, 2Chemical and Biological Engineering, Colorado State University, Fort Collins, CO, 3Macromolecular Resources, Colorado State University, Fort Collins, CO and 4Biomedical Sciences, Colorado State University, Fort Collins, CO.

#1323 3:21 HEPATIC TOXICOGENOMIC RESPONSES TO TRIAZOLE ANTIFUNGALS CONSERVED BETWEEN RODENTS AND HUMANS. A. K. Goetz, D. J. Dix and I. Shah, U.S. Environmental Protection Agency, Research Triangle Park, NC.

#1324 3:39 TRANSCRIPTIONAL RESPONSES IN THYROID TISSUES FROM RATS TREATED WITH A TUMORIGENIC AND A NON-TUMORIGENIC TRIAZOLE FUNGICIDE. S. Hester and S. Nesnow. Environmental Carcinogenesis Division, U.S. EPA, Durham, NC.

#1325 3:57 CHLORACETANILIDE HERBICIDE STRUCTURE-ACTIVITY STUDY USING BIOCHEMICAL AND GENOMIC APPROACHES. M. Genter, B. M. Warner, M. Medvedovic and M. A. Sartor. Environmental Health, University of Cincinnati, Cincinnati, OH.

Tuesday Afternoon, March 18
2:45 PM to 3:45 PM
Exhibit Hall 4C-3

EXHIBITOR HOSTED SESSION: TOXICITY, BIOMARKER AND METABOLOMICS WORKFLOWS RESULT IN EFFICIENT EVALUATION OF COMPOUND TOXICITY • SAFETY AND THE APPLICATION OF IPA PATHWAY ANALYSIS TOOLS TO CANCER THERAPEUTIC

Presented by: Ingenuity Systems

Toxicity, Biomarker, and Metabolomics Workflows Result in Efficient Evaluation of Compound Toxicity and Safety—System-wide prospective and analysis of ‘omics data (transcriptomic, proteomic and metabolomic data) through Ingenuity’s user-friendly molecular pathway and network analysis tools.

The Application of IPA Pathway Analysis Tools to Cancer Therapeutics—Pathway context and gene network analysis, performed within the IPA platform, enables predictive modeling of the effects of chemotherapeutic agents on individual patients and tumors.

Tuesday Afternoon, March 18
2:45 PM to 3:45 PM
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: TREVIGEN STANDARDIZED COMETASSAY™ SYSTEM

Presented by: Trevigen

In a typical comet assay, electrophoresis methods and differences in cell preparations create a significant source of variation in comet tail parameters. Trevigen’s set of stable control cell populations are being used to analyze critical electrophoresis parameters. A standardized electrophoresis system to control variation in comet parameters will be discussed.

Tuesday Afternoon, March 18
4:30 PM to 6:00 PM
Ballroom 6A

SOT ANNUAL BUSINESS MEETING

Chairperson(s): George B. Corcoran

(SOT Members Only: Full, Associate, Postdoctoral, and Student Members Invited)

Members are invited and encouraged to attend the 47th Annual SOT Business Meeting. If you have long-range planning ideas that you would like added to the agenda, please send them to Shawn Lamb at SOT Headquarters. The agenda includes a discussion of the Council 2008 strategic planning session, financial summary, a review of the 2007–2008 activities, and plans for the future.
Different governmental organizations, and even different industries, have taken different approaches to decision-making about the safety of chemicals. U.S. and Canadian regulatory agencies take a risk-based approach to chemical regulation, whereas the E.U. approach is hazard-based. Many retailers of products that contain chemicals, such as Walmart, are also starting to adopt a hazard-based expectations for their suppliers. Both approaches have their supporters, and both have positive and negative aspects. They may lead to very different decisions regarding acceptability based on the same data set. Since these decisions have important public health and economic implications, it is important to understand more about them. The purpose of this Roundtable will be to present the current lay of the land in chemical regulation, and to highlight the differences in decisions that are often made by the two approaches, as well as their consequences.
Program Description (Continued)

Abstract #

Wednesday Morning, March 19
7:30 AM to 8:50 AM
Room 608

CAREER DEVELOPMENT


Endorsed by:
Academy of Toxicological Sciences
Career Resource and Development Committee*
Postdoctoral Assembly
Student Advisory Council

There is growing concern within the discipline of toxicology with regard to the projected retirement of experienced toxicologists and the toxicology training pipeline from both a numbers and depth of training perspective. This problem is only becoming more acute due to budgetary constraints, regulatory and policy shifts and the advent of new chemical and biological challenges resulting from innovative and technology driven product development. Toxicologists are being asked to address safety issues for novel nanotechnology products, plant-made pharmaceuticals and industrials, combination therapeutics and concerns related to potential chemical and biological terror agents in a timely and cost effective manner. To address these issues, the next generation of toxicologists will need new tools and cutting edge training, and they must be produced in sufficient numbers to effectively replace the current cadre of toxicologists as they retire. A necessary first step in assuring the availability of qualified toxicologists is to begin a dialogue among the various potential employers on projected current and future needs in toxicology and what type of training experience would be most advantageous as the discipline moves into the 21st century. There is also a need to develop a clear picture of the number of new toxicologists that will be needed over the next 10 years. This session will focus on the number of toxicologists and the required skill sets needed as discussed by representatives from the industry, academic, research, consulting and government sectors and will be a positive step forward by addressing these needs at a meeting where most of the concerned toxicologists and many of those responsible for training and hiring toxicologists will be in attendance.

#1328 7:30 TOXICOLOGY TRAINING NEEDS: NEW FACES AND NEW TOOLS FOR THE 21ST CENTURY. W. Slikker* and J. Bucher*. Office of the Director, FDA / NCTR, Jefferson, AR and 2Associate Director NTP, NIEHS / NIH, Research Triangle Park, NC.

7:34 TRAINING NEEDS FOR TOXICOLOGISTS: A VIEW FROM EUROPE AND THE PHARMACEUTICAL INDUSTRY. Ruth Roberts

7:53 TRAINING NEEDS FOR TOXICOLOGISTS: A VIEW FROM THE ACADEMIA TRENCHES. David Eaton

8:12 THE ACADEMIC TRAINING NEEDS FOR TOXICOLOGIST: A GOVERNMENT PERSPECTIVE. Bruce Fowler

8:31 TOXICOLOGY TRAINING TO MEET THE NEEDS OF THE BIOTECHNOLOGY INDUSTRY. John A. Wisler

(Continued)
The competition in developing your career as a scientist can be daunting at times. It is clear that being productive through hard work alone is not the answer. In order to meet your career goals, scientists must also develop leadership and people skills. The mastering of these skills may be particularly challenging for those scientists reared with cultural values that differ from their Western workplace culture. The differences in cultural values may be manifested in misunderstanding and barriers or "glass ceilings" in the development of one's career. Asian scientists and their co-workers and managers need to better understand how Asian and Western cultural values differ and how such cultural values are directly connected to behavior and practices in the workplace. Many Asians for example, are taught to respect authority, not to toot their own horn and value harmony of the team. It is also important to understand of how different behaviors are perceived by their non-Asian managers and co-workers in the Western workplace and the potential impact that may ensue when behaviors are misunderstood. For instance, speaking up in team meetings may be perceived as being not interested or having nothing valuable to add to the discussion. These misperceptions may result in organizations underutilizing their Asian employees and decreased team effectiveness. In addition, Asian scientists may experience limited upward mobility and lower job satisfaction. This background information will be covered by Sally Huang-Nissen, a consultant and trainer with extensive experience in the area of cross-cultural effectiveness and diversity training. This will be followed by a roundtable discussion by a panel of SOT members from different backgrounds and with different career paths (academia, industry, government). The roundtable discussion will focus on their personal experiences and how these scientists addressed these cultural differences in their careers.
Children are exposed to tobacco smoke. In a study of 5, 400 U.S. school-aged children, 85% had measurable cotinine levels in their blood. Whether it is prenatal exposure to mainstream smoke or postnatal exposures to sidestream smoke, childhood exposures are most often involuntary exposures and can result in adverse health effects. This is not surprising as tobacco smoke contains a complex mixture of compounds with toxic and/or biologically active effects. Yet the long term outcomes of childhood exposures are still not well understood. The purpose of this session is to bring together the latest research on the effect of tobacco smoke on development of the neural, immune and respiratory systems and to highlight potential areas of future research. There is recent concern about the possibility of persistent adverse health effects of tobacco smoke exposure that continue into adulthood after exposures during development in either the pre or postnatal period. Persistent effects have been described for the lung, the immune system and for both behavior and neurobiology.
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Program Description (Continued)

and drug discovery groups. A brief overview of the functions, and concepts of NK cells will be followed by some of the cutting edge results from in vitro and in vivo data from different species.

#1344  9:00  NATURAL KILLER CELLS AS TARGETS OF DRUGS, TOXICANTS, AND BIOLOGICALS. R. Krishnaraj. Pharmacology, University of Illinois at Chicago, Chicago, IL.


#1346  10:00  NATURAL KILLER CELLS AT THE INTERPHASE OF INNATE AND ADAPTIVE IMMUNITY. C. Munz. Laboratory of Viral Immunobiology, The Rockefeller University, New York. Sponsor: R. Krishnaraj.


#1348  11:10  SUBTYPE MARKERS DEFINE THE TISSUE SPECIFIC EFFECTS OF CHRONIC ALCOHOL CONSUMPTION ON NK CELLS. G. G. Meadows and H. Zhang. Cancer Prevention & Research Center, Washington State University, Pullman, WA.

Wednesday Morning, March 19
9:00 AM to 11:45 AM
Room 615

WORKSHOP SESSION: SAFE APPROACHES TO TOPICAL PRODUCT DEVELOPMENT

Chairperson(s): Dave Hobson, H&H Scientific Services, LLP, Boerne, TX and William Reifenrath, Stratacor, Inc., Richmond, WA.

Endorsed by:
Dermal Toxicology Specialty Section*

Topical products are applied to the skin, eyes, or mucosal membranes for purposes that vary from altering appearance, to combating disease or to protecting against environmental assaults. Topical formulations are usually complex mixtures that may contain one or more pharmacologically active agents, a vehicle to facilitate application, components to improve user acceptability, agents to promote or retard penetration or evaporation, stabilizers or preservatives, as well as other materials depending on the ultimate use. Most topical drug products are formulated with commonly used excipients that are included in FDA’s Inactive Ingredients Guide. But some new products may need novel ingredients that offer benefits not available with commonly used excipients. The potential of a formulation to produce untoward effects is governed by the properties of each ingredient and the presentation of those ingredients to a site of action. However, simple addition of individual ingredient toxicities has proven inadequate for predicting the toxic potential of the formulation. Good toxicological judgment and critical testing thus play an important role in eliminating formulation problems that could represent a toxic potential of the formulation. Good toxicological judgment and critical testing thus play an important role in predicting skin irritation potential uses a range of test systems, corrosion assays, and skin culture tests can aid in early stage toxicological decisions. The primary test systems for predicting skin corrosion or irritation have been the human cornified tissue constructs. The skin corrosion and basic irritation endpoints have recently completed formal validation. Assessment of eye irritation potential uses a range of test systems, with some systems tailored to demonstrate the required mildness of formulation. In summary, the judicious choice of excipients, the proper design of formulation, and the information gained from critical pre-clinical tests combine to make the difference between success and failure for a promising topical product.

#1349  9:00  SAFE APPROACHES TO TOPICAL PRODUCT DEVELOPMENT. W. G. Reifenrath. Stratacor, Inc., Richmond, CA.


#1351  9:35  TOXICOLOGICAL CONSIDERATIONS FOR THE USE OF EXCIPIENTS IN TOPICAL DRUG PRODUCTS AND FDA’S EXCIPIENT GUIDANCE. R. E. Osterberg. Aclairo PDG Inc., Chevy Chase, MD.

#1352  10:05  IN VITRO APPROACHES FOR PREDICTING IRRITATION POTENTIAL OF TOPICAL EXPOSURES TO THE SKIN AND EYES. J. W. Harbell. Mary Kay Inc., Addison, TX.

#1353  10:40  SAFETY AND MECHANISTIC CONSIDERATIONS IN SKIN TRANSPORT OF TOPICAL PRODUCTS. W. G. Reifenrath. Stratacor, Inc., Richmond, CA.

#1354  11:15  TOXICOLOGICAL CONSIDERATIONS IN THE FORMULATION AND DEVELOPMENT OF WOUND HEALING AND TISSUE REPAIR PRODUCTS. D. W. Hobson. H&H Scientific Services LLP, Boerne, TX.

Wednesday Morning, March 19
9:00 AM to 11:45 AM
Room 6C

WORKSHOP SESSION: THRESHOLD OF TOXICOLOGIC CONCERN: HISTORICAL PERSPECTIVES AND FUTURE APPLICATIONS

Chairperson(s): Susan Felter, Procter & Gamble Company, Cincinnati, OH and Karen Blackburn, Procter & Gamble Company, Cincinnati, OH.

Endorsed by:
Food Safety Specialty Section
Regulatory and Safety Evaluation Specialty Section*

Risk Assessment Specialty Section

The Threshold of Toxicological Concern (TTC) approach was developed by the U.S. FDA in the 1980s as a means to more efficiently address questions related to the safety of food packaging materials that have some potential to migrate to foodstuffs, but at levels that would result in exceedingly small human exposures. The approach is based on the fundamental premise that there is an exposure to untested chemicals below which adverse health effects will be negligible or absent. TTC-based exposure limits are established based on the distribution of potencies of chemicals for which toxicity data exist, with a tiered approach being developed that includes both cancer and non-cancer endpoints. For an untested chemical, a TTC-based exposure limit is then determined by placing the chemical into the appropriate tier based on evaluation of chemical structure, the presence of structural alerts, and other available data. This session will provide an overview of the history of TTC; the scientific basis behind the tiered TTC exposure limits; current regulatory acceptance of TTC; and future opportunities for the continued expansion of this risk assessment tool.

#1355  9:00  THRESHOLD OF TOXICOLOGIC CONCERN: HISTORY, CURRENT USES AND FUTURE OPPORTUNITIES. S. P. Felter and K. L. Blackburn. Central Product Safety, Procter & Gamble, Cincinnati, OH.
Abstract #


#1358 10:15 USE OF THRESHOLD OF TOXICOLOGICAL CONCERN (TTC) FOR GENOTOXIC IMPURITIES IN FOOD. J. C. Muwo and B. Danielewska-Nikiel. CANTOX Health Sciences International, Mississauga, ON, Canada.

#1359 10:45 USE OF THRESHOLD OF TOXICOLOGICAL CONCERN (TTC) APPROACH IN ASSESSMENT OF GENOTOXIC IMPURITIES IN PHARMACEUTICALS. R. Maythe. Global Research and Development, Pfizer, Ann Arbor, MI.

#1360 11:15 THE THRESHOLD OF TOXICOLOGICAL CONCERN (TTC) – FUTURE OPPORTUNITIES. A. G. Renwick. School of Medicine, University of Southampton, Southampton, United Kingdom. Sponsor: S. Felter.

Wednesday Morning, March 19
9:00 AM to 11:45 AM
Room 6A

WORKSHOP SESSION: USE OF BEHAVIORAL AND NON-Routine NEUROLOGICAL APPROACHES IN DRUG DISCOVERY TOXICOLOGY


Endorsed by:

Drug Discovery Toxicology Specialty Section*
Neurotoxicology Specialty Section

Novel pharmaceutical targets, including kinase inhibitors for inflammatory diseases and oncology, have been evaluated for their potential as therapeutic interventions in recent years. Unusual considerations for the toxicologist may include unwanted neurobehavioral effects, and deficits in learning and memory acquisition. In addition, interactions of chemical structure types with biogenic amine (e.g., serotonergic and dopaminergic) receptors and their metabolism and uptake mechanisms are relatively common off-target effects. Toxicologists in the drug discovery environment are confronted with the adverse neurobiology of small molecules and are required to place these effects in a broad risk-assessment perspective. Bridging pharmacology and toxicology, this expertise is of growing interest in the toxicology community - this session focuses the current knowledge and awareness in an area traditionally considered peripheral to the issues that most toxicologists are asked to address. The goal of this session is to raise awareness to the role of toxicologists in defining adverse neurological effects, particularly within the discovery and target selection environment, through illustration of this field, the techniques employed, and with specific examples of risk assessment for neurobehavioral and related toxicity.

Abstract #


#1363 9:45 LEVERAGING NEUROBEHAVIORAL ASSESSMENT OF ADVERSE CNS EFFECTS TO IMPROVE CANDIDATE SELECTION. M. J. Kallman. Investigative Toxicology Lilly Research Labs, Greenfield, IN.


#1365 10:45 MAXIMIZING SENSITIVITY AND EFFICIENCY IN THE DETECTION OF PROCONVULSANT LIABILITY IN RODENTS. M. Bell. Safety Assessment, AstraZeneca Pharmaceuticals, Wilmington, PA. Sponsor: P. Cinciripini.


Wednesday Morning, March 19
9:00 AM to 11:45 AM
Room 602

INFORMATIONAL SESSION: GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS): A NEW LANGUAGE FOR TOXICOLOGISTS

Chairperson(s): Patricia Weideman, Schering-Plough Corporation, Union, NJ and Heather Burleigh-Flayer, PPG Industries Inc, Pittsburgh, PA.

Endorsed by:

Occupational and Public Health Specialty Section*
Regulatory and Safety Evaluation Specialty Section
Risk Assessment Specialty Section

The United Nations has issued a system for the classification and labeling of chemicals known as the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). The intent of the GHS system is to provide a consistent foundation for classification and labeling of chemicals that takes into account the extensive global trade of chemicals and the need for the development of national programs to deal with the safe supply, use, transport, and disposal of chemicals. This system is being adopted by countries around the world, as well as the newly adopted European chemical legislation, REACH. The challenges that will be faced include the following: 1) available toxicology data used for classification may vary in quality and consistency between countries and companies, 2) lack of a universal rating system recommended for evaluating the quality of the toxicology data, 3) knowledge and expertise of individuals determining hazard classifications may vary widely, and 4) different countries are not uniformly adopting the GHS, nor the “building blocks” of GHS. Despite the intention of harmonization, it is inevitable that toxicologists will encounter differing classification outcomes for a given chemical because of differences in the availability of information, the evaluation of information, the expertise of the professional (or the regulatory body) performing the evaluation, and differences in implementation of the GHS by various countries or regions. Consistent use by toxicology experts of the criteria and interpretation of data with respect to select endpoints is critical to the success of the GHS and provides for scientific soundness of this hazard communication system. Furthermore, scientists from all disciplines, including those from academia, industry, or government, need to be aware of the GHS and utilize the criteria when applying...
terminology to chemicals if we are to “speak the same language” and reduce confusion amongst the public and ourselves about chemical hazards.

#1367 9:00 GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS (GHS): A NEW LANGUAGE FOR TOXICOLOGISTS. P. A. Weideman1 and H. D. Burleigh-Floyer2. 1Schering-Plough Corporation, Union, NJ and 2PPG Industries Inc., Allison Park, PA.


#1370 10:05 GHS IMPLEMENTATION IN THE ASIA/PACIFIC RIM: VARIATIONS AND CHALLENGES. A. M. Johnson. 3M Company, St. Paul, MN.


#1372 11:05 TOXICOLOGICAL CHALLENGES OF GHS IMPLEMENTATION. A. R. Schatz. Global Safety & Environmental Affairs, Schering-Plough Corporation, Union, NJ.

11:35 PANEL DISCUSSION.

Wednesday Morning, March 19
9:00 AM to 11:45 AM
Room 611

PLATFORM SESSION: ADVANCES IN BIOLOGICAL MODELING

Chairperson(s): Hugh Barton, U.S. EPA, Research Triangle Park, NC and Thomas Webster, Boston University School of Public Health, Boston, MA.

#1373 9:00 MULTI-MODAL VALIDATION OF COMPUTATIONAL PULMONARY AIRFLOW SIMULATIONS IN THE RAT. D. R. Einstein1, T. H. Robertson1, S. Kabilan1, A. P. Kuprat2, K. Minard1, R. Jacobs1, J. P. Carson1, C. Timchalk1 and R. Corley2. 1Biological Monitoring and Modeling, Pacific Northwest National Laboratory, Richland, WA and 2Pulmonary & Critical Care Medicine, Yeshiva University, New York and 3Mouse Cancer Genetics Program, National Cancer Institute, Frederick, MD. Sponsor: P. Weideman.

#1374 9:19 COMPARING PHARMACOKINETIC MODELS FOR PERFLUOROOCTANOIC ACID IN MICE. H. A. Barton1, I. Lou1, C. Lau2, R. G. Hanson1, A. B. Lindstrom1, M. J. Strynar4 and R. W. Setzer1. 1ORD National Center for Computational Toxicology, U.S. Environmental Protection Agency, Research Triangle Park, NC, 2CEMLB, University of North Carolina, Chapel Hill, NC, 3Reproductive Toxicology Division, U.S. EPA, RTP, NC and 4HEASD, NERL., U.S. EPA, RTP, NC.

Wednesday Morning, March 19
9:00 AM to 11:45 AM
Room 2A

DEVELOPMENTAL BASIS OF DISEASE

PLATFORM SESSION: MECHANISMS OF REPRODUCTIVE TOXICITY

Chairperson(s): Ulrike Luderer, University of California Irvine, Irvine, CA and Aileen Keating, University of Arizona, Tucson, AZ.

#1382 9:00 OVOTOXICITY OF 4-VINYLCYCLOHEXENE DIEPOXIDE MEDIATED THROUGH PHOSPHATIDYLINOSITOL 3-KINASE SIGNALING. A. Keating1, N. Sen1, I. Sipes2 and P. B. Hayes3. 1Department of Physiology, University of Arizona, Tucson, AZ and 2Department of Pharmacology, University of Arizona, Tucson, AZ.
Program Description (Continued)

Abstract #

#1383 9:21 OOCYTE INJURY CAN BE DETECTED AFTER IN VITRO EXPOSURE TO BI-FUNCTIONAL TOXICANTS. S. K. Petrillo1, P. Desmeules1, A. Keating2, P. B. Hoyer2 and P. J. Devine1, 1INRS-Institut Armand-Frappier, Institut national de la recherche scientifique, Pointe-Claire, QC, Canada and 2Department of Physiology, The University of Arizona, Tucson, AZ.


#1385 10:03 OVEREXPRESSION OF GLUTAMATE CYSTEINE LIGASE PROTECTS GRANULOSA CELLS AGAINST OXIDANT AND RADIATION-INDUCED CELL DEATH. M. M. Cortes1, E. Giedzinski1, C. L. Limoli2 and U. Luderer3, 1Developmental and Cell Biology, University of California Irvine, Irvine, CA, 2Radiation Oncology, University of California Irvine, Irvine, CA and 3Medicine, University of California Irvine, Irvine, CA.

#1386 10:24 OVEREXPRESSION OF ESTROGEN RECEPTOR ALPHA INCREASES SENSITIVITY TO METHOXYCHLOR IN THE MOUSE OVARY. T. Paulose and J. A. Flaws. Veterinary Biosciences, University of Illinois, Urbana, IL.

#1387 10:45 CONCENTRATION DEPENDENT EFFECTS OF GENISTEIN IN NOVEL MODELS OF ESTROGEN-STIMULATED ENDOMETRIUM. B. P. Sampey1, C. Barbier1, E. Wilson1 and D. G. Kaufman2, 1Pathology, University of North Carolina at Chapel Hill, Chapel Hill, NC and 2Developmental and Cell Biology, University of California Irvine, Irvine, CA.

#1388 11:05 IN VIVO METABOLITES OF DE-71 ARE ESTROGENIC IN VITRO. M. Mercado-Feliciano1 and R. M. Bigsby2, 1Department Pharmacology & Toxicology, Indiana University, Indianapolis, IN and 2Department of Obstetrics and Gynecology, Indiana University, Indianapolis, IN.

#1389 11:25 EFFECTS OF NUTRITION RELEVANT MIXTURES OF PHYTOESTROGENS ON STEROIDGENESIS AND ON AROMATASE, ESTROGEN, AND ANDROGEN ACTIVITIES. A. Elleby1, K. Sonne-Hansen2, E. Bonefeld-Jørgensen1, A. Vinggaard3, A. Lykkefseldt4 and C. Nellmann5, 1Department of Toxicology and Risk Assessment, Technical University of Denmark, Soborg, Denmark, 2Department of Tumor Endocrinology, Danish Cancer Society, Copenhagen, Denmark and 3Department of Environmental and Occupational Medicine, University of Aarhus, Aarhus, Denmark. Sponsor: L. Gray.

Abstract #

Wednesday Morning, March 19
9:00 AM to 11:45 AM
Room 618

PLATFORM SESSION: MODULATING APOPTOSIS FOR BENEFICIAL OUTCOMES

Chairperson(s): Rhonda Rosengren, University of Otago, Dunedin, New Zealand and Armin Wolf, Novartis AG, Basel, Switzerland.

#1390 9:00 A TRIPLE BIOFLAVONOID MIXTURE MODULATES PRO- AND ANTI-APOPTOTIC GENE EXPRESSION DURING STREPTOZOCIN (STZ)-INDUCED OXIDATIVE STRESS IN THE MOUSE LIVER. M. Parmar1, I. Syed2, S. J. Stol3 and S. D. Ray4, 1Pharmaceutical Sciences, Arnold & Marie Schwartz Coll of Pharmacology & HScs, Brooklyn, NY and 2 & 3AdvocCare International, Carrolton, TX.

#1391 9:21 EFFECT OF SPECIFIC GENE SILENCING ON SDZ IMM125-INDUCED CASPASE-3 AND -7 ACTIVATION IN CULTURED RAT HEPATOCYTES. C. Strupp1, M. Dong1, O. Grenet1, W. E. Trommer2 and A. Wolf1. Investigative Toxicology, Novartis Pharmacology AG, Basel, Switzerland and 2Department of Chemistry, University of Kaiserslautern, Kaiserslautern, Germany.

#1392 9:42 MODIFIED CARDIOLIPIN HOMOLOGUES AS INHIBITORS OF PRO-APOPTOTIC PEROXIDASE FUNCTION OF CYTOCHROME C. G. G. Borisenko1, A. Kapralov1, V. A. Tyurin1,2 and V. E. Kagan1,2, 1Center for Free Radical and Antioxidant Health, University of Pittsburgh, Pittsburgh, PA, 2EOH, University of Pittsburgh, Pittsburgh, PA and 3Research Institute of Physico-Chemical Medicine, Moscow, Russian Federation.

#1393 10:03 STRUCTURE ACTIVITY OF METHOXY SUBSTITUTED PHENOLS: CYTOTOXICITY TOWARD ESTROGEN RECEPTOR NEGATIVE HUMAN BREAST CANCER CELLS. T. J. Somers-Edgar and R. J. Rosengren. Pharmacology & Toxicology Otago University, Dunedin, New Zealand.

#1394 10:24 A NUTRIENT MIXTURE INDUCES APOPTOSIS IN HUMAN REINAL CARCINOMA TUMOR CELLS. A. Niedzwiecki, M. Roomi1, V. Ivanov and M. Rath. Dr. Rath Research Institute, Santa Clara, CA.

#1395 10:45 ASPIRIN-INDUCED CELL CYCLE ARREST, MITCHONDRIAL DYSFUNCTION, OXIDATIVE STRESS AND APOPTOSIS IN HEPATOMA HEPG2 CELLS. H. Raza1, A. John1, S. Benedict1 and A. Al-Otaiba1, 1Biochemistry, Faculty of Medicine and Health Sciences, Al Ain, United Arab Emirates and 2Internal Medicine, FMHS, Al Ain, United Arab Emirates.
Program Description (Continued)

Abstract #

#1396 11:05 CARBACHOL PREVENTS OXIDATIVE STRESS-MEDIATED APOPTOSIS INDUCED BY DOMOIC ACID IN CEREBELLAR GRANULE CELLS. G. Giordano1, L. Li1, T. Kavanagh1 and L. Costa2,3. 1Environmental and Occupational Health Sciences, University of Washington, Seattle, WA and 3Human Anatomy, Pharmacology and Forensic Science, University of Parma Medical School, Parma, Italy.

#1397 11:25 THE EFFECTS OF JS-K AND PABA/NO, NOVEL ANTI-TUMOR NITRIC OXIDE RELEASING PRODRUGS, IN HUMAN HEPATOMA HEPC3 CELLS. J. Liu1, Q. Wu1, L. K. Keefer1, J. E. Saavedra2 and M. Wiinik3. 1CS, LCC, NCI at NIEHS, Research Triangle Park, NC, 2Zunyi Medical College, Zunyi, China, 3CS, LCC, NCI at Frederick, Frederick, MD and 4SAIC, NCI at Frederick, Frederick, MD.

Wednesday Morning, March 19
9:00 AM to 11:45 AM
Room 6E

NanoTechnology

PLATFORM SESSION: NANO PARTICLES: CELLULAR AND ORGAN DISPOSITION

Chairperson(s): Nancy Monteiro-Riviere, North Carolina State University, Raleigh, NC and Owen Moss, The Hamner Institutes of Health Sciences, Research Triangle Park, NC.

#1398 9:00 GOLD NANO PARTICLES IN RATS AFTER INHALATION EXPOSURE. L. E. Yu1, W. Ong1, L. Yung2, C. Ong3, Y. Tan4, K. Balasubramanian5, D. Hartono5, G. Shui6 and M. R. Wenk5. 1Anatomy, National University of Singapore, Singapore, 2Environmental Science & Engineering, National University of Singapore, Singapore, 3Chemical & Biomolecular Engineering, National University of Singapore, Singapore, 4Community Occupational and Family Medicine, National University of Singapore, Singapore, Singapore and 5Biochemistry, National University of Singapore, Singapore, Singapore. Sponsor: U. Boelsterli.


#1400 9:38 SHORT-TERM INHALATION TESTS WITH EIGHT NANO-MATERIALS IN RATS. R. Landisde1,2, L. Ma-Hock3, S. Burkhard4, V. Strauss4, A. O. Gamer5, K. Wiencz5 and B. van Ravenzwaay1. 1Experimental Toxicology and Ecology, BASF, Ludwigshafen am Rhein, Germany and 2Product Safety, BASF, Ludwigshafen am Rhein, Germany.

Abstract #

#1401 9:57 ADSORBED PROTEINS INFLUENCE THE BIOLOGICAL ACTIVITY AND MOLECULAR TARGETING OF NANO PARTICLES. S. T. Weber1, D. Dutta2, S. K. Sundaram3, J. Teegarden4, B. Riley1, L. Fifield1, J. Jacobs1, S. Addleman1, G. Kayser5 and B. Moudgil5. 1Cell Biology and Biochemistry Group, Pacific Northwest National Laboratory, Richland, WA, 2Department of Materials Science and Engineering, University of Florida, Gainesville, FL and 3Department of Medicine and the Department of Biochemistry and Molecular Medicine, University of California Davis, Davis, CA.

#1402 10:15 PHARMACOKINETIC MODELLING AND IMPLICATIONS OF PERIODICITY IN ARTERIAL EXTRACTION OF QUANTUM DOT NANO PARTICLES. H. A. Lee, M. Imran, S. E. Mason, N. A. Monteiro-Riviere and J. E. Riviere. Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.

#1403 10:33 COMPARATIVE BIODISTRIBUTION OF COATED AND UNCOATED NANO- AND MICRON-SIZED TITANIUM DIOXIDE FOLLOWING INTRADERMAL ADMINISTRATION IN MICE. N. V. Gopee1, C. Cozart1, P. H. Suitoni1, C. S. Smith1, N. J. Walker1, and P. C. Howard1. 1Biochemical Toxicology, National Center for Toxicological Research, U.S. FDA, Jefferson, AR and 2National Toxicology Program, National Institute for Environmental Health Sciences, Research Triangle Park, NC.

#1404 10:51 BIOKINETICS OF AU NANO PARTICLES RELATIVE TO SIZE, SURFACE COATING AND PORTAL OF ENTRY. A. Rinderknecht1, R. Prud’homme2, R. Poreda3, R. Gelein1, N. Corson1, A. Pidruczny4, J. Finkelstein5, O. R. Moss2, S. Addleman1, and A. Elder6. 1Environmental Medicine, University of Rochester, Rochester, NY, 2Chemical Engineering, Princeton University, Princeton, NJ, 3Earth & Environmental Sciences, University of Rochester, Rochester, NY, 4Center of Neutron Activation, McMaster University, Hamilton, ON, Canada and 5Department of Pediatrics, University of Rochester, Rochester, NY.


#1406 11:27 MACROPHAGE UPTAKE OF 26 NM AND 250 NM PSL IS MEDIATED BY SEPARATE MECHANISMS. O. R. Moss, V. A. Wong, P. M. Radcliffe and E. Bermudez. Toxicology, The Hamner Institutes for Health Sciences, Research Triangle Park, NC.
Program Description (Continued)

Abstract #  #1413

Poster Board Number ...........................................101


Wednesday Morning, March 19
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: MECHANISMS OF CARCINOGENESIS

Chairperson(s): Burra Madhukar, Michigan State University, East Lansing, MI and Lori White, U.S. EPA, Research Triangle Park, NC.

Displayed: 9:00 AM–12:30 PM

Attended: 9:00 AM–11:00 AM

#1407  #1415

Poster Board Number ...........................................101


#1408  #1416

Poster Board Number ...........................................102

VARIABLE HISTONE MODIFICATIONS AT THE Aα METASTABLE EPIALLELE, D. C. Dolinoy and R. L. Jirtle. Department of Radiation Oncology, Duke University, Durham, NC.

#1409  #1417

Poster Board Number ...........................................103


#1410  #1418

Poster Board Number ...........................................104


#1411  #1419

Poster Board Number ...........................................105

THE ROLE OF TUMOR PROMOTER-INDUCED PKC ACTIVATION IN THE REGULATION OF HUMAN EQUILIBRATIVE NUCLEOSIDE TRANSPORTER 1 EXPRESSION AND ACTIVITY. S. Jones, A. V. Leisewitz and L. M. Graves. ‘Curriculum in Toxicology, University of North Carolina-Chapel Hill, Chapel Hill, NC and ‘Department of Pharmacology, University of North Carolina-Chapel Hill, Chapel Hill, NC.

#1412  #1420

Poster Board Number ...........................................106

CONSTITUTIVELY ACTIVE B-RAF DOES NOT REGULATE CYCLIN D1 IN 2, 3, 5-TRIS-(GLUTATHION-S-YL) HYDROQUINONE-TRANSFORMED, TUBEROUS SCLEROSIS-2 NULL CELLS. J. D. Cohen, M. T. Labenski, T. J. Monks and S. S. Lau. Pharmacology and Toxicology, University of Arizona, Tucson, AZ.
Abstract #

Wednesday Morning, March 19
9:00 AM to 12:30 PM

Exhibit Hall

POSTER SESSION: GENE REGULATION AND GENOMIC APPROACHES

Chairperson(s): Yue Wern Huang, University of Missouri, Rolla, MO.

Displayed: 9:00 AM–12:30 PM

Attended: 11:00 AM–12:30 PM

Poster Board Number: 1420

AHRI PROTEIN INTERACTIONS: BUILDING A COMPREHENSIVE PROTEIN INTERACTION NETWORK. D. M. Tappendren1, L. Yang1, R. S. Thomas1, and J. J. LaPres2,3,4. 1Biochemistry, MU, East Lansing, MI, 2The Hamner Institutes for Health Sciences, Research Triangle Park, NC, 3The National Food Safety and Toxicology Center, MSU, East Lansing, MI, and 4Center for Integrative Toxicology, MSU, East Lansing, MI.

Poster Board Number: 1421


Poster Board Number: 1422

TEMPORAL AND DOSE-DEPENDENT AHR-MEDIATED GENE EXPRESSION ANALYSIS IN HUMAN LIVER ADULT STEM CELLS. S. Kim1,2, E. Dere1, L. D. Burgoom1,2, C. C. Chang1,2, and T. R. Zacharewski1,2,3. 1Department of Biochemistry & Molecular Biology, Michigan State University, East Lansing, MI, 2National Food Safety & Toxicology Center, Michigan State University, East Lansing, MI, 3Center for Integrative Toxicology, Michigan State University, East Lansing, MI, and 4Department of Pediatrics & Human Development, Michigan State University, East Lansing, MI.

Poster Board Number: 1423

CHARACTERIZATION OF GENE EXPRESSION RESPONSES ELICITED BY TOXIC AND NON-TOXIC AHR LIGANDS IN MURINE HEPATIC CELLS. E. Dere1,2, A. W. Lee1,2, M. S. Kiewitt1,2, L. D. Burgoom1,2, and T. R. Zacharewski1,2,3. 1Department of Biochemistry & Molecular Biology, Michigan State University, East Lansing, MI, 2National Food Safety & Toxicology Center, Michigan State University, East Lansing, MI, and 3Center for Integrative Toxicology, Michigan State University, East Lansing, MI.

Poster Board Number: 1424

CONSERVED AND DIVERGENT GENE EXPRESSION PROFILES DURING ETHYNYLESTRADIOL, TAMOXIFEN AND O, P'-DDT INDUCED UTEROTROPY IN THE RAT UTERUS. J. C. Kweli1,2, K. J. Williams1,2, and T. R. Zacharewski1,2,3. 1Biochemistry and Molecular Biology, Michigan State University, East Lansing, MI, 2Center for Integrative Toxicology and National Food Safety and Toxicology Center, Michigan State University, East Lansing, MI, and 3Department of Pathobiology and Diagnostic Investigation, Michigan State University, East Lansing, MI.

Poster Board Number: 1425

STERIODIGENIC ACUTE REGULATORY PROTEIN AS A TARGET FOR ORGANOCHLORINE PESTICIDES IN LARGEMOUTH BASS (MICROPTERUS SALMOIDES). M. S. Prue1, W. Rees2, D. Barber3, and N. D. Denslow4. 1Pharmacology and Therapeutics, University of Florida, Gainesville, FL and 2Physiological Sciences, University of Florida, Gainesville, FL.

Poster Board Number: 1426

STRESS ASSAY ENSEMBLE RESPONSE TO ENVIRONMENTAL CHEMICALS IN DIFFERENT HUMAN CELL TYPES. S. Simmons and R. Ramabhadran. NHEERL, U.S. EPA, Durham, NC.

Poster Board Number: 1427

EVALUATION OF ESTROGENIC ACTIVITY OF PHTHALATE ESTERS BY DNA MICROARRAY ANALYSIS. M. Parveen1, A. Inoue2, R. Ise3, M. Tanji3, and R. Kiyama1,2. 1Signaling Molecules Research Laboratory, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan and 2InfoGenes Co., Ltd, Kashiwa, Japan. Sponsor: M. Sato.

Poster Board Number: 1428


Poster Board Number: 1429


Poster Board Number: 1430

ACRYLAMIDE AND GLYCIDAMIDE-INDUCED MITOCHONDRIAL GENE EXPRESSION PROFILES IN BIG BLUE TRANSGENIC MICE. M. G. Manjanatha1, C. L. Moland1, W. S. Brannham2, S. D. Shelton1, E. Tareke1, T. Lee2, A. Aidoo1, J. C. Fuscoe2, and V. G. Desai1. 1Genetic Toxicology, FDA/NCTR, Jefferson, AR, 2Division of Systems Toxicology, National Center for Toxicological Research, Jefferson, AR and 3Personalized Medicine and Nutrition, National Center for Toxicological Research, Jefferson, AR. Sponsor: B. Parsons.

Poster Board Number: 1431

GENE EXPRESSION CHANGES IN BLOOD LEUKOCYTES INDICATIVE OF D-SERINE EXPOSURE. A. Soto1, M. Davison1, M. DelRaso2 and V. Chan3. 1HEPB, AFRL, Dayton, OH and 2ORISE, Dayton, OH. Sponsor: D. Mattie.
### Program Description (Continued)

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<td>#1432</td>
<td>126</td>
<td>APPLICATION OF IN VITO TOXICOGENOMICS DURING INTERMEDIATE STAGES OF COMPOUND PROGRESSION. J. F. Waring¹, J. M. Ligouri², S. E. Warder¹, P. J. Hajduk² and E. A. Blomme¹. Cellular and Molecular Toxicology, Abbott Laboratories, Abbott Park, IL. and ²Protein NMR, Molecular Modeling, and Cheminformatics Research, Abbott Laboratories, Abbott Park, IL.</td>
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<tr>
<td>#1433</td>
<td>127</td>
<td>MICROARRAY ANALYSIS OF MOUSE LIVER TRANSCRIPTS FOLLOWING LOW DOSE ARSENIC/DEXAMETHASONE EXPOSURE. J. C. Davey¹, J. A. Goss¹, C. D. Kogel¹, T. H. Hampton¹, A. Nomikou², L. A. Warneke², J. E. Thorpe¹, J. E. Bodwell¹, M. A. Ihna² and J. W. Hamilton¹. Pharmacology/Toxicology, Dartmouth Medical School, Hanover, NH. Physiology, Dartmouth Medical School, Lebanon, NH and ²Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK.</td>
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**Wednesday Morning, March 19**

9:00 AM to 12:30 PM

**Exhibit Hall**

**POSTER SESSION: RESPIRATORY AND SKIN HYPERSENSITIVITY**

*Chairperson(s):* Marc Pollard, University of Paris, Chatenay Malabry, France and Victor Johnson, NIOSH/CDC, Morgantown, WV.

**Displayed:** 9:00 AM–12:30 PM

**Attended:** 9:00 AM–11:00 AM

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<td>#1434</td>
<td>128</td>
<td>ANTI-INFLAMMATORY EFFECT OF SAPONINS ISOLATED FROM THE ROOTS OF PLATYCODON GRANDIFLORUM IN A MOUSE MODEL OF ALLERGIC LUNG INFLAMMATION. J. Choi¹ and H. Jeong¹. ¹Pharmacy, Chosun University, Kwangju, South Korea and ²Research Center for Proteineous Materials, Chosun University, Gwangju, South Korea.</td>
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<tr>
<td>#1435</td>
<td>129</td>
<td>SAPONINS DERIVED FROM ROOTS OF PLATYCODON GRANDIFLORUM INHIBITS INFLAMMATORY CYTOKINE EXPRESSION IN RAST MAST CELLS. C. Youngchul¹, E. Han² and H. Jeong². ¹Division of Food Science, Jinju International University, Jinju, South Korea and ²Pharmacy, Chosun University, Kwangju, South Korea.</td>
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<td>#1436</td>
<td>130</td>
<td>UP-REGULATION OF CYCLOOXYGENASE-2 EXPRESSION BY SERINE PROTEASE, SUBTILISIN, IN MACROPHAGES. J. Hyepark¹, E. H. Han² and H. Jeong². ¹Pharmacy, Chosun University, Kwangju, South Korea and ²Research Center for Proteineous Materials, Chosun University, Gwangju, South Korea.</td>
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Program Description (Continued)

Abstract #  
#1444  
*Poster Board Number*  
#138  
**EVALUATION OF RESPIRATORY CHEMICAL ALLERGENS IN THE PEPTIDE REACTIVITY ASSAY.** H. Rothe¹, K. Sarlo¹, F. Gerberiek¹, L. Foertsch¹, R. Dearman¹ and J. Kimber¹. ¹Procter & Gamble, Cincinnati, OH, ²University of Manchester, Manchester, United Kingdom and ³Procter & Gamble, Darmstadt, Germany.

#1445  
*Poster Board Number*  
#139  

#1446  
*Poster Board Number*  
#140  
**ACTIVITY OF CHEMICAL RESPIRATORY SENSITIZERS IN A NON-STANDARD LOCAL LYMPH NODE ASSAY (LLNA).** R. J. Dearman¹, D. A. Basketter¹, H. F. McGarry¹ and I. Kimber¹. ¹Faculty of Life Sciences, Manchester University, Manchester, Greater Manchester, United Kingdom, ²St John’s Institute of Dermatology, St Thomas’ Hospital, London, United Kingdom and ³Health and Safety Executive, Bootle, United Kingdom.

#1447  
*Poster Board Number*  
#201  
**EVALUATION OF THE POTENTIAL AND STRENGTH OF SKIN SENSITIZATION USING IN VITRO SKIN SENSITIZATION TEST - HUMAN CELL LINE ACTIVATION TEST (H-CLAT).** Y. Nukada¹, T. Ashikaga², N. Kosaka², S. Sono², H. Sakaguchi³, H. Itagaki³ and N. Nishiyama³. ¹Kao Corporation, Tochigi, Japan and ²SHISEIDO CO., LTD., Kanagawa, Japan.

#1448  
*Poster Board Number*  
#202  

#1449  
*Poster Board Number*  
#203  
**EXAMINATION OF A HUMAN CELL LINE ACTIVATION TEST (H-CLAT) FOR PREDICTING SKIN SENSITIZATION POTENTIAL: OUTCOME OF THE THIRD RING TRIAL.** C. Ryan¹, H. Sakaguchi², T. Ashikaga², J. Ovgine² and D. Eschrich². ¹Procter & Gamble Company, Cincinnati, OH, ²Kao Corporation, Safety Science Laboratories, Tochigi, Japan, ³Shiseido Co., Ltd., Quality Assurance Center, Kanagawa, Japan, ⁴Norwich, Advanced Research, Ailnay sous Bois, France and ⁵Phenten-Henkkel, Dusseldorf, Germany.

#1450  
*Poster Board Number*  
#204  

#1451  
*Poster Board Number*  
#205  
**INTER-LABORATORY VALIDATION OF A NON-RadioISOTOPE VERSION OF THE LLNA.** H. Kojima¹, M. Takeyoshi¹, T. Omori¹, T. Sozu¹, K. Arima¹, K. Idehara¹, Y. Ikarakishi¹, Y. Kanazawa², E. Maki², N. Nakagiri², M. Tanaka³, A. Yuusa³ and I. Yoshimura³. ¹NIHS, Tokyo, Japan, ²Chemical Evaluation and Research, Saitama, Japan, ³Chemical Evaluation and Research, Saitama, Japan, ⁴Kyoto University, Kyoto, Japan, ⁵Osaka University, Osaka, Japan, ⁶Taisho Pharmaceutical Co., Saitama, Japan, ⁷Daicel Chemical Industries, Ltd., Hyogo, Japan, ⁸Food and Drug Safety Center, Kanagawa, Japan, ⁹Biosafety Research Center, Foods, Drugs and Pesticides, Shizuoka, Japan, ¹⁰Otsuka Pharmaceutical Co., Ltd., Tokushima, Japan, ¹¹Meiji Seika Kaisha, Ltd., Yokohama, Japan, ¹²Fujifilm Photo Film Co., Kanagawa, Japan and ¹³Tokyo University of Science, Tokyo, Japan. Sponsor: T. Inoue.

#1452  
*Poster Board Number*  
#206  

#1453  
*Poster Board Number*  
#207  
**SENSITIZATION POTENTIAL OF VETIVERYL ACETATE EVALUATED USING THE LOCAL LYMPH NODE ASSAY.** R. Jones, R. Foxenberg, J. Lalko, C. Letizia and A. Api. Human Health Sciences, Research Institute for Fragrance Materials, Woodcliff Lake, NJ.

#1454  
*Poster Board Number*  
#208  

#1455  
*Poster Board Number*  
#209  
**PERFORMANCE CHARACTERISTICS OF THE LOCAL LYMPH NODE ASSAY (LLNA) LIMIT DOSE PROCEDURE.** W. Stokes¹, D. Aller¹, T. Burns², N. Choksi², J. Matheson¹, A. Jacobs³ and R. Tice³. ¹NICEATN, NIEHS/NIH/DHHS, RTP, NC, ²ILS, Inc., NICEATN, RTP, NC, ³CPSC, Bethesda, MD and ⁴FDA, Silver Spring, MD. Sponsor: T. Inoue.

#1456  
*Poster Board Number*  
#210  
**THE CHEMICAL ALLERGEN NICKEL SULFATE TRIGGERS THE PRODUCTION OF THE BIO-ACTIVE FORM OF INTERLEUKIN-12 BY HUMAN DENDRITIC CELLS.** M. Pallardy¹, D. Antonios, S. Kerdine-Clark¹, M. Padilla¹, M. Pinkerton² and L. Trepanier¹. ¹Department of Medical Sciences, School of Veterinary Medicine, University of Wisconsin, Madison, WI and ²Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin, Madison, WI.

#1457  
*Poster Board Number*  
#211  
**THE EFFECTS OF ASCORBATE AND GLUTATHIONE DEFICIENCY ON THE TOXICITY AND IMMUNOGENICITY OF SULFAMETHOXAZOLE NITROSO IN GUINEA PIGS.** S. Bhusari¹, M. Padilla¹, M. Pinkerton² and L. Trepanier¹. ¹Department of Medical Sciences, School of Veterinary Medicine, University of Wisconsin, Madison, WI and ²Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin, Madison, WI.
Program Description (Continued)

Abstract #
Wednesday Morning, March 19
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: EPIDEMIOLOGY AND EXPOSURE ASSESSMENT

Chairperson(s): Ellen Silbergeld, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD and Annette Rohr, Electric Power Research Institute, Palo Alto, CA.

Displayed: 9:00 AM – 12:30 PM

Attended: 11:00 AM – 12:30 PM

#1458
Poster Board Number ........................................214

#1459
Poster Board Number ........................................215

#1460
Poster Board Number ........................................216
TAPE STRIPPING FOR THE ASSESSMENT OF DERMAL PYRENE EXPOSURE: A VOLUNTEER STUDY. C. Vieu1, K. Deroy1, R. Thuot1 and A. Maitre2. 1Chair of Toxicological Risk Analysis & Management, Department of Environmental & Occupational Health, University of Montreal, Montreal, QC, Canada and 2Equipe EPSP Environment, University of Grenoble, Grenoble, Isere, France.

#1461
Poster Board Number ........................................217
ASSOCIATIONS BETWEEN ASTHMA EMERGENCY DEPARTMENT VISITS AND DIESEL EMISSIONS IN TACOMA, WA. J. Q. Koenig1, T. F. Mar2 and J. Primomo3. 1environmental health, university of washington, Seattle, WA and 2Nursing Program, university of washington, Tacoma, WA.

#1462
Poster Board Number ........................................218

#1463
Poster Board Number ........................................219
NEUROLOGICAL SYMPTOMS AND NEUROPATHOLOGICAL ANTIBODIES IN Poultry WORKERS EXPOSED TO CAMPYLOBACTER JEFJEU. L. B. Price1,2,3, A. Roess1, J. Graham1, S. Baqaar1, R. Vailles1, L. Lackey1, K. A. Sheikh1 and E. K. Silbergeld1. 1Environmental Health Sciences, Johns Hopkins Univ SPH, Baltimore, MD, 2Johns Hopkins University School of Medicine, Baltimore, MD, 3Northern Arizona University, Flagstaff, AZ and 4U.S. Naval Medical Research Center, Silver Spring, MD.

#1464
Poster Board Number ........................................220
EVALUATION OF POTENTIAL INHALATION HAZARDS OF PETROLEUM-, SYNTHETIC- AND BIO-FUELS USING GC/MS ANALYSIS OF VAPORS UNDER EQUILIBRIUM CONDITIONS. C. K. Kendrick1, S. A. Martin1, J. W. Fisher2, T. T. Adams2 and R. T. Tremblay3. 1Environmental Health Science, University of Georgia, Athens, GA, 2Interdisciplinary Toxicology Program, University of Georgia, Athens, GA and 3Engineering Outreach Service, University of Georgia, Athens, GA.

#1465
Poster Board Number ........................................221
NITRATE TOXICITY RISK ASSESSMENT: FROM FIELD SAMPLING TO REMOTE SENSING AND BEYOND. S. Tawde and D. Van Der Merve. Diagnostic Medicine/Pathobiology, Kansas State University, Manhattan, KS.

#1466
Poster Board Number ........................................222

#1467
Poster Board Number ........................................223
EFFECTS OF DEMOGRAPHIC, ENVIRONMENTAL, AND POLYMORPHIC FACTORS ON EMERGENCY DEPARTMENT VISITATION IN ASTHMATIC CHILDREN. G. G. Goodrich1, P. H. Goodman2 and C. A. Pritts3. 1Environmental Sciences and Health, University of Nevada, Reno, NV and 2Internal Medicine, University of Nevada, Reno, NV.

#1468
Poster Board Number ........................................224

#1469
Poster Board Number ........................................225
ASSOCIATION OF THE CYPIA1 G184C POLYMORPHISM WITH LUNG CANCER RISK. D. Ryu1, M. Huang2, C. Park1, R. Im2 and J. Park3. 1College of Veterinary Medicine, Seoul National University, Seoul, South Korea and 2Preventive Medicine, College of Medicine, Chung-Ang University, Seoul, South Korea.

#1470
Poster Board Number ........................................226
CASE STUDIES OF NON-PAINT SOURCES OF LEAD EXPOSURES IN THE UNITED STATES. V. Colucio and K. Vetrano. TRC, Windsor, CT.
**Program Description (Continued)**

Abstract #

**Poster Board Number #1471**

**#1471 OCCUPATIONAL EXPOSURE TO BENZENE THE EXXONMOBIL REFINERY IN JOLIET, ILLINOIS (1977-2006).** M. L. Kreider1, K. M. Unice1, J. M. Pankow1, T. E. Widner1, D. J. Paustenbach2, L. E. Booher1, R. H. Gelatt1, S. H. Gaffney1. 1ChemRisk, Pittsburgh, PA, 2ChemRisk, San Francisco, CA. 1 ExxonMobil Corporate, Fairfax, VA and 3 ExxonMobil Biomedical Sciences Inc., Clinton, NJ.

**Poster Board Number #1472**

**#1472 CANCER MORTALITY IN CHINESE POPULATIONS SURROUNDING AN ALLOY PLANT WITH CHROMIUM SMELTING OPERATIONS (1960-1978).** B. D. Kerger1, W. J. Butler2, D. J. Paustenbach2, J. Zhang3 and S. Li4. 1Health Science Resource Integration, Tallahassee, FL, 2Environmental Risk Analysis, San Mateo, CA, 3ChemRisk, San Francisco, CA, 3 Jinzhou Disease Control and Prevention Station, Jinzhou, Liaoning, China and 4 Benxi Disease Control and Prevention Station, Benxi, Liaoning, China.

**Poster Board Number #1473**


**Poster Board Number #1474**

**#1474 COMPARING GENE EXPRESSION PATTERNS IN BLOOD AND LUNG TISSUE OF IMMUNOLOGICALLY-CHALLENGED RATS EXPOSED TO CONCENTRATED AIRBORNE PARTICULATES.** D. Reif1, B. Heidenfelder2, E. Huval1, J. R. Harkema1 and J. Gallagher1. 1National Center for Computational Toxicology, U.S. Environmental Protection Agency, Research Triangle Park, NC, 2Human Studies Division, U.S. Environmental Protection Agency, Research Triangle Park, NC and 3 Department of Pathobiology and Diagnostic Intervention, Michigan State University, East Lansing, MI.

**Poster Board Number #1475**

**#1475 HIGHER POLYCHLORINATED DIPHENYL (PCB) LEVELS AND RATIOS IN SKIN LIPIDS RELATIVE TO ADJACENT SUBCUTANEOUS ADIPOSE LIPIDS.** R. C. James1, B. D. Kerger2, S. M. Roberts3, A. F. Payer4, D. J. O’Hehir3 and A. P. DeCaprio3. 1University of Florida, Gainesville, FL, 2Health Science Resource Integration, Tallahassee, FL, 3Florida State University, Tallahassee, FL, 4State University of New York, Albany, NY and 5University of Massachusetts, Amherst, MA.

**Poster Board Number #1476**

**#1476 PILOT STUDY OF VAPOR REACTION PRODUCTS FROM MIXING DIACETYL AND CHLORIN BLEACH.** M. J. Fedoruk1, B. D. Kerger2, Israel1, S. Hoyt1, J. Brit1 and R. C. James1. 1University of California, Irvine, CA, 2Health Science Resource Integration, Tallahassee, FL, 3Environmental Analytical Services, San Luis Obispo, CA and 4TERRA, Tallahassee, FL.

**Poster Board Number #1477**


**Poster Board Number #1478**

**#1478 URINARY 1-HYDROXYPYRUVINE: A BIOMARKER OF POLYCYCLIC AROMATIC HYDROCARBON EXPOSURE IN A GHANAIAN POPULATION.** N. M. Johnson1, A. Cardona1, A. Robinson1, J. Taylor1, E. Afrist-Gyawu1, H. Huebner1, L. Xiu1, L. Tang2, N. A. Ankrah1, D. Ofor-Ijede2, J. H. Williams3, J. S. Wang1 and T. D. Phillips1. 1College of Veterinary Medicine, Texas A&M University, College Station, TX, 2The Institute of Environmental and Human Health, Texas Tech University, Lubbock, TX, 3Noguchi Memorial Institute for Medical Research, University of Ghana, Accra, Ghana and 4Peanut Collaborative Research Support Program, The University of Georgia, Griffin, GA.

**Poster Board Number #1479**

**#1479 ENVIRONMENTAL HEALTH & COMMUNITY REVIEW BOARD (EHCB): SUPPLEMENTING THE TRADITIONAL IRB.** S. G. Gilbert1, T. E. McHugh2, 1INND, Seattle, WA and 2Groundwater Service, Inc., Houston, TX.

**Poster Board Number #1480**

**#1480 ESTIMATION OF TOTAL DIETARY INTAKE OF PERCHLORATE AND IMPACTS ON SETTING A MAXIMUM CONTAMINANT LEVEL FOR DRINKING WATER.** E. J. Martin1 and C. D. Sandau. TRIUM Environmental Solutions Inc., Cochrane, AB, Canada.

**Poster Board Number #1481**

**#1481 ASSESSING POTENTIAL EXPOSURE TO TRANSFERABLE INSECTICIDE RESIDUES FROM THE FUR OF DOGS TREATED WITH A SPOT-ON FLEA CONTROL PRODUCT CONTAINING THE PYRETHROID INSECTICIDE PERMETHRIN.** M. K. Davis1, M. Rassam1, M. K. Ross1 and J. E. Chambers. Center for Environmental Health Sciences, Mississippi State University, Mississippi State, MS.
Program Description (Continued)

Abstract # | Poster Board Number | Abstract #
--- | --- | ---
1482 | #1488 | 1483 | #1489 | 1484 | #1490 | 1485 | #1491
Cadmium exposure assessment using total diet study and probalistic Monte Carlo simulation in a cadmium-polluted region, Japan. F. Kajama1, H. Horiguchi1, S. Naka2, N. Nitta3 and S. Sasaki4. 1Center for Community Medicine, Jichi Medical University, Kawachi-Gun, Tochigi, Japan, 2Yokohama National University, Yokohama, Japan, 3National Institute of Environmental Studies, Tsukuba, Japan and 4University of Tokyo, Tokyo, Japan. Sponsor: T. Yoshida.

Poster Board Number #1483

Poster Board Number #1484
Research on toxic chemicals in the Great Lakes: defining studies to help ensure healthy people in every stage of life. H. E. Hicks, A. Ashizawa and C. T. De Rosa. Division of Toxicology and Environmental Medicine, ATSDR/CDC, Atlanta, GA.

Wednesday Morning, March 19
9:00 AM to 12:30 PM
Exhibit Hall

Nanotechnology

Poster Session: Nanoparticles: Inhalation and Respiratory Cell Injury
Chairperson(s): Dale Porter, CDC - NIOSH, Morgantown, WV and Jurgen Pauluhn, Bayer Healthcare AG, Wuppertal, Germany.
Displayed: 9:00 AM–12:30 PM
Attended: 9:00 AM–11:00 AM

Poster Board Number #1489
An in-Vitro assessment of a nanoscale, redox-sensitive antioxidant delivery system's impact on oxidative damage. B. S. Lepene and C. D. Thatcher. Department of Biomedical and Veterinary Sciences, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Blacksburg, VA. Sponsor: M. Erich.
Program Description (Continued)

Abstract #

#1492

Poster Board Number ........................................308

ENGINEERED TITANIUM DIOXIDE NANOSECONDARY TOXICITY IN VITRO AND IN VIVO. D. W. Porter1, A. Holian2, K. Sriram1, N. Wu1, M. Wolfarth1, R. Hamilton1 and M. Buford1. 1Health Effects Laboratory Division, NIOSH, Morgantown, WV; 2Mechanical & Aerospace Engineering, West Virginia University, Morgantown, WV and 2Center for Environmental Health Sciences, University of Montana, Missoula, MT.

#1493

Poster Board Number ........................................309

COMPARATIVE PULMONARY RESPONSE TO INHALED MULTIWALLED CARBON NANOTUBES, CARBON BLACK, AND ALPHA QUARTZ. J. Pauluhn. Toxicology, Bayer HealthCare, Wuppertal, Germany.

#1494

Poster Board Number ........................................310

COMBINED EXPOSURE TO CARBON NANOTUBES AND BACTERIA ENHANCES PULMONARY INFLAMMATION AND INFECTIVITY. A. R. Murray1,2, E. Kisin1, J. F. Fabisiak1, J. R. Roberts1, J. M. Antonini1, C. Kommineni1, J. Reynolds1, A. Barchowsky1, V. Castranova2, V. Kagan3 and A. A. Shvedova1,2.

1PPRB, NIOSH, Morgantown, WV; 2Polymers Division, NIST, Gaithersburg, MD.

Poster Board Number ........................................311


#1495

Poster Board Number ........................................312


#1496

Poster Board Number ........................................313

INHALATION OF CARBON NANOTUBES INDUCES OXIDATIVE STRESS AND CYTOKINE RESPONSE CAUSING RESPIRATORY IMPAIRMENT AND PULMONARY FIBROSIS IN MICE. A. A. Shvedova1,2, E. Kisin1, A. R. Murray1,3, V. Johnson2, O. Gorelik4, S. Arepalli5, A. F. Hubbs6, R. R. Mercer1, S. Stone1, D. Frazer1, T. Chen1, G. Deye2, A. Maynard1, P. Baron7, M. Kadiiska1, K. Stadler1, A. Mouithys-Mickalad1, V. Castranova3,4,5 and V. E. Kagan1,2.

1HELD/PPRB, National Institute for Occupational Safety and Health (NIOSH), Morgantown, WV and 2Health Sciences Center, West Virginia University, Morgantown, WV.

Abstract #

#1499

Poster Board Number ........................................315

DIRECT FIBROGENIC EFFECTS OF DISPERSED SINGLE-WALLED CARBON NANOTUBES ON HUMAN LUNG FIBROBLASTS. L. Wang1, V. Castranova1, Y. Rojansakul1, Y. Li1, J. F. Scabilloni1 and R. R. Mercer2. 1HELD/PPRB, National Institute for Occupational Safety and Health (NIOSH), Morgantown, WV and 2Health Sciences Center, West Virginia University, Morgantown, WV.

#1500

Poster Board Number ........................................316

PULMONARY RESPONSE TO INHALED NICKEL NANOPARTICLES. P. Gillespie, G. Kang, M. Zhong, A. Gunston, T. Gordon and L. Chen. New York University School of Medicine, Tucedo, NY.

#1501

Poster Board Number ........................................317

PULMONARY TOXICITY ASSOCIATED WITH NON-DISPERSED TITANIUM DIOXIDE NANORODS. J. R. Roberts1, D. Schweger-Berry1, S. Leonard1, A. Karim1, V. Tirumala2, J. M. Antonini1 and V. Castranova1.

1HELD/PPRB, NIOSH, Morgantown, WV and 2Polymer Division, NIST, Gaithersburg, MD.

#1502

Poster Board Number ........................................318

A NINETY-DAY SUBCHRONIC INHALATION TOXICITY STUDY OF SILVER NANOPARTICLES IN SPRAGUE DAWLEY RATS. J. Sang1, J. Li1, J. Park1, J. Yoon1, D. Kim1, M. Song2, B. Choi3, J. Han3, Y. Chung4, J. Jeong6, B. Han6, J. Chung6 and I. Yu1. 1Biosafety Evaluation Headquarter, KEMTI, Incheon, South Korea, 2Samsung Electronics Co., Suwon, South Korea, 3College of Medicine, Chung-Ang University, Seoul, South Korea, 4HCT Co., Icheon, South Korea, 5Center for Occupational Toxicology, KOsha, Daejeon, South Korea, 6National Institute of Toxicological Research, KFDA, Seoul, South Korea and 7College of Pharmacy, Seoul National University, Seoul, South Korea.

#1503

Poster Board Number ........................................319

COMPARISON OF HEALTH EFFECTS AND COMPOSITION OF BIOGENIC SECONDARY ORGANIC AEROSOLS FORMED WITH AND WITHOUT SULFUR DIOXIDE. M. Doyle-Eisele1, J. Seinfeld2, A. Rohr3, E. Knipping1, M. J. Campen1, J. Seagrave3 and J. McDonald3. 1Lovelace Respiratory Research Institute, Albuquerque, NM, 2California Institute of Technology, Pasadena, CA and 3Electric Power Research Institute, Palo Alto, CA.

#1504

Poster Board Number ........................................320


#1505

Poster Board Number ........................................321

Program Description (Continued)

Abstract #

#1506 Poster Board Number ..................................... 322
MULTIWALL CARBON NANOTUBE (MWCNT) EXPOSURE MONITORING IN A CNT RESEARCH LABORATORY BEFORE AND AFTER IMPROVEMENT OF WORKPLACE ENVIRONMENT. J. Han1, E. Lee1, J. Lee1, K. So1, Y. Lee2 and J. hi1. 1Biosafety Evaluation Headquarter, KEMTI, Incheon, South Korea. 2Center for Occupational Toxicology, KOSHA, Daejeon, South Korea and 3Department of Physics, Sungkyunkwan University, Suwon, South Korea.

#1507 Poster Board Number ..................................... 323
INHALED MULTIWALLED CARBON NANOTUBES POTENTIATE AIRWAY FIBROSIS IN A MURINE MODEL OF ALLERGIC ASTHMA. J. P. Ryman-Rasmussen1, E. W. Tewksbury2, O. R. Moss2, M. F. Cesta1,2,3, B. A. Wong2 and J. C. Bonner1,2. 1Environmental Sciences, Research Triangle Park, NC and 2College Preclinical Studies, The Hamner Institutes, Research Triangle Park, NC.

#1508 Poster Board Number ..................................... 324

#1509 Poster Board Number ..................................... 325
CARBON NANOTUBES AND BACTERIAL LIPOPOLYSACCHARIDE (LPS) ACT COORDINATELY TO STIMULATE PLATELET-DERIVED GROWTH FACTOR (PDGF) SIGNALING AND LUNG FIBROSIS IN RATS. M. F. Cesta1,2,3, J. P. Ryman-Rasmussen1,2, D. G. Wallace2 and J. C. Bonner1,2. 1College of Agricultural and Life Sciences, North Carolina State University, Raleigh, NC; 2CIIT at the Hamner Institutes, Research Triangle Park, NC; and 3LEP, NIEHS, RTP, NC.

#1510 Poster Board Number ..................................... 326
NANOPARTICLE SELECTION STIMULATE NADPH OXIDASE IN RABBIT PULMONARY CELL LINES. E. Rushton1, G. Oberdörster2 and J. N. Finkenstein1,2,3. 1Pediatrics, University of Rochester, Rochester, NY; 2Environmental Medicine, University of Rochester, Rochester, NY; and 3Radiation Oncology, University of Rochester, Rochester, NY.

#1511 Poster Board Number ..................................... 327
UPTAKE OF FINE AND ULTRA-FINE POLYSTYRENE LATEX BEADS IN A549 CELLS. P. M. Radcliffe1, V. A. Wong1, O. R. Moss1 and D. C. Dorman1. 1Division of Toxicology and Preclinical Studies, The Hamner Institutes for Health Sciences, Research Triangle Park, NC and 2College of Veterinary Medicine, North Carolina State University, Raleigh, NC.

#1512 Poster Board Number ..................................... 328
NANOPARTICLE DEPOSITION EFFICIENCY IN RAT AND HUMAN NASAL REPLICAS. B. A. Wong, E. W. Tewksbury and B. Asgharian. The Hamner Institutes for Health Sciences, Research Triangle Park, NC.

#1513 Poster Board Number ..................................... 329
EFFECTS OF CERIUM OXIDE ON RAT PRIMARY ALVEOLAR MACROPHAGES. J. Y. Ma1, H. Zhao1, M. Barger1, V. Castranova1 and J. K. Ma1,2. 1NIOSH, Morgantown, WV and 2School of Pharmacy, WVU, Morgantown, WV.

#1514 Poster Board Number ..................................... 330
MANUFACTURING METHODS FOR GENERATING NANOPARTICLE AEROSOLS: FROM BENCHTOP TO INHALATION LABORATORY. M. L. Ostran1, K. C. Swain1, E. McDermott1, K. L. Reed1, C. M. Sayes1 and D. B. Warheit2. 1DuPont Haskell Laboratory, Newark, DE and 2DuPont Central Research and Development, Wilmington, DE.

Wednesday Morning, March 19
9:00 AM to 12:30 PM
Exhibit Hall

DEVELOPMENTAL BASIS OF DISEASE

POSTER SESSION: DEVELOPMENTAL TOXICOLOGY

Chairperson(s): Chad Vezina, University of Wisconsin Madison, Madison, WI and Robert Ellis-Hutchings, U.S. EPA, Durham, NC.

Displayed: 9:00 AM–12:30 PM

Attended: 11:00 AM–12:30 PM

#1515 Poster Board Number ..................................... 331
2, 3, 7, 8 TETRACHLOROBENZO-P-DIOXIN (TCDD) INHIBITS FIBROBLAST GROWTH FACTOR (FGF)-10 INDUCIBLE PROSTATIC BUDDING IN THE MOUSE UROGENITAL SINUS (UGS). C. M. Vezina1, R. W. Moore1,2, S. H. Allgeier1 and R. E. Peterson1,2. 1School of Pharmacy, UW-Madison, Madison, WI and 2Molecular and Environmental Toxicology Center, UW-Madison, Madison, WI.

#1516 Poster Board Number ..................................... 332
PROSTATIC BUDDING BY THE MOUSE UROGENITAL SINUS (UGS) IS INDUCED BY NOTCH SIGNALING; THIS EFFECT IS INSENSITIVE TO 2, 3, 7, 8 TETRACHLOROBENZO-P-DIOXIN (TCDD). R. W. Moore1,2, C. M. Vezina1, S. H. Allgeier1 and R. E. Peterson1,2. 1School of Pharmacy, UW-Madison, Madison, WI and 2Molecular and Environmental Toxicology Center, UW-Madison, Madison, WI.

#1517 Poster Board Number ..................................... 333
WN15A REDUCES PROSTATIC BUD FORMATION IN THE MOUSE UROGENITAL SINUS (UGS) AND INHIBITION OF WN15A RESCUES EFFECTS OF 2, 3, 7, 8-TETRACHLOROBENZO-P-DIOXIN (TCDD) ON BUDD FORMATION IN VITRO. S. H. Allgeier1, C. M. Vezina1, R. W. Moore1,2, W. A. Fritz1 and R. E. Peterson1,2. 1Molecular and Environmental Toxicology Center, UW-Madison, Madison, WI and 2School of Pharmacy, UW-Madison, Madison, WI.

up-to-date information at www.toxicology.org
Program Description (Continued)

Abstract #

#1518  
**Poster Board Number**  
A TERATOLOGY STUDY OF ORAL GAVAGE OF LIU-WEI-TI-HUANG-WAN IN RABBITS.  
Development Center for Biotechnology, Taipei, Taiwan.

#1519  
**Poster Board Number**  

#1520  
**Poster Board Number**  
VARIATION, LEVELS AND CONGENER PROFILES OF POLYBROMINATED DIPHENYL ETHERS (PDBEs) IN HUMAN GESTATIONAL MEMBRANES. M. Miller1, S. M. Chernyak1, M. C. Chames2 and R. Loch-Carasu3. Environmental Health Sciences, University of Michigan, Ann Arbor, MI and 2Obstetrics and Gynecology, University of Michigan, Ann Arbor, MI.

#1521  
**Poster Board Number**  
MONO-2-ETHYLHEXYL PHTHALATE STIMULATES RELEASE OF THE PROINFLAMMATORY CYTOKINE INTERLEUKIN-6 IN HUMAN GESTATIONAL MEMBRANE CULTURES. L. M. Tez2 and R. Loch-Carasu3. Environmental Health Sciences, University of Michigan School of Public Health, Ann Arbor, MI.

#1522  
**Poster Board Number**  
IN UTERO EXPOSURE TO BENZENE CAUSES STRAIN AND GENDER SPECIFIC CHANGES IN HEMATOPOIETIC PROGENITOR CELLS. H. Budhan1 and L. Winn2. 1Pharmacology and Toxicology, Queen’s University, Kingston, ON, Canada and 2School of Environmental Studies, Queen’s University, Kingston, ON, Canada.

#1523  
**Poster Board Number**  
EFFECT OF MATERNAL FOLIC ACID SUPPLEMENTATION ON VALPROIC ACID INDUCED TERATOGENESIS IN CULTURED MOUSE EMBRYOS. E. W. Tung1 and L. M. Winn2. 1Pharmacology and Toxicology, Queen’s University, Kingston, ON, Canada and 2School of Environmental Studies, Queen’s University, Kingston, ON, Canada.

#1524  
**Poster Board Number**  
EXPLORING THE DEVELOPMENTAL EFFECT OF THALIDOMIDE AND IRRADIATION ON LIMB PATTERNING. P. Allard1, J. Galloway1, C. Harris2, E. Carney3 and C. J. Tabin1. 1Genetics, Harvard Medical School, Boston, MA, 2Environmental and Industrial Health Toxicology, University of Michigan, Ann Arbor, MI and 3Developmental and Reproductive Toxicology, The Dow Chemical Company, Midland, MI.

#1525  
**Poster Board Number**  

Abstract #

#1526  
**Poster Board Number**  
REPRODUCTIVE AND DEVELOPMENTAL RISK ASSESSMENT DATA IN CYNOMOLGUS MONKEYS OF CAMBODIAN, CHINESE, AND INDONESIAN ORIGIN. S. Oneda1, N. Makori1, D. Carwin1, J. Kentfeld1, S. Herrin1, A. Araimi1, B. Baker2, J. Klaassen1, S. Meyer2 and R. Nigut2. SNBL USA, Ltd., Everett, WA and 2Shin Nippon Biomedical Laboratories, Ltd., Kagoshima, Japan.

#1527  
**Poster Board Number**  

#1528  
**Poster Board Number**  
EARLY RESPONSE IN GENE EXPRESSION PROFILES OF POLYBROMINATED DIPHENYL ETHERS (PDBEs) IN HUMAN GESTATIONAL MEMBRANES. M. Miller1, S. M. Chernyak1, M. C. Chames2 and R. Loch-Carasu3. Environmental Health Sciences, University of Michigan, Ann Arbor, MI and 2Obstetrics and Gynecology, University of Michigan, Ann Arbor, MI.

#1529  
**Poster Board Number**  
DEVELOPMENTAL TOXICITY OF N, N-DIMETHYLPROPANAMIDE IN RATS. T. Roth1, R. Jung1 and R. Ceccatelli2. 1CPS Toxicology, Clariant Produkte (Deutschland) GmbH, Sulzbach am Taunus, Germany and 2RCC Ltd. Fuellinsdorf, Switzerland. Sponsor: G. Kennedy.

#1530  
**Poster Board Number**  
ANALYSIS OF ETHANOL-INDUCED ABNORMALITIES IN THE MEDIAL FOREBRAIN OF FETAL MICE. E. A. Myers1, S. E. Parmelli1, D. B. Dehart2, G. A. Johnson2 and K. K. Sulik3. 1Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC, 2Center for Alcohol Studies, University of North Carolina, Chapel Hill, NC and 3Center for In Vivo Microscopy, Duke University, Durham, NC.

#1531  
**Poster Board Number**  
#1532
Poster Board Number #1532
LOW-DOSE TRICHLOROETHYLENE EXPOSURE DURING VALVULOSEPTAL MORPHOGENESIS CAUSES VENTRICULAR SEPTAL DEFECTS IN HATCHED CHICKS. E. S. Rufer1,2, T. Hacker1, J. Lough1 and S. M. Smith1,2. 1Toxicological Sciences, University of Wisconsin - Madison, Madison, WI, 2Molecular & Environmental Toxicology Center, University of Wisconsin - Madison, Madison, WI, 3Cardiovascular Research Toxicology Center, University of Wisconsin - Madison, Madison, WI and 4Department of Cell Biology, Medical College of Wisconsin, Milwaukee, WI.

#1533
Poster Board Number #1533
A STUDY OF THE EFFECTS OF GREEN TEA CATECHINS (GTC) ON EMBRYO/FETAL DEVELOPMENT IN RATS. J. Knapp1, J. Moore1, S. Davis1, M. Nemec1, O. Morita2 and Y. Tamaki2. 1DART, WIL Research Laboratories, LLC, Ashland, OH and 2Safety Science Research Laboratories, Kao Corporation, Haga-Gun TOCHIGI, Japan. Sponsor: D. Stump.

#1534
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#1535
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EMBRYOTOXICITY OF RETINOIC ACID IN POSTIMPLANTATION RAT WHOLE EMBRYO CULTURE MONITORED WITH GENE EXPRESSION ANALYSIS. V. van Beelen1,2, M. Luijten1, A. Westerman1, A. Verhoef2, J. Pennings1, F. van Schooten1 and A. Piersma2. 1Health Risk Analysis & Toxicology, Maastricht University, Maastricht, Netherlands and 2Laboratory for Health Protection Research, National Institute for Public Health and the Environment (RIVM), Bilthoven, Netherlands. Sponsor: H. van Loveren.

#1536
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TWO-GENERATION ASSESSMENT OF REPRODUCTIVE TOXICITY AND TERATOGENICITY OF A NOVEL CALCIUM/POTASSIUM SALT OF (-)-HYDROXYCITRIC ACID. D. Bagchi1,2, N. S. Deshmukh1 and M. Bagchi1. 1Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, 2Department of Toxicology, Lovelace Respiratory Research Institute, Albuquerque, NM, 3Makhteshim Chemical Works, Ltd., Beer Sheva, Israel.

#1538
Poster Board Number #1538
DEVELOPMENTAL TOXICITY ASSESSMENT OF A NOVEL CALCIUM/POTASSIUM SALT OF (-)-HYDROXYCITRIC ACID. M. Bagchi1, N. S. Deshmukh1 and D. Bagchi1. 1Department of Pharmacy Sciences, Creighton University Medical Center, Omaha, NE, 2InterHealth Nutraceuticals, Inc, Benicia, CA and 3Intox Pvt. Ltd, Pune, India.
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<td>SKIN IMMUNOSENESCENCE: DECREASED RACK-1 EXPRESSION IS ASSOCIATED WITH DEFECTIVE TNF-ALPHA PRODUCTION IN RESPONSE TO DIFFERENT STIMULI, E. Corsini, C. Gregorelli, L. Lucchi, E. Donetti, M. Bedoni, M. Marinovich, C. L. Galli and F. Roussé. 1Department of Pharmacological Sciences, University of Milan, Milan, Italy, 2Department of Human Morphology, University of Milan, Milan, Italy and 3L’Oreal Advanced Reasearch, Clichy, France.</td>
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<td>DIFFERENTIAL RESPONSES OF HEMIZYGOUS VERSUS HOMOZYGOUS TG.C AC MICE TO THE PHOTOCARCINOGENIC EFFECT OF ULTRAVIOLET RADIATION, P. C. Howard, N. J. Walker and N. V. Gopee. 1Biochemical Toxicology, National Center for Toxicological Research, U.S. FDA, Jefferson, AR and 2National Toxicology Program, National Institute of Environmental Health Sciences, Research Triangle Park, NC.</td>
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<td>USE OF A MULTI-FIBER APPROACH TO QUANTIFY CHEMICAL MIXTURE INTERACTIONS MODULATING DERMAL ABSORPTION. M. Imran, R. E. Baynes, X. Xia and J. E. Riviere. Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.</td>
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Abstract #

Poster Board Number ..............................................435

IV VITRO STUDIES OF PERCUTANEOUS ABSORPTION AND SURFACE-TO-SKIN TRANSFER OF D-METHAMPHETAMINE HYDROCHLORIDE USING HUMAN SKIN. X. Hui1, C. Salocks2, J. Sanborn1 and H. Maibach1. 1Dermatology, University of California San Francisco, San Francisco, CA and 2Office of Environmental Health Hazard Assessment, Cal/EPA, Sacramento, CA.

Poster Board Number ..............................................436

COMPARATIVE EFFECTS OF SURFACTANTS (SLS AND LAS) ON THE DERMAL ABSORPTION OF A SERIES OF COMPOUNDS IN ISOLATED PERFUSED SKIN. J. E. Riviere and J. D. Brooks. Center for Chemical Toxicology Research and Pharmacokinetics, North Carolina State University, Raleigh, NC.

Poster Board Number ..............................................437

DERMAL EXPOSURE INDUCES KERATIN ADDUCTS IN THE SKIN. L. A. Nylander-French1, J. C. Kang-Sicket1, X. E. Chao1, K. Iyaya1, A. Gold1, D. G. Klapper1, L. M. Ball1 and J. E. French1. 1Environmental Sciences and Engineering, The University of North Carolina at Chapel Hill, Chapel Hill, NC, 2Microbiology and Immunology, The University of North Carolina at Chapel Hill, Chapel Hill, NC and 3Laboratory of Molecular Toxicology, National Institute of Environmental Health Sciences, Research Triangle Park, NC.

Poster Board Number ..............................................438

EFFECT OF BLOCKING THE IL-1 RECEPTOR ON JP-8-INDUCED GENE EXPRESSION IN RAT SKIN. T. J. Kannanayakal, C. M. Garrett and J. N. McDougal. Pharmacology and Toxicology, Boonshoft School of Medicine, Wright State University, Dayton, OH.

Poster Board Number ..............................................439

COMPARISON OF GENE EXPRESSION IN THE EPIDERMIS AFTER BRIEF EXPOSURES TO JP-8 IN HUMAN VOLUNTEERS AND RATS. J. N. McDougal, R. Simman and C. M. Garrett. Pharmacology and Toxicology, Boonshoft School of Medicine, Wright State University, Dayton, OH.

Poster Board Number ..............................................440

GENE EXPRESSION ANALYSIS OF RAT EPIDERMIS AFTER 1 HOUR JP-8 AND JP-8 COMPONENT EXPOSURES BY REAL-TIME PCR. C. M. Garrett and J. N. McDougal. Pharmacology and Toxicology, Boonshoft School of Medicine, Wright State University, Dayton, OH.

Abstract #

Wednesday Morning, March 19
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: APPLICATION OF ‘OMICS RESEARCH TOOLS IN TOXICOLOGY

Chairperson(s): Hisham Hamadeh, Amgen, Inc., Thousand Oaks, CA.

Displayed: 9:00 AM–12:30 PM

Attended: 11:00 AM–12:30 PM

Poster Board Number ..............................................501

THE SECOND STAGE OF THE TOXICOGENOMICS PROJECT IN JAPAN: A MULTICENTER VALIDATION STUDY OF GENE EXPRESSION IN RAT LIVER. T. Urushidani1,2, A. Ono3, N. Nakatsu2, T. Miyagishima2 and Y. Ohno3. 1Pathophysiology, Doshisha Women’s College of Liberal Arts, Kyotanabe, Kyoto, Japan, 2Toxico-genomics-informatics Project, National Institute of Biomedical Innovation, Ibaraki, Osaka, Japan and 3National Institute of Health Sciences, Tokyo, Japan.

Poster Board Number ..............................................502


Poster Board Number ..............................................503

ANALYSIS OF GLOBAL PATTERNS IN MICROARRAY GENE EXPRESSION DUE TO LOW DOSE ARSENIC EXPOSURE USING CORRELATION AND GENE SET ENRICHMENT. T. Hampton1, J. C. Davey1, J. A. Gosse1, C. D. Kozul1, M. A. Biha2 and J. W. Hamilton1. 1Pharmacology Toxicology, Dartmouth College, Hanover, NH and 2Department of Cell Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK.

Poster Board Number ..............................................504

PROBABILITY FOLD CHANGE RANKING: A NOVEL COMPUTATIONAL ALGORITHM FOR IDENTIFYING ROBUST DIFFERENTIALLY EXPRESSED GENE LISTS. X. Deng1,2, J. Xu1 and C. Wang1. 1Department of Medicine, Cedars-Sinai Medical Center, UCLA, Los Angeles, CA and 2Burns Allen Research Institute, Cedars-Sinai Medical Center, Los Angeles, CA.

Poster Board Number ..............................................505

CHEMICAL TOXICITY PREDICTION FOR TOXCAST PHASE I. Z. Li1, F. Wright1 and F. Elloumi2. 1Biostatistics, University of North Carolina at Chapel Hill, Chapel Hill, NC and 2National Research Council, RTP, NC.
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<td>HEPATIC GENE EXPRESSION DURING AGING IN MALE AND FEMALE MICE</td>
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<td>Pharmacology &amp; Molecular Biologicalg and National Food Safety &amp; Toxicology Center, Michigan State University, East Lansing, MI and Medicinal Safety Research Labs, Daiichi-Sankyo Co., Ltd., Fukuuroi, Shizuoka, Japan.</td>
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<td>M. E. Davidson, L. Kerpelesi, A. Soto and V. T. Chan</td>
<td>ORISE, Walleth, OH, Battele Memorial Institute, Columbus, OH and Applied Biotechnology Branch, Division of Biosciences and Protection, Human Effectiveness Directorate, Air Force Research Laboratory, Wright Patterson Air Force Base, OH. Sponsor: D. Mattie.</td>
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<td>Biostatistics, VCU, Richmond, VA and Pharmacology/Toxicology, VCU, Richmond, VA. Sponsor: C. Jennings.</td>
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TRANSCRIPTOMIC ANALYSIS OF TOluene-EXPOSED BROWN NORWAY RAT BRAINS AT DIFFERENT LIFE STAGES. J. E. Royland. Neurotoxicology Division, U.S. Environmental Protection Agency, Durham, NC.


CONCORDANCE IN GENOMIC CHANGES BETWEEN MOUSE LUNGS AND HUMAN AIRWAY EPITHELIAL CELLS EXPOSED TO DIESEL EXHAUST PARTICLES. T. Stevens1, W. Reed2, S. Hester3 and J. Gilmour4. Toxicology, UNC, carrboro, NC, 1NERL, EPA, RTP, NC and 2NERL, EPA, Cincinnati, OH.

THE URINARY BLADDER EXHIBITS A U-SHAPED GENOMIC DOSE-RESPONSE FOLLOWING SHORT- AND LONG-TERM EXPOSURE OF MICE TO ARSENATE IN DRINKING WATER. H. J. Clewell1, R. S. Thomas1, E. M. Kenyon1, M. F. Hughes1 and J. W. Hager2. The Hamner, RTP, NC, 1U.S. EPA / NHEERL, RTP NC and 2EPRI, Palo Alto, CA.

CONCENTRATIONS DEPENDENT TRANSITIONS IN RESPONSES OF RAT NASAL EPITHELIUM TO INHALED FORMALDEHYDE. M. E. Andersen, H. J. Clewell, E. Bermudez, G. A. Wilson and R. S. Thomas. The Hamner Institutes for Health Sciences, Research Triangle Park, NC.


DRUG METABOLISM RESPONSE EVALUATED BY ANTIBODY PROTEIN MICROARRAY IN MALE SPRAGUE-DAWLEY RATS EXPOSED TO PHENOBARBITAL (PB), 1, 4-DIOXANE (1, 4-D), TRICHLOROETHYLENE (TCE), AND ETHANOL (ETOH). D. Geteri1, L. Kau1, D. Kaplan2, S. Salagrama1, H. Kin2, A. Dombkowski3, W. Scott4 and B. Gollapudi4. The Dow Chemical Company, Midland, MI, 1Detroit R&D, Detroit, MI and 2Wayne State University, Detroit, MI.

PROTEOMIC (LC/MS/MS) ANALYSIS OF FFPE RAT LIVER TO IDENTIFY ATORVASTATIN REGULATED PROTEINS: COMPARISON TO FROZEN OCT EMBEDDED LIVER TISSUE. M. Scicchitano1, D. A. Delmas, R. W. Boyce, K. S. Frazier and H. C. Thomas. GlaxoSmithKline, Tokyo, Japan. Sponsor: M. Kurata.

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**Poster Board Number #1598**

**PROFILING OF METALLOTHIONEIN ISOFORMS IN HUMAN PROSTATE CELLS BY MASS SPECTROMETRY.** R. Wang, D. A. Sens, A. Albrecht, S. Garrett, S. Somji, M. Sens and X. Lu. Department of Pathology, University of North Dakota, Grand Forks, ND and Proteomics core facility, University of North Dakota, Grand Forks, ND.

**Poster Board Number #1599**


**Poster Board Number #1600**


**Poster Board Number #1601**


**Poster Board Number #1602**


**Poster Board Number #1603**


**Poster Board Number #1604**


**Abstract # #1605**


**Poster Board Number #1606**


**Wednesday Morning, March 19**

9:00 AM to 12:30 PM

Exhibit Hall

**POSTER SESSION: METALS I**

Chairperson(s): Susan McKarns, NIAID/NIH, Bethesda, MD.

Displayed: 9:00 AM–12:30 PM

Attended: 9:00 AM–11:00 AM

**Poster Board Number #1607**


**Poster Board Number #1608**

**THE CORRELATION OF METALLOTHIONEIN ISOFORM EXPRESSION WITH THE DEGREE OF MALIGNANCY IN A SERIES OF RECENTLY DERIVED HUMAN PROSTATE CANCER CELL LINES.** S. H. Garrett, E. J. Tokar, A. L. Albrecht and M. P. Woukal. Pathology, University of North Dakota, Grand Forks, ND and NIEHS, Research Triangle Park, NC.

**Poster Board Number #1609**

**NICKEL INDUCES METALLOTHIONEIN IN AIRWAY EPITHELIAL CELLS BY INCREASING INTRACELLULAR ZINC.** A. A. Nemec, S. A. Sandel, G. D. Leikauf, B. R. Pitt and A. Barcowsky. Environmental and Occupational Health, University of Pittsburgh, Pittsburgh, PA.

**Poster Board Number #1610**

**MTF-1 AND CARM1 MAY COOPERATE TO REGULATE METALLOTHIONEIN EXPRESSION AND METAL HOMEOSTASIS.** E. Braithwaite and J. Freedman. National Institute of Environmental Health Sciences, Research Triangle Park, NC.
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#1612  Poster Board Number ..............................551
EMERGENCE OF METHYL MERCURY TOXICITY LONG AFTER A PERINATAL EXPOSURE IN METALLOTHIONEIN-NULL AND ITS WILD-TYPE C57BL MICE STRAINS, M. Yoshida¹, C. Watanabe², M. Satoh¹ and A. Yasutake². ¹Hachinohe University, Aomori, Japan, ²Graduate School of Medicine, University of Tokyo, Tokyo, Japan, ³School of Pharmacy, Aichi Gakuin University, Nagoya, Japan and ⁴National Institute of Minamata Disease, Minamata, Japan.

#1613  Poster Board Number ..............................552
RELATIONSHIP BETWEEN PLASMA ANTI-METALLOTHIONEIN ANTIBODY AND RENAL DYSFUNCTION IN CADMIUM EXPOSED WORKERS, T. Jin¹,², L. Chen¹,², B. Huang¹, L. Chai¹, G. Nordberg³ and M. Nordberg⁴. ¹Occupational Health, Fudan University, Shanghai, China, ²Toxicology, Fudan University, Shanghai, China, ³Environmental Medicine, University of North Carolina, Chapel Hill, NC and ⁴University of North Carolina, Chapel Hill, NC.

#1614  Poster Board Number ..............................553
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#1615  Poster Board Number ..............................554
IMMUNOLOCALIZATION OF METALLOTHIONEINS IN LIVER AND KIDNEY OF WISTAR RATS EXPOSED TO CADMIUM, Y. Liang¹, H. Li¹, C. Xiang², L. Lei³, T. Jin³, M. Nordberg¹ and G. E. Nordberg³. ¹Department of Occupational Health and Toxicology, School of Public Health, Fudan University, Shanghai, China, ²Shanghai Municipal Center For Disease Control and Prevention, Shanghai, China, ³Institute Environmental Medicine, Karolinska Institute, Stockholm, Sweden and ⁴Environmental Medicine, Department of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden.

#1616  Poster Board Number ..............................555
EFFECTS OF LOW LEVEL EXPOSURE TO CADMIUM AND ARSENIC ON THE KIDNEY, M. Huang, S. Choi, K. Iri, N. Kim, B. Choi and J. Park. Preventive Medicine, College of Medicine, Chung-Ang University, Seoul, South Korea.

#1617  Poster Board Number ..............................556
CADMIUM-INDUCED MALIGNANT TRANSFORMATION OF HUMAN BREAST EPITHELIAL CELLS, L. Benbrahim-Tallaa¹, J. Coppin², J. Leit³, B. A. Dovian⁴ and M. Weiss⁴. ¹ICS, LCC, NCI at NIEHS, Research Triangle Park, NC and ²SAIC, NCI at Frederick, Frederick, MD.

#1618  Poster Board Number ..............................557
THE INVOLVEMENT OF RENAL IRON ACCUMULATION IN THE SUPPRESSION OF ERYTHROPOIETIN PRODUCTION IN RATS WITH CHRONIC CADMIUM INTOXICATION, H. Horiguchi, E. Oguma and F. Kayama. Division of Environmental Medicine, Center for Community Medicine, Jichi Medical University, Shimotsuke, Japan. Sponsor: T. Yoshida.

#1619  Poster Board Number ..............................558
STRAIN DIFFERENCES OF CADMIUM TOXICITY IN THE LIVER AND TESTES OF INBRED WISTAR-IMAMICHI AND FISCHER 344 RATS, H. Shimada¹, A. Yasutake², M. Nagano², M. P. Weiss³ and Y. Imamura³. ¹Kumamoto University, Kumamoto, Japan, ²National Institute for Minamata Disease, Kumamoto, Japan and ³NCI at NIEHS, Research Triangle Park, NC.

#1620  Poster Board Number ..............................559
CADMIUM INDUCED ALTERATION OF CADHERIN EXPRESSION IN THE MT-3 TRANSFECTED HUMAN PROXIMAL TUBULE CELL LINE HK-2, C. Bathula, S. H. Garrett, M. Sens, D. A. Sens and S. Somji. Pathology, University of North Dakota, Grand Forks, ND.

#1621  Poster Board Number ..............................560
LOSS OF GLUTAMATE-CYSTEINE LIGASE MODIFIER SUBUNIT SENSITIZES MICE TO ACUTE CADMIUM TOXICITY, S. N. Schneider, B. Wang, H. G. Sherzter, D. W. Nebert and T. P. Dalton. Environmental Health, University of Cincinnati Medical Center, Cincinnati, OH.

#1622  Poster Board Number ..............................561
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#1623  Poster Board Number ..............................562
THE ROLE OF FLAVONOIDS IN MODULATION OF THE METABOLISM OF ARSENIC, Z. Drobo⁴, A. Hernandez-Zavala⁴, F. S. Walton¹, D. J. Thomas¹ and M. Styblo¹,². ¹Nutrition, UNC Chapel Hill, NC, Chapel Hill, NC, ²CEMLB, University of North Carolina, Chapel Hill, NC and ³U.S. EPA, RTP, NC.

#1624  Poster Board Number ..............................563
CYTOTOXICITY OF COMBINED ARSENICALS ON RAT BLADDER EPITHELIAL CELLS IN VITRO, S. Suzuki, M. Nascimento, S. Kakusho-Kyoto, K. L. Pennington, L. L. Arnold and S. M. Cohen. Pathology and Microbiology, University of Nebraska Medical Center, Omaha, NE.

#1625  Poster Board Number ..............................564
#1626 ARSENIC INDUCED AN INCREASE IN ENDOTHELIAL CELL PERMEABILITY: INVOLVEMENT OF CYTOSKELETON SIGNALING. R. Ward1, X. Shi1, V. Castronova1 and Y. Qian1. 1Pathology and Physiology Research Branch, National Institute for Occupational Safety and Health, Morgantown, WV and The Cancer Cell Biology Program, West Virginia University, Morgantown, WV.

#1627 ROLE OF NA/PHOSPHATE COTRANSPORTERS IN THE CELL MEMBRANE TRANSPORT OF ARSENATE. R. Villa-Bellosta1, V. Sorribas1, M. J. Sancho1, P. Gaspar1 and A. Anadon2. 1Toxicology Department, University of Zaragoza, Zaragoza, Spain and 2Department of Toxicology and Pharmacology, Faculty of Veterinary Medicine, Universidad Complutense, Madrid, Spain.

#1628 TISSUE DISTRIBUTION OF ARSENIC SPECIES IN MICE CHRONICALLY EXPOSED TO METHYLARSENIC ACID. D. Paul1, A. Hernandez-Zavala1, V. Devesa2, D. J. Thomas3 and M. Styblo3. 1Department of Nutrition, University of North Carolina, Chapel Hill, NC, 2Center for Environmental Medicine, Asthma and Lung Biology, University of North Carolina, Chapel Hill, NC and 3U.S. EPA, RTP, NC.

#1629 TISSUE DISTRIBUTION AND URINARY EXCRETION OF INORGANIC ARSENIC AND ITS METHYLATED METABOLITES IN CS7BL/6 MICE FOLLOWING SUBCHRONIC EXPOSURE TO ARSENATE (AS3) IN DRINKING WATER. E. M. Kenyon1, M. F. Hughes2, B. Adair1, J. Highfill1, E. A. Crecelius2, H. J. Clewell3 and J. W. Ziegel4. 1ORD/NHEERL, NIEHS, Research Triangle Park, NC, 2Environmental Health Sciences, Columbia University, New York, NY, 3Environmental Health Sciences, Columbia University, New York and 4ORD/NHEERL, ETD, U.S. EPA, RTP, NC.

#1630 THE INFLUENCE OF SELENIUM ON ARSENIC METABOLISM AND GENOMIC METHYLATION OF LEUKOCYTE DNA. R. Pilsner1,2, X. Liu1, H. Ahsan1, P. Factor-Litvak1, H. J. Graziano2 and M. V. Gamble2. 1Epidemiology, University of Michigan, Ann Arbor, MI, 2Environmental Health Sciences, Columbia University, New York, 3Biostatistics, Columbia University, New York and 4Epidemiology, Columbia University, New York.


#1632 INCREASED SKIN CARCINOMA FORMATION IN ADULT MICE ASSOCIATED WITH DISTORTED STEM CELL DYNAMICS AFTER IN UTERO ARSENIC EXPOSURE. M. Waalkes1, J. Liu2, D. R. Germostoc2, J. M. Ward3, R. E. Cannon2, C. S. Trempe2, R. W. Tennant4 and B. A. Di want. 1Inorganic Carcinogenesis Section, LCC, NCI at NIEHS, Research Triangle Park, NC, 2NIEHS, Research Triangle Park, NC, 3NIAMD, Bethesda, MD and 4SAIC, NCI at Frederick, Frederick, MD.

#1633 DELAYED OXIDATIVE DNA DAMAGE DEPENDENT ON CELLULAR ABILITY TO METHYLATE ARSENIC. C. Kojima1, M. Waalkes2, J. Ramirez3 and R. Mason4. 1Inorganic Carcinogenesis Section, LCC, NCI at NIEHS, Research Triangle Park, NC and 2LPC, NIEHS, Research Triangle Park, NC.

#1634 CYTOTOXICITY, MUTAGENICITY AND CELLULAR LOCALIZATION OF INSOLUBLE DEPLETED URANIUM IN CHO AA8 AND HUMAN LUNG 16HE140 CELLS. V. H. Coryell1, M. R. Romanotto2, M. Yellowhair2, R. Luiz3 and D. M. Stewart1. 1Chemistry and Biochemistry, Northern Arizona University, Flagstaff, AZ, 2Pharmacology and Toxicology, University of Arizona, Tucson, AZ and 3Cell Biology and Anatomy, University of Arizona, Tucson, AZ.

#1635 BIOMATERIALS AS DECORPORATION AGENTS FOR RADIONUCLIDES. T. G. Levitskaia, K. D. Thrall and J. Morris. Pacific Northwest National Laboratory, Richland, WA.

#1636 TRACE ELEMENT PROFILES IN SINGLE STRANDS OF HUMAN HAIR. K. Gelcic1, P. Kaur2, T. Flaten1 and T. Syversen1. 1Department of Chemistry, Norwegian University of Science and Technology, Trondheim, Norway and 2Department of Neuroscience, Norwegian University of Science and Technology, Trondheim, Norway.

#1637 INVESTIGATING METAL CONCENTRATIONS IN THE TISSUES AND SHELL OF THE BIVALVES CRASSOSTREA VIRGINICA AND GEUKENSIA DEMISSA IN THE NY HUDSON RIVER ESTUARY AND LONG ISLAND SOUND USING SYNCHROTRON RADIATION. S. Murray2, K. Kaur1, T. Flaten1 and T. Syversen1. 1Department of Chemistry, Norwegian University of Science and Technology, Trondheim, Norway and 2Institute of Physics, University of Neuchatel, Neuchatel, Switzerland.

#1638 THE CURIOUS HISTORY OF ANTIMONY AND ITS RELEVANCE TO HUMAN RISK ASSESSMENT. L. Jowa and R. Howd. OEHH, Cal/EPA, Sacramento and Oakland, CA.
Program Description (Continued)

Abstract #

#1639

Poster Board Number ....................................616

REDUCING LEAD LEVELS IN THE CONTAMINATED SOILS
BY PHYTOEXTRACTION USING
SUNFLOWERS. Y. Wei, C. Freeman and M. Latimore. 1Department of Community Medicine, Mercer University School of Medicine, Macon, GA; 2Department of Chemistry, Southwest Magnet High School and Law Academy, Macon, GA and
3Agricultural Research, Fort Valley State University, Fort Valley, GA.

#1640

Poster Board Number ....................................617

CARIOVASCULAR AND OTHER HEALTH EFFECTS ASSOCIATED WITH ARSENIC
EXPOSURE IN INNER MONGOLIA, CHINA.
J. L. Mumford, Y. Xia, J. Mo, T. Wade, Y. Li, K. Wu and W. Sanders. NHEERL/HSD, U.S. EPA, Research Triangle Park, NC; 2Inner Mongolia Center for Endemic Disease Control and Research, Huhhot, Inner Mongolia, China and 3Center for Environmental Medicine, Asthma and Lung Biology, University of North Carolina, Chapel Hill, NC. Sponsor: M. Madden.

#1641

Poster Board Number ....................................618

NONLINEAR BLOOD LEAD RESPONSE OF CHILDREN TO SOIL LEAD:
TOXICOLOGICAL BASIS FOR HEALTH DISPARITIES IN METROPOLITAN NEW ORLEANS, LOUISIANA. H. W. Mielke, C. Gonzalez, E. Powell and P. W. Mielke, Jr. Chemistry, Tulane University, New Orleans, LA; 2Center for Bioenvironmental Research, Tulane University, New Orleans, LA; 3Center for Environmental Medicine, Asthma and Lung Biology, University of North Carolina, Chapel Hill, NC and 4Statistics, Colorado State University, Fort Collins, CO.

#1642

Poster Board Number ....................................619

GENOTOXIC EFFECTS OF INDIVIDUALS EXPOSED TO ARSENIC IN DRINKING
WATER, IN MORELOS, MEXICO. M. Martinez-Pacheco, P. Mussali-Galanle, E. Tovar-Sanchez, L. Colín-Barenque, P. Bizarro-Nevares, A. Gonzalez-Villalva and F. I. Teresa. 1Biología Celular y Tisular, UNAM, Mexico City, Mexico; 2CEAMISH, UAEM, Cuernavaca, Mexico and 3Neuromorfologia, FES Iztacala, Edo. Mexico, Mexico.

#1643

Poster Board Number ....................................620

ARSENIC EXPOSURE BY DRINKING
WATER IN MORELOS, MEXICO. P. Mussali-Galanle, E. Tovar-Sanchez, M. Martinez-Pacheco, L. Colín-Barenque, P. Bizarro-Nevares, A. Gonzalez-Villalva and F. I. Teresa. 1Biología Celular y Tisular, UNAM, Mexico City, Mexico; 2CEAMISH, UAEM, Cuernavaca, Mexico and 3Neuromorfologia, FES Iztacala, UNAM, Edo. Mexico, Mexico.

#1644

Poster Board Number ....................................621

URINARY CREATININE: A PREDICTOR
OF ARSENIC METHYLATION AND OF
AS-INDUCED PREMALIGNANT SKIN

Abstract #

Wednesday Morning, March 19
9:00 AM to 12:30 PM
Exhibit Hall

POSTER SESSION: CARIOVASCULAR SYSTEM: CARDIAC EFFECTS

Chairperson(s): Jacqueline Wallenborn, University of North Carolina
Chapel Hill, Chapel Hill, NC and Susan Borghoff, Integrated Lab Systems, Research Triangle Park, NC.

Poster Board Number ....................................624

EVALUATION OF CARDIAC ALTERATIONS IN CONSCIOUS NAIVE
CYNOMOLGUS MONKEYS OF MAURITIAN ORIGIN. U. Zuehlke, A. Kijtawornrat, Y. Panyasing, J. Lolly and J. Schmidt. University of Montpellier, St-Hyacinthe, QC, Canada and 2GREPAQ, Faculty of Veterinary Medicine, University of Montreal, St-Hyacinthe, QC, Canada. Sponsor: G. Washer.

Poster Board Number ....................................625

COMPARISON OF ANESTHETIC PROTOCOLS FOR UNCONSCIOUS
CARDIOVASCULAR SAFETY PHARMACOLOGY IN BEAGLE DOGS.
S. Fourrier, S. Authier, F. Chaurnaud and E. Troncy. 1LAB Research Canada, Laval, QC, Canada and 2GREPAQ, Faculty of Veterinary Medicine, University of Montreal, St-Hyacinthe, QC, Canada. Sponsor: G. Washer.

Poster Board Number ....................................626

POSSIBLE IMPORTANCE OF DETECTING DRUG-INDUCED ALTERATIONS IN
REGIONAL DISTRIBUTION OF CARDIAC OUTPUT. R. Hamlin and A. Kijtawornrat. Y. Panyasing, J. L. Lolly, J. J. Schmidt, L. Snedden and D. M. Hamlin. Veterinary Biosciences, The Ohio State University, Columbus, OH and 2QTest Labs, Columbus, OH. Sponsor: M. Hejtmancik.
**Program Description (Continued)**

**Abstract #**  
**Poster Board Number...............................633**

THE IMPORTANCE OF EARLY CHARACTERIZATION OF METABOLITES TO ASSESS POTENTIAL CARDIOVASCULAR EFFECTS. D. L. Misrer1, J. Ly1, L. Guo2, S. Chanda2, S. Platz2, R. Weikert1 and K. Kolaja1. 1Roche Palo Alto, Palo Alto, CA and 2Roche, Nutley, NJ.

**Abstract #**  
**Poster Board Number...............................634**

REPEATED TREATMENTS WITH DOxorubicIN CAUSES ELECTROCARDIOGRAM (ECG) CHANGES AND INCREASED VENTRICULAR PREMATURE BEATS IN WISTAR-KYOTO (WKY) RATS. M. S. Hazari1, N. Haykal-Coates2, D. Winser2, A. Card2, D. Costa2 and A. Farrag2. 1Curriculum in Toxicology/ETD, University of North Carolina/U.S. EPA, Chapel Hill, NC and 2Experimental Toxicology Division, U.S. Environmental Protection Agency, Research Triangle Park, NC.

**Abstract #**  
**Poster Board Number...............................635**

CHARACTERIZATION OF CARDIOVASCULAR EFFECTS IN ACID SPHINGOMYELINASE KNOCKOUT MICE FOLLOWING ADMINISTRATION OF RECOMBINANT ACID SPHINGOMYELINASE (RHASM). A. D’Angora1, C. Brown1, A. L. D’Angona1, J. Murray1, K. P. Karey1, T. G. Hampton2 and L. Andrews1. 1Pharmacology and Toxicology, Genzyme, Framingham, MA and 2Mouse Specifics, Boston, MA.

**Abstract #**  
**Poster Board Number...............................636**

SUBCHRONIC INHALATION OF ZINC SULFATE CAUSES CARDIAC CHANGES IN HEALTHY RATS. J. G. Wallenbom1, P. Evansky2, J. H. Shannahana1, M. C. Schladoweiler1, B. Vallan1, R. Gottpolu2, A. D. Ledbett1, J. Richards2, A. Nyko3 and U. P. Kodavanti2. 1SPIH, UNC, Chapel Hill, NC, 2NHEERL, ETD, U.S. EPA, Durham, NC, 3Curriculum in Toxicology, UNC, Chapel Hill, NC, 4NHEERL, ECD, U.S. EPA, Durham, NC and 5Toxicologic Pathology, Timrat, Israel.

**Abstract #**  
**Poster Board Number...............................637**

MEASUREMENT OF CARDIAC TROPONIN T (cTnT) IN RAT SERUM: COMPARING TWO ELECTROCHEMILUMINESCENT (ECL) PLATFORMS. S. Borghoff1, C. Hobbs1, K. Shepard1 and G. S. Travlos2. 1ILS, Inc, RTP, NC and 2NIH, RTP, NC.

**Abstract #**  
**Poster Board Number...............................638**

EXAMINATION OF THE CARDIOVASCULAR EFFECTS OF PDE2 INHIBITORS IN THE NEONATAL AND ADULT ISOLATED RABBIT HEART (Langendorff) MODEL. P. J. Lapinskas1, E. Tanhehco2, P. Senes2, M. Gralinski2, P. Schaefer1, D. Stirling1 and O. Laskin1. 1Exploratory Toxicology, Celgene Corporation, Summit, NJ and 2CorDynamics, Inc, Chicago, IL.

**Abstract #**  
**Poster Board Number...............................639**


**Abstract #**  
**Poster Board Number...............................640**

ADULT ZEBRAFISH EXPOSED TO 2, 3, 7, 8-TETRACHLORODIBENZO-P-DIOXIN (TCDD) DISPLAY REDUCED MYOCARDIAL REGENERATIVE CAPACITY FOLLOWING VENTRICULAR RESECTION. V. Mehra1, R. E. Peterson2 and W. Heideman1. 1Molecular and Environmental Toxicology Center, University of Wisconsin-Madison, Madison, WI and 2Mathematics, Statistics and Computer Sciences, Maquette University, Milwaukee, WI.

**Abstract #**  
**Poster Board Number...............................641**

A COMMON PATHOLOGICAL AND TRANSCRIPTIONAL RESPONSE OF ZEBRAFISH EMBRYONIC HEART TO VARIOUS STRESSES. J. Chen1, C. Struble2, R. E. Peterson3 and W. Heideman1. 1Pharmaceutical Sciences, University of Wisconsin - Madison, Madison, WI and 2Mathematics, Statistics and Computer Sciences, Maquette University, Milwaukee, WI.

**Abstract #**  
**Poster Board Number...............................642**

A CARDIOVASCULAR SAFETY EVALUATION STUDY OF wttC SESTAMIBI IN DIFFERENT AGED MALE MONGREL DOGS DURING REST AND TREADMILL EXERCISE. C. Hassler1, M. Mistry2, S. Robinson2, M. Hawk1, S. Kopp1, M. Coffee1, R. Lordo1, B. Wood1 and T. Vinci1. 1Battelle, Columbus, OH and 2Experimental Toxicology Division, U.S. Environmental Toxicology Center, University of North Carolina/U.S. EPA, Chapel Hill, NC.

**Abstract #**  
**Poster Board Number...............................643**


**Abstract #**  
**Poster Board Number...............................644**


**Abstract #**  
**Poster Board Number...............................645**

ANGIOTENSIN II-INDUCED CARDIAC APOPTOSIS IS MEDIATED BY PS5-DEPENDENT MITOCCHONDRIAL CYTOCHROME C RELEASE PATHWAY. G. Zhou and L. Cai. University of Louisville, Louisville, KY.
# Program Description (Continued)

**Abstract #**

#1664

**Poster Board Number ........................................646**

CHOLESTEROL-SECOALDEHYDE-INDUCED APOPTOSIS IN CARDIOMYOCYTES: ROLE OF HYDROGEN PEROXIDE AND P38 MAP KINASE SIGNALING. L. Laynes, A. C. Raghavamenon and K. M. Uppu. Environmental Toxicology and the Health Research Center, Southern University and A & M College, Baton Rouge, LA.

#1665

**Poster Board Number ........................................647**

AKT-DEPENDENT DOWN-REGULATED GLYCOGEN SYNTHESIS KINASE-3β PLAYS A CRITICAL ROLE IN DIABETES-INDUCED INTRAMYOCARDIAL LIPID ACCUMULATION AND INFLAMMATION: PREVENTION OF METALLOCIONEIN. Y. Wang. Medicine, University of Louisville, Louisville, KY. Sponsor: L. Cai.

#1666

**FUNCTIONAL STUDY OF CYSTATIN C IN CARDIAC EXTRACELLULAR MATRIX REMODELING. L. Xie, E. V. Sheveleva, B. Xu and Q. M. Chen. University of Arizona, Tucson, AZ.**

#1667


**Wednesday Morning, March 19**

9:00 AM to 12:30 PM

**Exhibit Hall**

**POSTER SESSION: DNA DAMAGE AND REPAIR: MECHANISMS AND AGENTS**

**Chairperson(s):** Vernon Walker, Lovelace Respiratory Research Institute, Albuquerque, NM and Haley Menard, Brown University, Providence, RI.

**Displayed:** 9:00 AM–12:30 PM

**Attended:** 9:00 AM-11:00 AM

#1668

**Poster Board Number ........................................650**


#1669

**Poster Board Number ........................................651**


#1670

**Poster Board Number ........................................652**

EXPLORING THE LINK BETWEEN HIF-1 AND RADIOPROTECTION. I. G. Bebenek1, W. H. McBride2 and O. Hankinson3,4. Pathology, UCLA, Los Angeles, CA, 'Radiation Oncology, UCLA, Los Angeles, CA and 'Molecular Toxicology Program, UCLA, Los Angeles, CA.

#1671

**Poster Board Number ........................................653**

REPAIR OF RADIATION INDUCED DNA STRAND BREAKS IN P53 DEFICIENT AND WILD-TYPE MOUSE HEMATOPOIETIC STEM CELLS IS STRAIN DEPENDENT. J. E. French and V. I. Parron. Laboratory of Molecular Toxicology, NIEHS, NIH, Research Triangle Park, NC.

**Poster Board Number ........................................654**


#1672

**Poster Board Number ........................................655**

GENOMIC ARCHITECTURE AND INSTABILITY OF HUMAN RIBOSOMAL RNA GENE CLUSTERS. D. M. Stults1,4, M. W. Killen1,2, H. H. Pierce3 and A. J. Pierce2,4,1. 'Grad Ctr for Toxicology, University of Kentucky, Lexington, KY, 2Microbiology, Immunology, and Molecular Genetics, University of Kentucky, Lexington, KY, 3Department of Internal Medicine, University of Kentucky, Lexington, KY and 4Markey Cancer Center, University of Kentucky, Lexington, KY. Sponsor: M. Vore.

#1673

**Poster Board Number ........................................656**

FORMALDEHYDE INDUCES TOXICITY VIA A P53-DEPENDENT SIGNALING PATHWAY. H. L. Menard, M. F. Reynolds and A. Zhiltovik. Pathology and Laboratory Medicine, Brown University, Providence, RI.

#1674

**Poster Board Number ........................................657**

TOXIC ACTIVITIES IN WOOD DUST FROM RED OAK. M. Wilson, R. Rando and C. A. Miller. Environmental Health Sciences, Tulane University, New Orleans, LA.

#1675

**Poster Board Number ........................................658**


#1676

**Poster Board Number ........................................659**

CENTROSMAL AMPLIFICATION INDUCED BY ANTIRETROVIRALS COMMONLY USED IN THE THERAPY OF HIV. M. Yu, M. C. Poirier and O. A. Olivero. Carcinogen-DNA Interactions, National Cancer Institute, Bethesda, MD.

#1677

**Poster Board Number ........................................660**

THE END DRAWNS NEAR: TELOMERE SHORTENING INDUCED BY A QUINONE METABOLITE OF PCB3. J. Jacobus1,2. A. Klingelhofer1, L. Robertson2 and G. Ludewig1,2. 'OEH, College of Public Health, Univ of Iowa, Iowa City, IA, 2Interdisciplinary Graduate Program in Human Toxicology, Univ of Iowa, Iowa City, IA and 3Department of Microbiology, Univ of Iowa, Iowa City, IA.

#1678

**Poster Board Number ........................................661**

GENOTOXICITY OF PCB3 METABOLITES IN VITRO – WHICH ONE IS THE BAD GUY? S. M. Flor and G. Ludewig. Occupational and Environmental Health, University of Iowa, Iowa City, IA.

up-to-date information at www.toxicology.org
Program Description (Continued)

Abstract #

#1680

Poster Board Number ........................................662 INVESTIGATING GAMMA-H2AX EXPRESSION AFTER ACUTE AND IN UTERO BENZENE EXPOSURE. A. Lau1 and L. M. Winn1,2. 1Pharmacology and Toxicology, Queen’s University, Kingston, ON, Canada and 2School of Environmental Studies, Queen’s University, Kingston, ON, Canada.

#1681

Poster Board Number ........................................701 MUTAGENIC EVALUATION OF THE AZO DYE DISPERSY ORANGE-I AND DETERMINATION OF THE MECHANISM OF DNA DAMAGE. D. P. Oliveira1, E. A. Ferraz1, F. D. Chequer1, D. J. Dotta1 and M. B. Zanoni2. 1Clinical, Toxicological and Bromatological analysis, University of São Paulo, Ribeirão Preto, São Paulo, Brazil and 2Chemical Institute, Universidade Estadual Paulista, Araraquara, São Paulo, Brazil.

#1682


#1683

Poster Board Number ........................................703 EFFECTS OF SIDE STREAM TOBACCO SMOKE ON MICE DEFICIENT IN THE REPAIR OF OXIDATIVE DNA DAMAGE. M. L. Yamamoto1, A. Westbrook1,2, J. H. Miller1,3 and R. Schiestl1,2. 1Pathology, University of California, Los Angeles, Los Angeles, CA, 2Microbiology, Immunology and Molecular Genetics, University of California, Los Angeles, Los Angeles, CA and 3Molecular Toxicology, University of California, Los Angeles, Los Angeles, CA.

#1684

Poster Board Number ........................................704 EFFECT OF CIGARETTE FILTER VENTILATION ON CYTOTOXICITY, MUTAGENICITY, INFLAMMATION AND FREE RADICALS OF SMOKE PARTICULATE MATTER. R. D. Leverette, J. T. Hamm, M. Misra and D. C. Middleton. A. W. Spears Research Center, Lorillard Tobacco Company, Greensboro, NC.

#1685


#1686

Program Description  (Continued)

Abstract #

Wednesday Morning, March 19
11:00 AM to 12:00 NOON
Exhibit Hall 4C-3

EXHIBITOR HOSTED SESSION: MICROCT BASED VIRTUAL HISTOLOGY™ FOR SMALL ANIMAL IMAGING

Presented by: Numira Biosciences

Numira Biosciences presents Virtual Histology™, a microCT based methodology allowing high resolution 3D visualization of soft tissue and skeletal features for simultaneous, nondestructive quantitative analysis. The sensitivity and specificity of Virtual Histology™ enables accurate detection and assessment of both gross and subtle malformations in a wide range of animal models and disease conditions.

Wednesday Morning, March 19
11:00 AM to 12:00 NOON
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: UTILITY OF HEMATOPOIETIC COLONY FORMING CELL (CFC) ASSAYS IN DRUG DEVELOPMENT

Presented by: StemCell Technologies, Inc.

CFC assays are robust in vitro assays used to detect hematopoietic progenitor cells. Using primary cell sources, these clonal assays offer a more biologically relevant alternative to many in vitro screening assays. This talk outlines how CFC assays can be utilized to learn how compounds stimulate or inhibit hematopoietic cells.

Wednesday Afternoon, March 19
12:00 noon to 1:30 PM
Sheraton Willow Room

SPECIALTY SECTION MEETING/LUNCHEON: COMPARATIVE AND VETERINARY

Wednesday Afternoon, March 19
12:00 NOON to 1:20 PM
Ballroom 6B

MEET THE DIRECTORS: A CONVERSATION WITH THE DIRECTORS: THE NIEHS STRATEGIC PLAN

Chairperson: Cheryl Lyn Walker, University of Texas MD Anderson Cancer Center, Smithville, TX

The Meet the Director program is a special 80 minute session that provides an opportunity for the leaders of major federal agencies to engage in a panel discussion of emerging trends in toxicology research and its funding. The session will be a particularly valuable opportunity to update our members on the future directions of the Institute and NTP. There will be a strong emphasis on change of direction and new initiatives that may impact the practice of toxicology in the near and long term. Speakers will identify opportunities where non-agency toxicologists may be able to participate in initiatives of their agencies, and will answer questions of attendees.

Cheryl Lyn Walker, University of Texas MD Anderson Cancer Center, Smithville, TX

Samuel H. Wilson, Director, National Institute of Environmental Health Sciences and National Toxicology Program, Research Triangle Park, NC

William Suk, Deputy Director, National Institute of Environmental Health Sciences and National Toxicology Program, Research Triangle Park, NC

Dennis Lang, Director, Division of Extramural Research and Training (NIEHS), Research Triangle Park, NC
### Program Description (Continued)

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<td><strong>Wednesday Afternoon, March 19</strong>&lt;br&gt;12:00 NOON to 1:20 PM&lt;br&gt;South Lobby, Level 4</td>
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<td><strong>SOAPBOX SESSION</strong></td>
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<td><strong>Chairpersons:</strong> Harvey Clewell, John Morris, and Hollie Swanson</td>
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<td>Each speaker will be allowed to address the audience for up to 10 minutes on a topic they have submitted in advance. Topics can reflect either an area of continuing concern or an issue that has arisen during the meeting, and are expected to be novel, controversial, contrary and/or unpopular. No projector or computer slide capability will be provided, but speakers can hold up a poster as a visual aid if desired. After each speaker, the audience will have up to five minutes to challenge or support the speaker with questions or comments.</td>
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<td><strong>Wednesday Afternoon, March 19</strong>&lt;br&gt;12:00 noon to 1:20 pM&lt;br&gt;Room 615</td>
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<td><strong>CAREER DEVELOPMENT</strong></td>
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<td><strong>INFORMATIONAL SESSION: MENTORING 101—HOW TO MENTOR, AND HOW TO BE MENTORED</strong></td>
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<td><strong>Chairpersons:</strong> Carol Auletta, Huntingdon Life Sciences, East Millstone, NJ and Rae Benedict, University of Maryland, Solomons, MD.</td>
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<td><strong>Endorsed by:</strong></td>
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| Career Resource and Development Committee  
Education Committee  
Student Advisory Council  
Women in Toxicology Special Interest Group |  |
| A mentor is a teacher or trusted counselor who may play a large role in how satisfied a student or colleague is with his/her studies or career. Some individuals are natural mentors and excel at this activity. However, for many, mentoring skills need to be developed. This session will explore this issue and address such questions as: What makes a successful mentor? How does a mentor exhibit the empathy, understanding and trustworthiness required to form a positive connection? How does a mentor acquire those characteristics? Does a mentor know how to listen to goals, help the mentee to clarify and understand them and provide appropriate resources or contacts to facilitate career advancement? This session is intended for both those scientists seeking to improve their mentoring skills and those who want to learn more about the potential benefits of receiving mentoring. The ideas fostered through this session will positively impact the expanding mentoring activity of the Society by providing basic advice on mentoring relationships. |  |

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<td><strong>Wednesday Afternoon, March 19</strong>&lt;br&gt;12:15 pM to 1:15 pM&lt;br&gt;Exhibit Hall 4C-3</td>
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<tr>
<td><strong>EXHIBITOR HOSTED SESSION: GTOX FLOW KIT: NO-WASH, ROOM-TEMPERATURE, FULLY AUTOMATED FLOW CYTOMETRIC DETECTION OF MURINE PERIPHERAL BLOOD MICRONUCLEATED ERYTHROCYTES</strong></td>
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<td><strong>Presented by:</strong> Beckman Coulter, Inc.</td>
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<td>Beckman Coulter has developed a no-wash, room temperature, and fully automated murine peripheral blood flow cytometric micronuclei detection application that yields first results in less than 2 hours. Codebar sample identification enables automatic data processing and comparison to existing flow cytometry tests yields extremely high correlation coefficients (R2 &gt; 0.9).</td>
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<td><strong>Wednesday Afternoon, March 19</strong>&lt;br&gt;12:15 pM to 1:15 pM&lt;br&gt;Exhibit Hall 4C-4</td>
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<tr>
<td><strong>EXHIBITOR HOSTED SESSION: OCULAR DRUG DEVELOPMENT SELECTED PRECLINICAL TOPICS—PHARMACOKINETIC BARRIERS TO OCULAR DRUG SAFETY AND CONSIDERATIONS IN SPECIES SELECTION FOR SAFETY STUDIES</strong></td>
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<td><strong>Presented by:</strong> Covance</td>
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<tr>
<td>Pharmaceutical companies are increasingly looking at ocular diseases as opportunities for new drug development or to expand the indications for their existing drugs. However, many challenges confront those responsible for designing the programs to support these developmental efforts. Included in these challenges is a thorough understanding of the pharmacokinetic barriers to ocular drug efficacy and species considerations for efficacy and safety studies.</td>
<td></td>
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#1690<br>**12:00**<br>MENTORING 101—HOW TO MENTOR, HOW TO BE MENTORED. C. S. Auletta and R. Benedict. †Huntingdon Life Sciences, East Millstone, NJ and ‡National Academy of Sciences, Washington, DC.  
**12:20**<br>ENTERING MENTORING OR HOW I BECAME A MENTOR BY DEFAULT. Jim Gentile
Program Description (Continued)

Abstract #

Wednesday Afternoon, March 19
1:00 PM to 4:30 PM
Exhibit Hall

DEVELOPMENTAL BASIS OF DISEASE

POSTER SESSION: DEVELOPMENTAL NEUROTOXICITY

Chairperson(s): Joseph Breier, University of North Carolina, Chapel Hill, NC.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

Poster Board Number #1691

Poster Board Number #1692

Poster Board Number #1693

Poster Board Number #1694

Poster Board Number #1695

Poster Board Number #1696

Poster Board Number #1697

Poster Board Number #1698

Poster Board Number #1699

Poster Board Number #1700

Poster Board Number #1701

THE PROTECTIVE EFFECT OF L-CARNITINE ON PHENCYCLIDINE-
INDUCED CORTICAL APOPTOSIS IN THE DEVELOPING RAT: X. Zou1, S. Y. Bector, 1, N. Sadovova1, S. Ferguson1, M. G. Paule1, W. Slikker1 and C. Wang1. Division of Neurotoxicology, National Center for Toxicological Research, Jefferson, AR and Toxicologic Pathology Associates, National Center for Toxicological Research, Jefferson, AR.


EVALUATION OF HUMAN NEURAL PROGENITOR CELLS FOR DEVELOPMENTAL NEUROTOXICITY SCREENING: TIME COURSE OF EFFECTS ON CELL PROLIFERATION AND VIABILITY, J. M. Breier1,2 and T. J. Shafer3. 1Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC and 2Neurotoxicology, U.S. EPA, RTP, NC.


EFFECTS OF PRENATAL EXPOSURE TO 1-BROMOPROPAINE ON NEURONAL EXCITABILITY IN THE HIPPOCAMPUSS OF OFFSPRING, Y. Fuet1, T. Ishida1, S. Ueno1, Y. Yoshida1 and H. Horis1. 1Environmental Management, School of Health Sciences, University of Occupational and Environmental Health, Kitakyushu, Japan, 2Pharmaco, School of Medicine, University of Occupational and Environmental Health, Kitakyushu, Japan and 3Immunology, School of Medicine, University of Occupational and Environmental Health, Kitakyushu, Japan. Sponsor: N. Kusumaga.

#1702  
**Abstract #**  
**Poster Board Number** ...............................112  
**Program Description (Continued)**  
**#1702**  
**Poster Board Number** ...............................112  

#1703  
**Poster Board Number** ...............................113  
**DEVELOPMENTAL EXPOSURE TO PERCHLORATE ALTERS SYNAPTIC TRANSMISSION IN HIPPOCAMPUS OF THE ADULT RAT.** M. E. Gilbert1 and L. Sui2.  

#1704  
**Poster Board Number** ...............................114  
**THE ROLE OF N-METHYL-D-ASPARTATE RECEPTORS IN POLYCHLORINATED BIPHENYL-MEDIATED NEUROTOXICITY.** N. Leopold and C. Laurie.  
Community Health, University of Northern British Columbia, Prince George, BC, Canada.

#1705  
**Poster Board Number** ...............................115  
**POLYCHLORINATED BIPHENYLS (PCBs) INFLUENCE DENDRITIC GROWTH IN CULTURED HIPPOCAMPAL NEURONS VIA RYANODINE RECEPTOR (RYR)-DEPENDENT ACTIVATION OF CAM KINASE I. V. A. Ledoux1, G. A. Wayman2, I. N. Pessah3 and P. J. Lein4.  
1CROET, Oregon Health & Science University, Portland, OR, 2VCAPP, Washington State University, Pullman, WA and 3Department of Anatomy I, Showa University Shool of Medicine, Tokyo, Japan.

#1706  
**Poster Board Number** ...............................116  
**INDUCTION OF NEUROTOXICITY IN FETAL BRAIN AFTER PRENATAL EXPOSURE TO VALPROATE.** M. Kawagata1, T. Ogawa2, S. Shioda3 and T. Nagata1.  
1Toxicology, Hatano Research Institute, Hadano, Japan and 2,3Department of Anatomy I, Showa University Shool of Medicine, Tokyo, Japan.

#1707  
**Poster Board Number** ...............................117  
**IN UTERO AND LACTATIONAL EXPOSURE TO A LOW DOSE OF TCDD OR TBDD PERTURBS PAIRED ASSOCIATIVE LEARNING OF MALE RAT OFFSPRING.** T. Endo, M. Kakeyama and C. Tohyama.  
Division of Environmental Health Sciences, Center for Disease Biology and Integrative Medicine(CDBIM), Graduate School of Medicine, The University of Tokyo, Bunkyo-ku, Tokyo, Japan.

#1708  
**Poster Board Number** ...............................118  
Environmetal Toxicology, Uppsala University, Uppsala, Sweden.

#1709  
**Abstract #**  
**Poster Board Number** ...............................119  
**EXPRESSION AND FUNCTIONAL CHARACTERIZATION OF THE ORGANIC CATION TRANSPORTER-3 IN MOUSE ASTROCYTES.** J. Panza1, R. Ara2, N. Ballatori3 and K. Tieu1,2.  
1Environmental Medicine, University of Rochester, Rochester, NY and 2Center for Aging and Development, University of Rochester, Rochester, NY.

**Poster Board Number** ...............................120  
**PERFLUOROCTANESULFONATE DEVELOPMENTAL NEUROTOXICITY STUDY IN RATS.** D. J. Ehresman1, A. T. Eveland2, J. D. Zatzow3, J. A. Bjork4, D. G. Stump5, S. Chang6, K. B. Wallace7 and J. L. Butenko8.  
1SM Company, St. Paul, MN, 2Pace Analytical Services, Inc., Minneapolis, MN, 3University of Minnesota, Duluth, MN and 4WIL Research, Ashland, OH.

**Poster Board Number** ...............................121  
**BISPHENOL-A IS RELEASED FROM POLYCARBONATE DRINKING BOTTLES AND IMIMICS THE NEUROTOXIC ACTIONS OF ESTROGEN IN DEVELOPING CEREBELLAR NEURONS.** S. M. Belcher, H. H. Le, E. M. Carlson and J. P. Chua.  
Pharmacology, University of Cincinnati, Cincinnati, OH.

**Poster Board Number** ...............................122  
**HEARING IMPAIRMENT FOLLOWING DEVELOPMENTAL EXPOSURE TO PCBs IN A RAT MODEL.** B. E. Powers, J. J. Sable, P. K. Pandya and S. L. Schantz.  
University of Illinois @ U-C, Urbana, IL.

**Poster Board Number** ...............................123  
**RDX PILOT FOR DEVELOPMENTAL NEUROTOXICITY TEST IN RATS.** A. Hess-Ruth, L. Crouse and L. Roszell.  
Directorate of Toxicology, U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD.

**Poster Board Number** ...............................124  
**EFFECTS OF 7-NITROINDAZOLE AND MELATONIN ON KETAMINE-INDUCED NEUROTOXICITY IN POSTNATAL DAY 3 (PND-3) MONKEY FRONTAL VORTICAL CULTURES.** N. Sadovova1, T. Patterson2, X. Zou2, X. Zhang3, J. Hanig4, M. Paule5, S. Alif2, W. Slukker2 and C. Wang1.  
1Toxicologic Pathology Associates, Jefferson, AR, 2Division of Neurotoxicology, National Center for Toxicological Research/FDA, Jefferson, AR and 3Center for Drug Evaluation and Research/FDA, Silver Spring, MD.

**Poster Board Number** ...............................125  
**NEUROTOXICITY OF SOME NEW ANTICONVULSANT N, N'-SUBSTITUTED SPIROHYDANTOINS.** R. A. Stephani1, P. Gatta2 and H. Patel3.  
2Pharmaceutical Sciences, St. John’s University, Jamaica, NY and 3Chemistry, Saint John’s University, Jamaica, NY.
Program Description (Continued)

Abstract #

#1716  
**Poster Board Number** .................................126  
TRANSFORMATION OF DEVELOPMENTAL NEUROTOXICITY DATA INTO STRUCTURE-SEARCHABLE TOXML DATABASE. H. W. Broening1, K. D. Acuff1, K. M. Crofton1, A. S. Fix1, E. Julen1, E. J. Matthews1, J. E. Nash1, A. M. Richard1, S. A. Tozer1 and C. Yang1.  
1Procter & Gamble Company, Cincinnati, OH, 2ORD, U.S. EPA, RTP, NC, 3ILSI Research Foundation, Washington DC, DC, 4CDER OPS ICSAS, U.S. FDA, Silver Spring, MD, MD and 5Leadscope, inc, Columbus, OH.

#1717  
**Poster Board Number** .................................127  
BNP3 INDUCES MITOCNDRIAL DYNSNCTION AND CELL DEATH THROUGH MODULATING ENDOPLASMIC RETICULAR AND MITOCHONDRIAL CA\+ STORES. L. Zhang, L. Li, X. Zhang, H. Leavesley, J. Borowitz and G. Isom. MCMF, Purdue University, West Lafayette, IN.

#1718  
**Poster Board Number** .................................128  
PROTEOMIC ANALYSIS OF PBDE-99 EXPOSED IN VIVO CORTEX AND IN VITRO CORTICAL CELLS. H. Alm1, B. Scholz1, A. Nilsson1, P. E. Andren1, A. Fex-Svenningsen2, L. Dencker1 and M. Stigson1.  
1Pharmaceutical biosciences, Uppsala University, Uppsala, Sweden, 2Department of Neuroscience, Uppsala University, Uppsala, Sweden and 3Laboratory for Medical Mass Spectrometry, Uppsala University, Uppsala, Sweden.

#1719  
**Poster Board Number** .................................129  
METHAMPHETAMINE RESPONSE IS DEPENDENT ON GENOTYPE, AGE, AND INITIAL DOSE. R. L. Good and R. A. Radcliffe.  
Department of Pharmaceutical Sciences, University of Colorado Health Sciences Center, Denver, CO.

#1720  
**Poster Board Number** .................................130  
D-\(3\)-HYDROXYBUTYRATE, A PRODUCT OF THE KETOGENIC DIET, IS NEUROPROTECTIVE IN ANIMAL MODELS OF HUNTINGTON’S DISEASE BY TARGETING BOTH MITOCHONDRIAL AND EPIGENETIC MECHANISMS. M. Blau1, S. Przedborski1 and K. Tieu1.  
1Environmental Medicine, University of Rochester Medical Center, Rochester, NY and 2Neurology, Columbia University, New York.

#1721  
**Poster Board Number** .................................131  

#1722  
**Poster Board Number** .................................132  
Department of Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.

#1723  
**Poster Board Number** .................................133  

#1724  
**Poster Board Number** .................................134  
THE SEQUENTIAL UPREGULATION OF CELL CYCLE GENES AND MASH1 INCREASES THE PROLIFERATION AND DIFFERENTIATION OF LATE-BORN RETINAL PROGENITOR CELLS (RPC) IN GESTATIONALLY LEAD-EXPOSED (GLE) MICE. A. Giddabasappa1, W. Xiao1, B. Xu1, S. Mukherjee1, S. Chaney1, R. Hamilton1, A. Swaroop2 and D. A. Fox1.  
1University of Washington, Seattle, WA and 2University of Michigan, Ann Arbor, MI.

#1725  
**Poster Board Number** .................................135  
NEW NEUROTOXICITY TEST WITH ZEBRAFISH EMBRYOS. J. I. Urrutia1, J. F. Rodriguez2, A. Arias2 and J. Guine4.  
1Canal de Isabel II, Madrid, Spain and 2ZF Biolabs, Tres Cantos, Spain. Sponsor: J. Domingo.

#1726  
**Poster Board Number** .................................136  
EFFECT OF GABA AGONISTS ON KETAMINE-INDUCED NEUROTOXICITY IN PND-3 MONKEY FRONTAL CORTICAL CULTURES. C. Wang1, N. Sadovova2, T. A. Patterson1, X. Zou1, X. Zhang1, J. P. Hanig1, M. G. Paule1 and W. Slikker1.  
1Division of Neurotoxicology, National center for Toxicological Research, Jefferson, AR and 2Toxicologic Pathology Associates, National center for Toxicological research, Jefferson, AR.

#1727  
**Poster Board Number** .................................137  
VOLTAGE-DEPENDENT SODIUM CHANNEL GATING MODIFIER TOXINS PRODUCE SODIUM INFUX IN NEOCORTICAL NEURONS. Z. Cao1, J. George1, W. H. Gerwick2 and T. F. Murray1.  
1Department of Pharmacology, Creighton University School of Medicine, Omaha, NE and 2Center for Marine Biotechnology and Biomedicine, Scripps Institution of Oceanography, San Diego, CA.

#1728  
**Poster Board Number** .................................138  
THE ROLE OF NMDA RECEPTOR SUBUNITS IN PHENCYCLIDINE (PCP)-INDUCED NEURONAL APOPTOSIS IN RATS. M. G. Paule1, N. Sadovova2, X. Zou1, X. Zhang1, W. Slikker1 and C. Wang1.  
Division of Neurotoxicology, National center for Toxicological Research, Jefferson, AR and Toxicologic Pathology Associates, National center for Toxicological Research, Jefferson, AR.

#1729  
**Poster Board Number** .................................139  
DESIGN CONSIDERATIONS AND IMPLICATIONS FOR NEUROBEHAVIORAL DATA. M. J. Beck, M. D. Nemec, D. G. Stump and J. F. Holson. WIL Research Laboratories, LLC, Ashland, OH.
Program Description (Continued)

Abstract #

Wednesday Afternoon, March 19
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: HUMAN BIOMARKERS

Chairperson(s): Wolfgang Dekant, University of Wuerzburg, Wuerzburg, Germany.

Abstract #

Wednesday Afternoon, March 19
1:00 PM–4:30 PM
Exhibit Hall

POSTER SESSION: HUMAN BIOMARKERS

Chairperson(s): Wolfgang Dekant, University of Wuerzburg, Wuerzburg, Germany.

Displayed: 1:00 PM–4:30 PM

Attended: 2:45 PM–4:30 PM

Poster Board Number #1730

OXIDATIVE DNA DAMAGE AND OCCUPATIONAL EXPOSURE TO PAH. H. Kufferlein1, B. Pesch2, B. Muczynski1, H. Hahn1, R. Preuss1, S. Rabstein1, J. Angerer1 and T. Brüning1.

1BGFA, Ruhr-University, Bochum, Germany, 2Friedrich-Alexander University, Erlangen, Germany and ‘BGF, A, St. Augustin, Germany.

#1731

BIOMARKERS OF PAH EXPOSURE AND GENOTOXIC EFFECTS IN HUMAN POPULATIONS. R. A. Lingenfelter1, Z. Naufal1, L. Cizmas1, L. He1, G. Zhou1, T. McDonald1, A. Mekhtiev2, A. Islamzadeh1 and K. Donnelly1.

1TAMU, College Station, TX, 2Institute of Physiology n.a. A.I.Karacev, Baku, Azerbaijan and 3Sungayit Centre For Environmental Rehabilitation, Sungayit, Azerbaijan.

#1732

BIOMONITORING OF EXPOSURE TO POLYCYCLIC AROMATIC HYDROCARBONS IN INDIVIDUALS LIVING NEAR AN ALUMINUM PLANT IN QUEBEC, CANADA. M. Bouchard1,2, L. Normandin2, F. Gagnon2 and T. Claude2.

1Environmental & Occupational Health, Université de Montréal, Montreal, QC, Canada and 2Institut national de santé publique du Québec, Montreal, QC, Canada. Sponsor: K. Kunnan.

#1733

BLOOD URANIUM (U) ISOTOPIC ANALYSIS AS A MEASURE OF DU EXPOSURE IN U.S. SOLDIERS. K. S. Squibb1, T. Todorov1, J. A. Centeno1 and M. A. McDiarmid2.

1University of Maryland School of Medicine, Baltimore, MD and 2Armed Forces Institute of Pathology, Washington, DC.

#1734

HUMAN EXPOSURE TO BISPHENOL A BY BIOMONITORING: METHODS, RESULTS AND ASSESSMENT OF ENVIRONMENTAL EXPOSURES. W. Dekant1 and W. Völkel2.

1Department of Toxicology, University of Würzburg, Würzburg, Germany and ‘Environmental Medicine/ Biomonitoring, Bavarian Health and Food Safety Authority, Munich, Germany.

#1735


Environmental toxicology graduate program, Epople Institute for Research in Cancer and Allied Diseases, UNMC, Omaha, NE.
Program Description (Continued)

Abstract # | Abstract #
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#1743 | #1748
**PROTEOMIC BIOMARKER DISCOVERY BY PARTIAL LEAST SQUARES DISCRIMINANT ANALYSIS.** M. M. Matzke, S. M. Varnum, B. Webb-Robertson, R. D. Smith and J. G. Pounds. Pacific Northwest National Laboratory, Richland, WA.

#1744 | #1749

#1745 | #1750
**BACKGROUND LEVELS OF HYDROGEN CYANIDE IN BREATH.** K. Stumvoll, O. Vantinnen, J. Jakoła, L. Halonen and G. Johanson. Work Environment Toxicology, Karolinska Institute, Stockholm, Sweden and Laboratory of Physical Chemistry, University of Helsinki, Helsinki, Finland.

#1746 | #1751

Wednesday Afternoon, March 19
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: BIOMARKERS: METHODS

Chairperson(s): Gunnar Boysen, University of North Carolina Chapel Hill, Chapel Hill, NC.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

#1747 | #1752
**QUANTIFICATION OF 3-NITROBENZANTHRONE DNA ADDUCTS USING ON-LINE SAMPLE PREPARATION AND HPLC-ELECTROSAY TANDEM MASS SPECTROMETRY.** G. Gamboa da Costa, R. Singh, V. M. Arlt, A. Mirza, M. Richards, T. Takamura-Enya, H. H. Schneiser, P. B. Farmer and D. H. Phillips. Division of Biochemical Toxicology, National Center for Toxicological Research, Jefferson, AR; Cancer Biomarkers and Prevention Group, Biosearch, University of Leicester, Leicester, United Kingdom; Section of Molecular Carcinogenesis, Institute of Cancer Research, Sutton, United Kingdom; Cancer Research U.K. Centre for Cancer Therapeutics, Institute of Cancer Research, Sutton, United Kingdom; Department of Applied Chemistry, Kanagawa Institute of Technology, Atsugi-shi, Japan and Division of Molecular Toxicology, German Cancer Research Center, Heidelberg, Germany. Sponsor: K. Delclos.

#1748 | #1753
**MULTI-ADDUCT ANALYSIS OF GLOBIN FROM RATS AFTER INHALATION EXPOSURE TO 1, 3-BUTADIENE.** N. Bordeear1, N. I. Georgieva1, G. Boysen1, P. B. Upton1, L. Collins1, V. Walker2 and J. A. Swenberg3. ‘Department of Environmental Sciences and Engineering, The University of North Carolina, Chapel Hill, NC and ‘Lovelace Respiratory Research Institute, Albuquerque, NM.

#1749 | #1754

#1750 | #1755
**DEVELOPMENT OF A NEW SYSTEM FOR THE IDENTIFICATION AND CLASSIFICATION OF AMPHETAMINE-DERIVATIVES ABUSER BY LIQUID CHROMATOGRAPHY/TANDEM MASS SPECTROMETRY.** S. Lee, H. Yoo, N. M. Islam, Y. Kim, B. Ko, M. In and D. Kim. ‘Doping control center, Korea Institute of Science and Technology, Seoul, South Korea and ‘Drug Signature Analysis Center, Supreme Prosecutors’ Office, Seoul, South Korea.

#1751 | #1756

#1752 | #1757
**CARBON NANOTUBE-BASED ELECTROCHEMICAL SENSOR FOR CHOLINESTERASE ENZYME ACTIVITY: AN ORGANOPHOSPHORUS INSECTICIDE AND NERVE AGENT EXPOSURE MONITOR.** J. Wang, G. Liu, C. Timchalk and Y. Liu. Pacific Northwest National Laboratory, Richland, WA and ‘North Dakota State University, Fargo, ND.

#1753 | #1758
**QUANTUM-DOTS-BASED ELECTROCHEMICAL IMMUNOASSAY FOR THE CHLORPYRIFOS AND TRICHLORPYR METABOLITE TRICHLOROPYRIDINOL.** G. Liu, S. L. Riechers, C. Timchalk and L. Yuehe. Pacific Northwest National Laboratory, Richland, WA and ‘North Dakota State University, Fargo, ND.

#1754 | #1759
**MOLECULAR DOSIMETRY OF THE VINYL CHLORIDE-INDUCED DNA ADDUCT, 7-OXOETHYLGLUANINE.** E. Mutlu, Y. Jeong, G. Boysen, P. B. Upton, L. Collins, M. D. Stout and J. A. Swenberg. ‘Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, Chapel Hill, NC and ‘Curriculum of Toxicology, University of North Carolina, Chapel Hill, NC.
Abstract #

**#1755**

**Poster Board Number** ..........................**229**

A NOVEL APPROACH FOR ANALYSIS OF N-TERMINAL VALINE ADDUCTS AS BIOMARKERS FOR EXPOSURE TO ALKYLATING COMPOUNDS. G. Boysen, N. I. Georgieva, N. Bordear, T. R. Gadwal and J. A. Swenberg, Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, Chapel Hill, NC.

**#1756**

**Poster Board Number** ..........................**230**


**#1757**

**Poster Board Number** ..........................**231**

QUANTITATION OF SELECTED CONSTITUENTS IN UNDILUTED MAINSTREAM CIGARETTE SMOKE GENERATED BY DIRECT PUMP EXPOSURE SYSTEMS USING UNFILTERED 2R4FS, B. MacIsaac1, D. K. Kobayashi2, D. Hoffman1, J. Gautier1, S. Beushausen7 and Washington, DC. Medicine, St. Louis, MO. Medicine, Washington University School of Medicine, Osaka, Japan. Takami and A. Horinouchi. Development Research WA and 2Division of Pulmonary & Critical Care Medicine, Washington University St. Louis School of Medicine, St. Louis, MO.

**#1758**

**Poster Board Number** ..........................**232**


**#1759**

**Poster Board Number** ..........................**233**

UPLC-ESI-MS/MS QUANTITATION OF CISPLATIN GUANINE INTRASTRAND CROSS LINKS IN OVARIAN CARCINOMA CELL LINES. I. M. Abraham, G. Boysen, E. Mutua, S. G. Chaney and J. A. Swenberg. Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC.

**#1760**

**Poster Board Number** ..........................**234**

MATRIX METALLOPROTEINASE-9 (MMP-9)-MEDIATED EXTRACELLULAR MATRIX REMODELING CAN BE DETECTED USING GRATING COUPLED SURFACE PLASMON RESONANCE IMAGING. D. Donaldson, G. Marasov and M. Lynes, Molecular and Cell Biology, University of Connecticut, Storrs, CT.

**#1761**

**Poster Board Number** ..........................**235**

A TIME AND DOSE RESPONSE METABONOMICS STUDY OF D-SERINE TOXICITY IN RATS. V. V. Reo1, A. E. Neuforth1, W. Couch1, M. L. Raymer2, P. Anderson2, D. Mahle3 and N. J. DeRaso7. Biochem & Mol Biol, Wright State University Dayton, OH, 2Computer Sciences & Eng, Wright State University Dayton, OH and 3AFRL/RHPB, Wright PattersonAFB, Dayton, OH.

Wednesday Afternoon, March 19
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: JUVENILE TOXICITY

Chairperson(s): Bhagavatula Moorthy, Baylor College of Medicine, Houston, TX.

Displayed: 1:00 PM–4:30 PM

Attended: 2:45 PM–4:30 PM

**#1762**

**Poster Board Number** ..........................**236**


**#1763**

**Poster Board Number** ..........................**237**


**#1764**

**Poster Board Number** ..........................**238**

Wednesday Afternoon, March 19
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: RISK ASSESSMENT APPLICATIONS

Chairperson(s): Julie Goodman, Gradient Corporation, Cambridge, MA and Lisa Sweeney, The Sapphire Group, Dayton, OH.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

Poster Board Number #1767

MOUNT SINAI SCHOOL OF MEDICINE, NY, NY, INSPIR, Cuernavaca, Morelos, Mexico, "UNAM, Mexico, Mexico, "UAQ, Queretaro, Mexico, "UJED, Gomez Palacio, Mexico, "INCIN, Mexico, Mexico, "CORNELL UNIVERSITY, NY, NY and "Toxicology, CINVESTAV-IPN, Mexico, Mexico.

Poster Board Number #1768
MASS SPECTROSCOPY, AND NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY ANALYSES OF OXYLIPIDS, LIPIDS, AND AMINO ACIDS IN PLASMA OF NON-HUMAN PRIMATES EXPOSED TO ENVIRONMENTAL TOBACCO SMOKE DURING PERINATAL DEVELOPMENT. C. Hood, J. Liu, S. Data, B. Hammock, O. Fiehn, R. Balhorn and K. Pinkerton.

University of California, Davis, Davis, CA and Lawrence Livermore National Laboratories, Livermore, CA.

Poster Board Number #1769
SUPPRESSION OF PPARα ACTIVITY CAUSES INCREASED Proliferation AND DECREASED NEUTROPHIL ACCUMULATION IN THE LUNGS OF NEWBORN MICE EXPOSED TO >95% O2. L. K. Rogers, T. E. Tipple, L. D. Neel, and S. E. Welty.

PEDIATRICS, The Research Institute at Nationwide Children’s Hospital, Columbus, OH and The Ohio State University, Columbus, OH.

Poster Board Number #1770

SR International, Menlo Park, CA.

Poster Board Number #1771


Poster Board Number #1772


Poster Board Number #1773

REPRODUCTIVE TOXiCOLOGY, Fraunhofer Institute for Toxicology and Experimental Medicine, Hannover, Germany. Sponsor: H. Muhlbe.
Abstract #  

#1780  
Poster Board Number ........................................317  

#1781  
Poster Board Number ........................................318  

#1782  
Poster Board Number ........................................319  
ASSESSING NASAL TISSUE DOSIMETRY OF NAPHTHALENE WITH A HYBRID CFD-PBPK MODEL, J. J. Campbell1, T. R. Sterner1, J. B. Morris2 and H. J. Clewell2, 1Center for Human Health Assessment, The Hamner Institutes for Health Sciences, Research Triangle Park, NC, 2Pharmaceutical Sciences, University of Connecticut, Dayton, CT and 3HIF, Wright-Patterson AFB, OH.

#1783  
Poster Board Number ........................................320  
CHRONIC NONCANCER TOXICITY REFERENCE VALUES FOR USE IN ETHYLBENZENE RISK ASSESSMENTS, L. M. Sweeney1, C. R. Kirman2, M. L. Gargas1 and M. J. Bostan1, 1The Saphire Group, Dayton, OH, 2The Saphire Group, Beachwood, OH and 3Lyndell Chemical Company, Rotterdam, Netherlands.

#1784  
Poster Board Number ........................................321  
MODE OF ACTION (MOA) EVALUATIONS AND DERIVATION OF A CANCER REFERENCE VALUE FOR ETHYLBENZENE, C. Kirman1, L. Sweeney2, J. Bus3 and M. Gargas4, 1The Saphire Group, Beachwood, OH, 2The Saphire Group, Dayton, OH and 3Dow Chemical Company, Midland, MI.

#1785  
Poster Board Number ........................................322  
A WEIGHT OF EVIDENCE METHODOLOGICAL APPROACH FOR DERIVING EVIDENCED-BASED RFS FOR GLUTARALDEHYDE: A CASE STUDY, P. J. Spencer, C. S. Barrow, L. G. McFadden and N. Ball, The Dow Chemical Company, Midland, MI.

#1786  
Poster Board Number ........................................323  
DETERMINATION OF A DICHLOROVOS-SPECIFIC ACUTE INTERSPECIES UNCERTAINTY FACTOR, L. M. Plunkett1, J. MacGregor2, T. Sjare3, S. Youngren4 and A. Manley5. 1Integrative Biostatistics LLC, Houston, TX, 2Toxicology Consulting Services, Arnold, MD, 3TBS Associates, Raleigh, NC, 4The Acta Group, Washington, DC and 5Avamac Chemical Corporation, Commerce, CA.

#1787  
Poster Board Number ........................................324  

#1788  
Poster Board Number ........................................325  
HUMAN SAFETY RISK ASSESSMENT OF A NOVEL POLYMERIC MATERIAL, V. M. Silva, Procter & Gamble, Cincinnati, OH.

Abstract #  

#1789  
Poster Board Number ........................................326  
APPLICATION OF THE 10% MINIMUM ELIGICATION THRESHOLD TO QUANTITATIVE ASSESSMENT OF DERMAL SENSITIZATION RISK TO HEXAVALENT CHROMIUM USING THE REPEAT OPEN APPLICATION TEST IN HUMANS, T. McMahon, J. Chen and J. Liccione, U.S. EPA, Washington, DC.

#1790  
Poster Board Number ........................................327  
RISK ASSESSMENT OF ALLERGIC CONTACT DERMATITIS DUE TO DERMAL EXPOSURES TO HEXAVALENT CHROMIUM, D. Proctor1, S. Su1, J. Gajpal2, J. Fowler1 and D. Morgan1, 1Exponent, Irvine, CA, 2Department of Dermatology, University of Louisville, Louisville, KY, 3FPRL, Springfield, OR and 4Exponent, New York.

#1791  
Poster Board Number ........................................328  
RISK ASSESSMENT FOR ARSENIC ON INDOOR SURFACES, C. A. Williams1 and C. S. Perry2, 1Tetra Tech, Inc., Tallahassee, FL and 2Tetra Tech, Inc., Dallas, TX.

#1792  
Poster Board Number ........................................329  
ASSESSING THE CARCINOGENIC RISK ASSOCIATED WITH THE PRESENCE OF NITRATES AND NITRITES IN DRINKING WATER, S. Chébekoué1, D. Phaneuf2, P. Levallois2, M. Rodriguez3 and R. Tardif4, 1Santé environnementale et santé au travail, Université de Montréal, Montréal, QC, Canada, 2Institut National de Santé Publique du Québec, Québec, QC, Canada, 3Faculté de Médecine Sociale et Prévénitive, Université Laval, Québec, QC, Canada and 4École Supérieure d’Aménagement du Territoire et de Développement Régional, Université Laval, Québec, QC, Canada.

#1793  
Poster Board Number ........................................330  
HEALTH RISK ASSESSMENT OF BISPHENOL A (BPA) IN DRINKING WATER, C. J. McMellant1, G. L. Ball2 and C. Willbute3, 1NSF International, Ann Arbor, MI and 2State of California, Berkeley, CA.

#1794  
Poster Board Number ........................................331  

#1795  
Poster Board Number ........................................332  
A PROTOCOL FOR DETERMINING CLEAN-UP STANDARDS AT SITES CONTAMINATED WITH LOW TOXICITY BARITE (BARIUM SULFATE), T. McGugh1, J. McIntrye2 and E. Higgins3, 1GSI Environmental, Houston, TX and 2Halliburton Energy Services, Houston, TX.

#1796  
Poster Board Number ........................................333  
VAPOR INTRUSION TO INDOOR AIR AT A SITE WITH POLYCYCLIC AROMATIC HYDROCARBONS IN SHALLOW SOIL, T. Turas1, A. LaPierre2, M. Wade3, P. Wong-Yim4, B. Davis1, M. Dalyme3 and J. Boly3, 1Toxic Substances Control, California Environmental Protection Agency, Sacramento, CA and 2Iris Environmental, Oakland, CA.


Microbial Risk Assessment for Recreational Use of Chicago Area Waterways. J. K. Tolson1, M. DeFlaun2, R. Lanoy3, T. C. Granato4, G. Rijuf5, C. Gerba6 and C. Petropoulou7. 1GeoSyntec Consultants, Tampa, FL, 2Neptune and Company, Lakewood, CO, 3State University of New York, Albany, NY, 4University of Massachusetts, Amherst, MA and 5Health Science Resource Integration, Tallahassee, FL.


Chronic Perchloroethylene Exposure in Two Differently Sensitive Groups: A Meta-Analysis. V. A. Benignus1, P. J. O’Callaghan2 and W. K. Boyes3. 1Exponent, Irvine, CA, 2Toxicology & Environmental Research and Consulting, The Dow Chemical Company, Midland, MI and 3University of Arizona, Tucson, AZ.

Health of Cattle and Wildlife Downwind from Gas Facilities: The Western Canada Study. T. L. Guidotti1 and C. Waldner2. 1Env & Oce Health, George Washington University, Washington, DC, 2Western Interprovincial Scientific Studies Association, Calgary, AB, Canada and 3Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada.

Corticosterone Pretreatment Attenuates Neurodegeneration and Blood-Brain Barrier Disruption Following Excitotoxic Damage from Kainic Acid. S. A. Benkovic1, J. P. O’Callaghan2 and D. B. Miller3. 1Env & Occ Health, George Washington University, Washington, DC, 2Toxicology & Environmental Research and Consulting, The Dow Chemical Company, Midland, MI and 3University of Arizona, Tucson, AZ.

Acute Neurotoxicity Study of 1,2-Dichloroethane (Ethylene Dichloride; Edc) Via Inhalation in F344 Rats. A. K. Andrus1, J. A. Hotchkiss2, S. M. Krieger3, K. A. Johnson4 and J. P. Maurissen5. 1Toxicology & Environmental Research and Consulting, The Dow Chemical Company, Midland, MI, and 2Env & Occ Health, George Washington University, Washington, DC, 3Western Interprovincial Scientific Studies Association, Calgary, AB, Canada and 4University of Arizona, Tucson, AZ.


Effect of Acrylonitrile Intoxication on Brain Energy Metabolism. F. W. Benz1 and C. Campian. Pharmacology and Toxicology, University of Louisville Medical School, Louisville, KY. Sponsor: W. Waddell.

Screening the Activation State of Multiple Phosphoproteins Reveals the In Vivo Impact of Stressors on Brain Signaling Pathways Controlling Cellular Structure. D. B. Miller1 and J. P. O’Callaghan2. 1Held, CDC-NIOSH, Morgantown, WV.
Abstract #

#1810  E1CTS OF DIETHYL MALEATE PRECONDITIONING ON THE EXPRESSION OF DNA REPAIR GENES IN MIDDRAIN ELICITED BY OCHRATOXIN-A. V. Sava, R. D. Harbison and J. Sanchez-Ramos.

#1811  E2FFECTS OF 4-HYDROXY-2-NONENAL ON NEUROTTRANSMITTER TRANSPORT AND VESICULAR STORAGE IN RAT STRIATAL SYNAPTOSOMES. R. LoPachin, B. Geohagen and T. Gavin.


#1813  PROTEIN MODIFICATION IN RAT STRIATUM SYNAPTOSOMES AS A RESULT OF THE INHIBITION OF DOPAMINE METABOLISM BY PRODUCTS OF OXIDATIVE STRESS. J. N. Rees, V. Flarang and J. A. Doorrn.

#1814  HUMAN PROSTAGLANDIN H SYNTHASE (iPHS-1) AND iPHS-2-DEPENDENT PROTEIN AND DNA OXIDATION CAUSED BY DOPAMINE, ITS PRECURSOR AND METABOLITES. A. Ramkisson and P. G. Wells.

#1815  ALTERED GABAERGIC NEUROTTRANSMISSION IS ASSOCIATED WITH INCREASED SUSCEPTIBILITY TO NMDA-INDUCED EXCITOTOXICITY IN CYCLOOXYGENASE-2 DEFICIENT MICE. C. D. Toscano, S. Vicini and F. Bosetti.

#1816  PROTEOMIC PROFILING OF PROXIMAL MURINE GIANT AXONOPATHY. D. Tshala-Katumba, V. Monterrosso, R. Kayton, P. Spencer and M. J. sabri.

Abstract #

#1817  EFFECT OF 1-BROMOPROPAINE EXPOSURE ON GENE EXPRESSION OF NEUROTTRANSMITTER RECEPTORS IN RAT. S. Sheik Mohiden, S. Ichihara, F. Liu, K. Furushashi, W. Li and G. Ichihara.

#1818  MEASURES OF MPTP BRAIN DOPAMINE NEUROTOXICITY. E. F. Domino and L. Ni.

#1819  VOODOO WASP TOXINS AND ZOMBIE COCKROACHES. C. Banks and M. E. Adams.

#1820  ACUTE BEHAVIORAL EFFECTS OF INHALED PERCHLOROETHYLENE IN RATS ARE DIRECTLY RELATED TO ITS CONCENTRATION IN THE BRAIN. W. M. Oshiro, Q. T. Krantz, E. M. Kenyon and P. J. Bushnell.

#1821  ACUTE INHALATION OF 2, 4-TRIMETHYLPERBENZ.T ALTERS VISUAL EVOKED POTENTIALS AND SIGNAL DETECTION BEHAVIOR OF RATS. W. K. Boyes, L. L. Degn, M. Bercegeay, W. Oshiro, T. Krantz and P. J. Bushnell.

#1822  CIRCADIAN CONTROL OF THE RAPID DEVELOPMENT OF TOLERANCE OR HYPER-REACTIVITY TO ETHANOL INDUCED SLEEP TIME IN RATS. R. L. Williams and K. F. Soliman.

#1823  TOLERANCE TO ANATOXIN-A AND NICOTINE ON OPERANT BEHAVIOR: A SEARCH FOR MECHANISMS. K. A. Jarema, J. D. Farmer and R. C. Mace,Phail.
# Program Description

Abstract #  

**#1824**  
**Poster Board Number** ..........421  
**USE OF AN ORGANOYTIC CULTURE SYSTEM TO STUDY THE ACTIONS OF MICROGLIA IN THE PRESENCE OF NEURONS EXPRESSING MUTANT HUNTINGTIN PROTEIN FRAGMENTS, A. D. Kraft, G. J. Turmel1, D. C. Lo2 and G. Harry1.  
1National Institute of Environmental Health Sciences, Research Triangle Park, NC and 2Duke University, Durham, NC.**

**#1825**  
**Poster Board Number** ..........422  
1Env & Oec Health, George Washington University, Washington, DC and 2Public Health Sciences, University of Alberta, Edmonton, AB, Canada.**

**#1826**  
**Poster Board Number** ..........423  
**VALIDATION OF NEW PHOTOBEBAM ACTIVITY SYSTEM USING ACRYLAMIDE IN WISTAR RATS, B. S. Trada, P. B. Deshmukh and V. K. Tiwari. Toxicology and Pharmacology, Jai Research Foundation, Vapi, Gujarat, India.**

**#1827**  
**Poster Board Number** ..........424  
**SNC-34 CELLS AS A MODEL OF MOTORNEURON EXCITOTOXICITY, K. Koski1,2, F. Vega1, R. K. Hajela1 and B. Archison1,3.  
1Pharmacology/Toxicology, Michigan State University, East Lansing, MI, 2RISE Program, University of Puerto Rico, Cayey, Cayey, PR and 3College of Veterinary Medicine, Michigan State University, East Lansing, MI.**

**#1828**  
**Poster Board Number** ..........425  
**ESTROGEN INCREASES TRANSTHYRETIN PRODUCTION IN, BUT NOT SECRETION FROM, THE CHOROID PLEXUS, J. S. Crossgrove1 and R. E. Wright2.  
1Raabe College of Pharmacy, Ohio Northern University, Ada, OH and 2Department of Biological and Allied Health Sciences, Ohio Northern University, Ada, OH.**

**#1829**  
**Poster Board Number** ..........426  
**STANDARDISATION OF A QUANTITATIVE METHOD TO ASSESS NEURITE ELONGATION IN CULTURED RAT DORSAL ROOT GANGLIA (DRG), A. Nicoli1, A. Moretto2 and M. Lotfi3.  
1Environmental Medicine and Public Health, University of Padova, Padova, Italy and 2Ocational Medicine, University of Milano, Milano, Italy.**

**#1830**  
**Poster Board Number** ..........427  
Medicinal Chemistry, The University of Wisconsin-Milwaukee, Milwaukee, WI.**

**#1831**  
**Poster Board Number** ..........428  
**NEUROTOXICITY AND NEPHROTOXICITY OF AMPHOTERICIN MONO-METHYL ESTER, O. U. Nnod1, C. P. Schaffner2 and K. R. Reuhl1.  
1pharmacology & toxicology, Rutgers university piscataway NJ, Piscataway, NJ, 2GJPT, Rutgers, Piscataway, NJ and 3Waksman Institute of Microbiology, Rutgers, Piscataway, NJ.**

**#1832**  
**Poster Board Number** ..........429  
**ASTOROGLIAL DYSREGULATION OF VEGF EXPRESSION AFTER LPS TREATMENT IN DJ-1 KNOCKOUTS, T. Katoh1, A. K. Ashley2, M. E. Legare1 and W. H. Hanneman1,2.  
1Environmental and Radiological Health Sciences, Colorado State University, Fort Collins, CO and 2Cell and Molecular Biology, Colorado State University, Fort Collins, CO.**

**#1833**  
**Poster Board Number** ..........430  
**RELEASE OF ENDOGENOUS DOPAMINE NEUROTOXIN 3, 4-DIHYDOXYPHENYLACETALDEHYDE (DOPAL) IN METHAMPETAMINE (METH) TREATED PC6-3 CELLS, Y. Insmaa, V. Florang and J. Doorn.  
University of Iowa, Iowa City, IA.**

**#1834**  
**Poster Board Number** ..........431  
**IN VITRO MITOCONDRIAL PROTEIN CARBOYLATION IN D1TNC1 CELLS EXPOSED TO 1, 3-DINITROBENZENE, S. R. Steiner and M. Philbert.  
University of Michigan School of Public Health, Ann Arbor, MI.**

**#1835**  
**Poster Board Number** ..........432  
Medicinal and Natural Products Chemistry, The University of Iowa, Iowa City, IA.**

**#1836**  
**Poster Board Number** ..........433  
**GENE EXPRESS PROFILING MULTIPLEX QUANTITATIVE PCR ON AMPLIFIED RNA, J. B. Eells.  
Department of Basic Sciences, Mississippi State University, Mississippi State, MS. Sponsor: M. Ross.**

**#1837**  
**Poster Board Number** ..........434  
**NEAR-INFRARED LIGHT TREATMENT ATTENUATES THE TOXIC EFFECTS OF MPTP IN A RODENT MODEL OF PARKINSON'S DISEASE, K. D. DeSmet1, E. Buchmann2, M. Henry1,2, H. T. Whelan1,2 and J. T. Eells1,2.  
Clinical Laboratory Sciences, University of Wisconsin-Milwaukee, Milwaukee, WI and 1Neurology, Medical College of Wisconsin, Milwaukee, WI.**

**#1838**  
**Poster Board Number** ..........435  

**#1839**  
**Poster Board Number** ..........436  
**DELAYED SYSTEMIC ADMINISTRATION OF A NEW-GENERATION FATTY ACID AMIDE HYDROLASE INHIBITOR IS NEUROPROTECTIVE AGAINST EXCITOTOXIC SEIZURES, FUNCTIONAL COMPROMISE, AND BRAIN DAMAGE, B. A. Bahr1,2, D. A. Karanian1,2, S. P. Nikas1, J. Zhao3, J. Hwang4, R. Kwos1, A. Colon4, J. E. Manautou1 and A. Makriyannis1.  
Department of Pharmaceutical Sciences and the Neurosciences Program, University of Connecticut, Storrs, CT and 3Center for Drug Discovery, Northeastern University, Boston, MA.**
#1840  
**Poster Board Number** ......................... 437  

#1841  
**Poster Board Number** ......................... 438  

#1842  
**Poster Board Number** ......................... 439  
MITOCHONDRIAL RESPIRATORY INHIBITORS SENSITIZE ORGANOTYPIC HIPPOCAMPAL-SLICE CULTURES TO EXCITOTOXICITY-INDUCED CELL DEATH. R. A. Schuh,1,2 T. Krustian,1 C. Matthews,1,2 and P. Fishman.1,2 1Research, VA Maryland Health Care System, Baltimore, MD, 2Neurology, University of Maryland School of Medicine, Baltimore, MD and 3Anesthesiology, University of Maryland School of Medicine, Maryland.

#1843  
**Poster Board Number** ......................... 440  
DISTRIBUTION OF 14C-PARAQUAT IN BRAIN AND BODY TISSUES OF C57BL/6 MICE USING PBPK MODELING AND AUTORADIOGRAPHY TOWARD AN ANALYSIS OF PARKINSON’S DISEASE-PATTERNED NEURODEGENERATION. L. McIntosh1, A. A. Li2 and G. L. Kedderis2. 1Exponent, Inc., Menlo Park, CA, 2Exponent, Inc., Oakland, CA and 3Consultant, Chapel Hill, NC.

Wednesday Afternoon, March 19
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: METAL NEUROTOXICOLOGY: EXPERIMENTAL MODELS AND MECHANISMS

Chairperson(s): Diana Echeverria, Battelle CPHRE, Seattle, WA and Hassan El-Fawal, Mercy College, Dobbs Ferry, NY.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

#1844  
**Poster Board Number** ......................... 501  
METHYLMERCURY (MEH) TOXICITY IN POSTNATAL RAT HIPPOCAMPUS IS ASSOCIATED WITH ACTIVATION OF THE MITOCHONDRIAL APOTOTIC PATHWAY. K. B. Sokolowski1, A. Falluél-Morel2 and E. Dicicco-Bloom.1 Joint Graduate Program in Toxicology, Rutgers, Piscataway, NJ and 2Neuroscience and Cell Biology, Robert Wood Johnson Medical School, Piscataway, NJ.

#1845  
**Poster Board Number** ......................... 502  
METHYLMERCURY INDUCES ALZHEIMER’S DISEASE-LIKE TAU PHOSPHORYLATION IN MOUSE BRAIN. M. Fujimura1, M. Sawada1 and A. Takashima2. 1Basic Medical Sciences, National Institute for Minamata Disease, Minamata, Kumamoto, Japan and 2Lab for Alzheimer’s Disease, RIKEN Brain Science Institute, Wako, Saitama, Japan. Sponsor: A. Nagano.
Program Description (Continued)

Abstract #

#1853  Poster Board Number 510

**COMPARATIVE GENE EXPRESSION ANALYSIS IN C57 MOUSE EMBRYOS UNDERGOING NEURLATION EXPOSED TO CADMIUM AND MERCURY.** J. F. Robinson, X. Yu, S. Hong, R. Beyer and E. M. Faustman. Environmental and Occupational Health Sciences, University of Washington, Seattle, WA.

#1854  Poster Board Number 511

**TEMPORAL PATTERN OF INCREASED OXIDATIVE DNA DAMAGE IN MURINE FETAL BRAIN AFTER IN UTERO EXPOSURE TO MERCURY.** K. Lam1, G. P. McCallum2 and P. G. Wells1,2. 1Pharmacology and Toxicology, University of Toronto, Toronto, ON, Canada and 2Pharmacological Sciences, University of Toronto, Toronto, ON, Canada.

#1855  Poster Board Number 512

**MERCURY NEUROTOXICITY: ANALYSIS IN NOVEL GENETIC MODELS AND PRIMARY CULTURES.** R. M. Nasi1, T. Henry2, K. Grimes3 and K. Braun1. 1Department of Pediatrics, Vanderbilt University Medical Center, Nashville, TN, 2Center for Environmental Health Sciences, University of Michigan, Ann Arbor, MI, 3Department of Zoology/Developmental Neurobiology, Otto von Guericke University, Magdeburg, Germany.

#1856  Poster Board Number 513

**MATERIAL MERCURY FROM A WILD-CAUGHT WALLEYE DIET INDUCES DEVELOPMENTAL ABNORMALITIES IN ZEBRAFISH.** Q. Liu1, M. L. Rise1,2, D. Weber1, M. Dellinger1, J. Dellinger1, S. L. Gerstenberger1 and M. J. Carvun1. 1University of Wisconsin-Milwaukee, Milwaukee, WI, 2Memorial University of Newfoundland, St. John’s, NF, Canada and 3University of Nevada Las Vegas, Las Vegas, NV.

#1857  Poster Board Number 514

**NEUROCHEMICAL BIOMARKERS TO ASSESS THE RISKS OF MERCURY IN NATURE USING COMPARATIVE AND INTEGRATIVE APPROACHES.** N. Basu. Department of Environmental Health Sciences, University of Michigan, Ann Arbor, MI.

#1858  Poster Board Number 515

**NEUROCHEMICAL EFFECTS OF MERCURY ON GLUTAMATE AND GABA RECEPTORS – FROM THE BENCH TO THE FIELD.** L. Chan1, T. Scheuhammer1 and N. Basu1. 1Department of Environmental Health Sciences, University of Michigan, Ann Arbor, MI, 2National Wildlife Research Center, Ottawa, ON, Canada and 3University of Northern British Columbia, Prince George, BC, Canada.

#1859  Poster Board Number 516

**DENTAL MERCURY EXPOSURE, 5-HTTLPR STATUS, AND ASSOCIATIONS WITH SELF-REPORTED SYMPTOMS.** N. J. Heyer1, D. Echeverria2, J. S. Woods2, F. M. Farin1 and T. L. F. Center for Public Health Research and Evaluation, Battelle CPHRE, Seattle, WA and 2Department of Environmental Health, University of Washington, Seattle, WA.

#1860  Poster Board Number 517

**MANGANESE EXPOSURE INDUCES ALZHEIMER’S-LIKE PATHOLOGY IN THE FRONTAL CORTEX OF NON-HUMAN PRIMATES.** T. Verina1, J. S. Schneider2 and T. R. Guiliarte1. 1Environmental Health Sciences, Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD and 2Pathology, Anatomy and Cell Biology, Thomas Jefferson University, Philadelphia, PA.

#1861  Poster Board Number 518

**NEUROIMAGING OF DOPAMINERGIC SYNAPSES IN THE STRIATUM OF MANGANESE-EXPOSED NON-HUMAN PRIMATES.** J. L. McGlothlin1, N. C. Burton1, Y. Zhou1, M. Alexander1, D. F. Wong2, L. D. Phar1, M. E. Griswol1, T. Syversen1, J. S. Schneider1 and T. R. Giula1. 1Env Hlth Sci, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, 2Radiology, Johns Hopkins Hospital, Baltimore, MD, 3Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, 4Neuroscience, Norwegian Univ Sciences & Technol, Trondheim, Norway and 5Pathol, Anat, & Cell Bio, Thomas Jefferson University, Philadelphia, PA.

#1862  Poster Board Number 519

**NEUROPATHOLOGICAL ANALYSIS OF GLIAL INFLAMMATORY RESPONSES TO MANGANESE-INDUCED NEUROTOXICITY IN DEVELOPING MICE.** K. A. Sullivan1, K. Streidel1, J. A. Moreno1,2,3 and R. B. Tjalkens4,5. 1Toxicology Section, Colorado State University, Fort Collins, CO, 2Cellular and Molecular Biology, Colorado State University, Fort Collins, CO and 3Molecular, Cellular, and Integrative Neuroscience, Colorado State University, Fort Collins, CO.

#1863  Poster Board Number 520

**MANGANESE EXPOSURE ALTERS GABA AND NOREPINEPHRINE TRANSPORTER PROTEIN EXPRESSION IN THE DEVELOPING RAT BRAIN.** J. Anderson and K. Erikson. Nutrition, UNC-Greensboro, Greensboro, NC.

#1864  Poster Board Number 521

**IRON CLEARANCE IN THE CEREBROSPINAL (CSF) OF RAT BRAINS AS AFFECTED BY MANGANESE EXPOSURE BY VENTRICULO-CISTERNAL BRAIN PERFUSION.** X. Wang1, Y. Zhang2 and W. Zheng3. 1Laboratory of Pharmacology and Chemistry, National Institute of Environmental Health Sciences, Research Triangle Park, NC and 2Health Sciences, Purdue University, West Lafayette, IN.

#1865  Poster Board Number 522

**MANGANESE DISRUPTION OF MITOCHONDRIAL RESPIRATION IN THE BIVALVE CRASSOSTRAS VIRGINICA AND ITS PROTECTION BY P-AMINOSALICYLIC ACID.** K. Davis1, C. Saddler1, M. A. Carroll1 and E. J. Catapan1. 1Biology, Medgar Evers College, Brooklyn, NY and 2Biology, Kingsborough Community College, Brooklyn, NY. Sponsor: C. Miller.
Panel Description (Continued)

Poster Board Number ................. 523
#1866

Poster Board Number ................. 524
#1867
**ENHANCED PERIPHERAL AND CENTRAL INFLAMMATION IN MANGANESE EXPOSED MICE THAT WERE CHALLENGED WITH LPS.** R. B. Pringle1, D. M. Budreickis1, D. Milatovic1, M. Aschner1, L. Bennett1 and N. M. Filipov1. CEHS, Basic Sciences, Mississippi State University, Mississippi State, MS. 1Pathobiology and Population Medicine, Mississippi State University, Mississippi State, MS and Department of Pediatrics, Vanderbilt University Medical Center, Nashville, TN.

Poster Board Number ................. 525
#1868
**ALZHEIMER’S DISEASE BIOMARKER, AMYLOID-BETA, IN THE BLOOD AND BRAIN OF DEVELOPMENTALLY LEAD EXPOSED MICE.** R. S. Dosumu and N. H. Zawia. Biomedical and Pharmaceutical Sciences, University of Rhode Island, Kingston, RI.

Poster Board Number ................. 526
#1869
**LIFETIME EXPOSURE TO LEAD AND STRESS: CONSEQUENCES FOR THE IPA AXIS AND BRAIN NEUROCHEMISTRY.** D. A. Cory-Slechta1, A. Rossi-George2, M. B. Virgolini2, M. Thiruchelvan1, D. Weston1 and R. Lisek2. 1Environmental Medicine, University of Rochester School of Medicine and Dentistry, Rochester, NY and 2EOHSI, UMDNJ and Rutgers, Piscataway, NJ.

Poster Board Number ................. 527
#1870
**LEAD (PbT) EXPOSURE ALTERS DEVELOPING GLUTAMATERIC SYNAPSES IN CULTURED HIPPOCAMPAL NEURONS.** A. P. Neal and T. R. Guilarte. Environmental Health Sciences, Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD.

Poster Board Number ................. 528
#1871
**HIPPOCAMPAL NEUROGENESIS AND BDNF FUNCTION ARE IMPAIRED BY CHRONIC LEAD EXPOSURE.** S. M. Lasley1, J. H. Goodman1, K. R. Vietti2, P. W. Wang1, L. C. Wang1, M. Nudel2 and M. E. Gillespie1. 1Cancer Biology & Pharmacology, University of Illinois College of Medicine, Peoria, IL, 2CNRRR, Helen Hayes Hosp., W. Haven, NY, 3Physics, Bradley U., Peoria, IL and 4Neurotoxicology, U S EPA, RTP, NC.

Poster Board Number ................. 529
#1872
**IDENTIFICATION AND EVALUATION OF CHRONIC LOW-LEVEL LEAD TOXICITY BIOMARKERS IN NEONATAL RATS.** R. U. Parikh and M. E. Gillespie. College of Pharmacy and Allied Health Professions, St. John’s University, Queens, NY.

Poster Board Number ................. 530
#1873
**CHRONIC LOW-LEVEL LEAD ACETATE (PBAc2) EXPOSURE DISRUPTS LOCOMOTOR ACTIVITY AND THYROID HORMONE LEVELS IN THE MALE ALBINO RAT (PRELIMINARY RESULTS).** V. M. Rodrigues1, L. Carrizales1, P. Villalobos1, M. Mendoza1, C. Valverde2 and M. Giordano2. 1Behavioral and Cognitive Neurobiology, INB-UNAM, Juriquilla, Queretaro, Mexico, 2Cellular and Molecular Neurobiology, INB-UNAM, Juriquilla, Queretaro, Mexico and 3Environmental Toxicology, UASLP, San Luis Potosi, Mexico.

Poster Board Number ................. 531
#1874
**LOW-LEVEL HUMAN EQUIVALENT GESTATIONAL LEAD EXPOSURE PRODUCES GENDER-SPECIFIC MOTOR AND COORDINATION ABNORMALITIES AND LATE-ONSET OBESITY IN YEAR-OLD MICE.** L. Leasure1, A. Gudhabahupee1, S. Chaney2, J. E. Johnson1, K. Pothakos1, Y. S. Lau1 and D. A. Fox1. 1University of Houston, Houston, TX and 2University of Houston-Downtown, Houston, TX.

Poster Board Number ................. 532
#1875
**OXIDATIVE STRESS (OS) AND NEUROTOXICITY: ANTIBODIES IN RATS EXPOSED TO ORGANO-METAL ELECTROPHILES.** S. M. Lasley1, A. Fox1, M. A. Carroll1, A. Rossi-George2, M. B. Virgolini2, N. M. Filipov1, C. Wang1, M. Nudel2 and M. E. Gillespie1. 1Cancer Biology & Pharmacology, University of Illinois College of Medicine, Peoria, IL, 2EOHSI, UMDNJ and Rutgers, Piscataway, NJ.

Poster Board Number ................. 533
#1876
**MODULATION OF CADMIUM-INDUCED OLFACTORY DAMAGE BY CALCIUM IN LARVAL ZEBRAFISH.** C. Matz and P. Krone. Toxicology Group & Anatomy and Cell Biology, University of Saskatchewan, Saskatoon, SK, Canada.

Poster Board Number ................. 534
#1877
**ACUTE SODIUM TUNGSTATE INHALATION IS NOT ASSOCIATED WITH DIRECT OLFACTORY TRANSPORT OF TUNGSTEN (188W) TO THE RAT BRAIN.** A. O. Olabisi1, P. M. Radcliffe1, D. J. Wagner1, B. A. Wong2, M. F. Sirue1, K. M. Attard1, E. Tewksbury2, P. G. Gunasekar1, G. D. Chapman1 and D. C. Dormann1. 1Environmental Health Effect Laboratory [EHEL], Naval Health Research Center, Wright Patterson Air Force Base, OH, 2CIIT, The Hamner Institutes, Research Triangle Park, NC and 3College of Veterinary Medicine, North Carolina State University, Raleigh, NC.

Poster Board Number ................. 535
#1878
**NICKEL (NI) NANOPARTICLE (NP)-INDUCED OXIDATIVE STRESS (OS) AND NEUROANTIBODIES.** H. A. El-Fawal1, H. A. El-Fawal2, A. G. Kanthasamy1, V. Anantharam and P. Gillespie2. 1Biomedical Sciences, Iowa State University, Ames, IA.

Poster Board Number ................. 536
#1879
**VANADIUM INDUCES NEUROTOXICITY IN DOPAMINERGIC NEURONAL CELLS VIA PROTEOLYTIC ACTIVATION OF PROTEIN KINASE C-Delta: RELEVANCE TO ETIOPATHOGENESIS OF PARKINSON’S DISEASE.** H. Afeseh Ngwa, A. Kanthasamy, V. Anantharam and A. G. Kanthasamy. Biomedical Sciences, Iowa State University, Ames, IA.
**Program Description (Continued)**

**Moderate Perinatal Arsenic Has Long-Term Effects on Learning and Memory Behavior and Erk Phosphorylation.**
E. J. Martinez1, J. Liu2 and A. M. Allan1. 1Department of Neurosciences, University of New Mexico, Albuquerque, NM and 2Department of Toxicology, University of New Mexico, Albuquerque, NM.

**Poster Board Number #1880**

**Moderate Perinatal Arsenic Has Long-Term Effects on Learning and Memory Behavior and Erk Phosphorylation.**
E. J. Martinez1, J. Liu2 and A. M. Allan1. 1Department of Neurosciences, University of New Mexico, Albuquerque, NM and 2Department of Toxicology, University of New Mexico, Albuquerque, NM.

**Poster Board Number #1881**

**Inorganic Arsenic Methylation and Accumulation in Mouse Brain Regions.**
M. Morales1, M. Torres1, G. Gutiérrez Ospina2, C. L. Sánchez-Peña3, L. M. Del Razo3 and M. E. Gonsebatt4. 1Medicina Genómica y Toxicología Ambiental, IIB, Universidad Nacional Autónoma de México, Mexico, D.F., Mexico, 2Biología Celular y Fisiología, IIB, Universidad Nacional Autónoma de México, Mexico, D.F., Mexico, 3Toxicology Section, CINVESTAV, Mexico, D.F., Mexico.

**Poster Board Number #1882**

**Gene Expression Biomarkers Associated with Neuropotxicity in Mice Exposed with Silver Nanoparticles by Inhalation.**
H. Lee1, G. Li1, J. Kwon1, J. Kim1, H. Im1, M. Cho1, Y. Choi1, S. Jung1 and B. Lee1. 1College of Pharmacy, Seoul National University, Seoul, South Korea, 2College of Veterinary Medicine, Seoul National University, Seoul, South Korea, 3School of Veterinary Medicine, Seoul National University, Seoul, South Korea and 4Nano Systems Institute-National Core Research Center, Seoul National University, Seoul, South Korea.

**Poster Board Number #1883**

**Characterization of the Effect of Methylmercury on Caenorhabditis Elegans.**
K. J. Helmecke1, A. Benedetto2, D. Miller1 and M. Aschner1,2. 1Pharmacology, Vanderbilt University, Nashville, TN, 2Molecular Toxicology, Vanderbilt University, Nashville, TN.

**Poster Board Number #1885**

**Investigation of Manganese Toxicity in Pd Genes Deficient C. elegans.**
A. Benedetto1, C. Au1, A. Benedetto2 and M. Aschner1,2. 1Pediatrics, Vanderbilt University Medical Center, Nashville, TN, 2Center of Molecular Neuroscience, Vanderbilt University Medical Center, Nashville, TN.

**Poster Board Number #1888**

**Antioxidants Reduce Manganese-Induced Mitochondrial Impairment in Cultured Astrocytes.**
M. Aschner1,2, M. Tian1, H. Jiang1, Z. Yin2, D. Milatovic1, A. Benedetto2 and M. Aschner1. 1Neurology, Meharry Medical College, Nashville, TN and 2Pediatrics, Vanderbilt University Medical Center, Nashville, TN.

**Poster Board Number #1889**

**Mechanisms of Estrogen-Mediated Neuroprotection in Manganese-Induced Neurotoxicity.**
Y. E. Lee1, H. Jiang1, Z. Yur2, D. Milatovic3, A. Benedetto2 and M. Aschner1. 1Neurology, Meharry Medical College, Nashville, TN and 2Pediatrics, Vanderbilt University Medical Center, Nashville, TN.

**Poster Board Number #1890**

**Cytoprotective Mechanisms of Dicarboxyl Trapping Anti-Diabetic Drugs.**
R. Mehta1, L. Wong and P. J. O’Brien. Pharmaceutical Sciences, University of Toronto, Toronto, ON, Canada.

**Poster Board Number #1891**

**Preclinical Investigation of Fibrodysplasia and Its Relevance to Human Musculo-Skeletal Syndrome.**
M. Coulson1, J. D. Tugwood1, J. Bowyer2, D. Waterson2, R. G. Roberts1, R. C. Scott1, R. A. Maciewicz2 and R. Westwood1. 1Safety Assessment UK, AstraZeneca, Macclesfield, United Kingdom and 2Respiratory and Inflammation Research Area UK, AstraZeneca, Macclesfield, United Kingdom.

**Poster Board Number #1892**

**Diagnostic Criteria for Selected Peroxisome Proliferator-Activated Receptor (PPAR) Agonist-Induced Menenchymal Lesions in the Rat.**
H. Kolenda-Roberts1, J. F. Hardy1, M. R. Elwell1, H. Ernst1, P. Greaves1, D. Malarky2, P. C. Mann3 and P. A. Teller1. 1EPL Inc., RTP, NC, 2Covance Laboratories, Vienna, VA, 3Taurheine Institute of Toxicology and Experimental Medicine, Hannover, Germany, 4University of Leicester, Leicester, United Kingdom, 5NIEHS, RTP, NC, 6EPL Northwest, Seattle, WA and 7Charles River Laboratories, Seminole, QC, Canada.

**Poster Board Number #1893**

**Characterization of the Effect of Methylmercury on Caenorhabditis Elegans.**
K. J. Helmecke1, A. Benedetto2, D. Miller1 and M. Aschner1,2. 1Pharmacology, Vanderbilt University, Nashville, TN, 2Molecular Toxicology, Vanderbilt University, Nashville, TN.

**Poster Board Number #1894**

**Investigation of Manganese Transport in C. elegans.**
C. Au1, A. Benedetto2 and M. Aschner1,2. 1Center of Molecular Neuroscience, Vanderbilt University, Nashville, TN, 2Pediatrics, Vanderbilt University, Nashville, TN and 3Cell and Developmental Biology, Vanderbilt University, Nashville, TN.

**Poster Board Number #1895**

**Investigation of Manganese Toxicity in Pd Genes Deficient C. elegans.**
A. Benedetto1, C. Au1,2 and M. Aschner1,2. 1Pediatrics, Vanderbilt University Medical Center, Nashville, TN, 2Center of Molecular Neuroscience, Vanderbilt University Medical Center, Nashville, TN and 3Pharmacology, Vanderbilt University Medical Center, Nashville, TN.

**Poster Board Number #1896**

**Methylmercury Induced Oxidative Injury and Inflammatory Response in Rat Primary Astrocytes: Attenuation by Antioxidants, M. Aschner1,2, D. Milatovic1 and Z. Yin1. 1Pediatrics, Vanderbilt University Medical Center, Nashville, TN and 2Pharmacology, Vanderbilt University Medical Center, Nashville, TN.
Program Description (Continued)

Abstract #

#1893  Poster Board Number ...........................................553
DIAGNOSTIC CRITERIA FOR SELECTED PEROXISOME PROLIFERATOR-
ACTIVATED RECEPTOR (PPAR)
AGONIST-INDUCED VASCULAR LESIONS
IN THE MOUSE. J. F. Hardisty1, H. Kolenda-
Roberts1, M. R. Elwel1, H. Ernst2, P. Greaves1, D.
Malarkey1, P. C. Mant2 and P. A. Tellier1. 
EPL, Inc., Research Triangle Park, NC, 1Covance Laboratories,
Vienna, VA, 2Fraunhofer Institute of Toxicology and 
Experimental Medicine, Hannover, Germany,
1University of Leicester, Leicester, United Kingdom,
1NEHS, RTP, NC, 2EPL Northwest, Seattle, WA and
1Charles River Laboratories, Senneville, QC, Canada.

#1894  Poster Board Number ...........................................554
STABILITY OF THE MYCOPHENOLIC ACID
ACYL GLUCURONIDE IN BIOLOGICAL
MATRICES. D. E. Harbou1t, M. S. Joy1 and P. C.
Smith1,2. 1Curriculum in Toxicology, UNC-Chapel
Hill, Chapel Hill, NC and 2Molecular Pharmacuetics,
UNC-Chapel Hill, Chapel Hill, NC. Sponsor: M.
Cordeiro-Stone.

#1895  Poster Board Number ...........................................555
PHARMACOKINETICS AND TOXICITY
TO RATS OF SR13668, A NOVEL CANCER
CHEMOPREVENTIVE AGENT. J. Bakke1, A.
Furinsky1, R. Erickson2, R. Swezey3, L. Jong1, J.
M. Kapetanovic2, J. A. Crowell1 and C. E. Green1.
Toxicology and Metabolism, SRI International,
Menlo Park, CA and 1National Cancer Institute,
Bethesda, MD.

#1896  Poster Board Number ...........................................556
USING KINASE SELECTION PROFILES
TO PREDICT IN VITRO AND IN VIVO BONE
MARROW TOXICITY. M. Hassani, A. Olayarski
H. Uppal and K. Kolaja. Investigative Toxicology,
Roche - Palo Alto, Palo Alto, CA.

#1897  Poster Board Number ...........................................557
TOLERABILITY OF AN INHALED
ANTISENSE OLIGONUCLEOTIDE IN
MOUSE AND MONKEY. R. A. Fev1, R. Z. Yu1,
M. D. Reed2, J. D. McDonald1 and S. P. Henry2.
Toxicology/PI, Isis Pharmaceuticals, Carlsbad, CA
and 1Toxicology, Lovelace Respiratory Research
Institute, Albuquerque, NM.

#1898  Poster Board Number ...........................................558
PRECLINICAL SAFETY EVALUATION OF
INHALED S-NITROSGLUTATHIONE, G. J.
Rosenthal1, D. Looker1, D. Borkhataria1, A. Jackson1,
P. Mueller2 and D. Alexander1. [N30 Pharmacology,
LLC, Boulder, CO, 1DA Nonclinical Safety Ltd,
Cambridge, United Kingdom, 2Consultant, Hertfordshire,
United Kingdom and 3RCC Ltd, Ilingen, Switzerland.

#1899  Poster Board Number ...........................................559
OCURRENCE AND BEHAVIOR OF ANTI-
INFLAMMATORY DRUG NAPROXEN IN
AQUATIC ENVIRONMENT. T. Suzuki1, R.
Kabuta2 and T. Nishimura2. 1Division of Water
Quality, Tokyo Metropolitan Institute of Public
Health, Shinjuku, Tokyo, Japan and 2Division of 
Environmental Chemistry, National Institute of 
Health and Science, Setagaya, Tokyo, Japan. 
Sponsor: M. Ema.

#1900  Poster Board Number ...........................................560
ROLE OF ENDOCYTIC ARK/PRK KINASES
IN ADRIAMYCIN RESISTANCE. T. Takahashi
and A. Nagano. Tohoku university, Sendai, Japan.

Abstract #

#1901  Poster Board Number ...........................................561
DRUG INTERFERENCE WITH
BIGTRANSFORMATION OF LISPHENOL
A AND NONYPHENOL IN RATS. M. Verner
and S. Haddad. Biological sciences, Université du 
Québec à Montréal, Montreal, QC, Canada.

#1902  Poster Board Number ...........................................562
SPECIES-DEPENDENT
PHARMACOKINETICS OF CMX001,
AN ORALLY AVAILABLE PRODRUG
OF CIDOFOVIR FOR TREATMENT OF
SMALLPox. L. C. Trott1, M. R. Almond2 and B.
M. Lampert1. 1Toxicology, Chimerix, Inc., Durham,
NC and 2Chemistry, Chimerix, Inc., Durham, NC.

#1903  Poster Board Number ...........................................564
OVER-THE-COUNTER ANALGESICS
NORMALIZE BLOOD GLUCOSE AND BODY
COMPOSITION IN MICE. FED A HIGH
FAT DIET. H. G. Shertzer1, S. N. Schneider1,
E. L. Kendig1, D. J. Clegg2 and M. Genter1.
Environmental Health, University of Cincinnati,
Cincinnati, OH and 1Psychiatry, University of 
Cincinnati, Cincinnati, OH.

#1904  Poster Board Number ...........................................565
ACETAMINOPHEN NORMONOFURFURYL
GLUCOSE HOMEOSTASIS IN MOUSE
MODELS FOR DIABETES. E. L. Kendig1,
M. Genter1, S. N. Schneider1, D. J. Clegg2, D. A.
D’Alessio1 and H. G. Shertzer1. Environmental
Health, University of Cincinnati, Cincinnati, OH,
1Psychiatry, University of Cincinnati, Cincinnati, OH
and 2Medicine, University of Cincinnati, Cincinnati, OH.

#1905  Poster Board Number ...........................................566
THE FORMATION OF A QUINONE
MET.probE FROM NO-ASA AND ITS
ANALOGS CONTRIBUTES TO THE
BIOLOGICAL ACTIVITY. T. Dunlap, R. P.
Thatcher. Medicinal Chemistry, University of Illinois
at Chicago, Chicago, IL. Sponsor: G. Thatcher.

#1906  Poster Board Number ...........................................567
TOPOICAL OCULAR MITOMYCIN C
TREATMENT IN THE PRESENCE OF A
CORNEAL EPITHELIAL DEFECT CAUSED
CHANGES IN CORNEAL ENDOTHELIUM. 
B. J. Christian1, G. Holley2,3, J. Miller1, P. Smith1, R.
McCulloch1, H. F. Edelhauser1, C. J. Murphy1, P. E.
Miller1, G. Leatherberry1 and T. T. Lam1. Covance
Laboratories, Inc., Madison, WI, 2Emory University,
Atlanta, GA and 3Comparative Ophthalmic Research
Labs, Madison, WI.

#1907  Poster Board Number ...........................................568
THE QUANTITATIVE EVALUATION OF
HORMESIS IN ANTCANCER DRUG DOSE-
RESPONSES, M. A. Nascarella1, E. J. Stanek3 and 
E. J. Calabrese1. 1Environmental Health Sciences
Program, University of Massachusetts Amherst,
Amherst, MA and 3Biostatistics and Epidemiology
Program, University of Massachusetts Amherst,
Amherst, MA.
Program Description (Continued)

Abstract #

#1908  Poster Board Number ..........................606  4-ANDROSTEN-3, 6, 17-TRIONE (6-0XO-5M) DOES NOT HAVE ANDROGENIC OR ANABOLIC ACTIVITY IN HERSBERGER ASSAY. K. K. Kabirov and A. V. Lyubimov. Pharmacology, Toxicology Research Laboratory, University of Illinois at Chicago, Chicago, IL.


#1910  Poster Board Number ..........................608  NOVEL ASPECTS OF ACQUIRED CANCER CELL CHEMO- AND RADIO-RESISTANCE. L. Luzhna1, V. Tryndyk2, V. Chekhun3, I. Pogribny4 and O. Kovalchuk5. 1University of Lethbridge, Lethbridge, AB, Canada, 2NCTR, Jefferson, AR and 3Kavetsky Institute of Experimental Oncology, Kiev, Ukraine.

#1911  Poster Board Number ..........................609  PRECLINICAL EVALUATION OF ACUTE TOXICITY OF DECITABINE (5-aza-2'-DEOXYCYTIDINE). K. K. Kabirov1, J. DeSimone1, R. Labotka1 and A. V. Lyubimov1. 1Pharmacology, Toxicology Research Laboratory, University of Illinois at Chicago, Chicago, IL and 2Medicine, Section Hematology/Oncology, University of Illinois at Chicago, Chicago, IL.


#1915  Poster Board Number ..........................613  NONCLINICAL TOXICOLOGY PROFILE OF AMG 517, A NOVEL TRPV1 ANTAGONIST CONSIDERED FOR CLINICAL USE AS A PAIN THERAPEUTIC. N. B. Ernst, D. N. Howland, S. Surapaneni, A. Buck, J. Wister and M. Cosenza. Toxicology, Amgen, Thousand Oaks, CA.

Abstract #

Wednesday Afternoon, March 19
1:00 PM to 4:30 PM
Exhibit Hall

POSTER SESSION: SAFETY ASSESSMENT, PHARMACEUTICAL—LIVER, KIDNEY, IMMUNE SYSTEM

Chairperson(s): Susan Sunner, RTI International, Research Triangle Park, NC and Amy Lamberti, Exelixis Inc., South San Francisco, CA.

Displayed: 1:00 PM–4:30 PM

Attended: 1:00 PM–2:45 PM

#1916  Poster Board Number ..........................614  A PANEL OF LIVER SPECIFIC PROTEINS AS BLOOD BIOMARKERS FOR DRUG INDUCED LIVER INJURY. Z. Hu1, C. Lausted1, B. Lin1, X. Yan1, D. Liu2, H. Wen3, L. Duan4 and L. Hood1. 1Institute for Systems Biology, Seattle, WA and 2Aviva Systems Biology, San Diego, CA.


#1918  Poster Board Number ..........................616  HEPATIC SIDE EFFECTS, IDIOSYNCRATIC OR TOXIC MECHANISMS – DIFFERENTIATED EVALUATION FOR REGULATORY AFFAIRS FOR HERBAL REMEDIES. C. P. Siegers and M. Tegtmieer. Institute of Experimental and Clinical Pharmacology and Toxicology, University of Luebeck, Luebeck, Germany.

#1919  Poster Board Number ..........................617  MULTI-SITE TECHNICAL VALIDATION OF NOVEL PRECLINICAL SERUM ENZYME MARKERS OF HEPATOTOXICITY. H. L. Jordan1, A. Lanveschi-Piersma1, D. Joslin1, J. J. Boysza2, L. Beattie2, B. Gallagher2, J. Ozer2 and S. Schomaker2. 1Safety Assessment, GlaxoSmithKline, Research Triangle Park, NC, 2Safety Assessment, AstraZeneca, Alderley Park, United Kingdom.

#1920  Poster Board Number ..........................618  PREDICTIVE AND MECHANISTIC TOXICOLOGY OF NANOPARTICULATE CARRIERS BY HEPATIC GENE EXPRESSION PROFILING IN THE RAT. R. Kravtsov1, O. Boutherin-Falson1, R. Forster2, S. Leuillet2, S. Arthaud2 and P. Ancian1. 1Flamel Technologies, Venissieux, France and 2CIT, Evreux, France.

#1921  Poster Board Number ..........................619  HEPATIC TRANSCRIPTIONAL PROFILING AS AN INDICATOR OF INFLAMMATORY/A CUTE-PHASE RESPONSES. W. Foster1 and T. Van Vleet2. 1Research and Development, Bristol-Myers Squibb, Mt. Vernon, IN and 2Research and Development, Bristol-Myers Squibb, Lawrenceville, NJ.

up-to-date information at www.toxicology.org
Program Description (Continued)

Abstract #  

#1922  
**Poster Board Number** .................................620  

#1923  
**Poster Board Number** .................................621  
**THE USE OF PRECISION-CUT LIVER SLICES TO ASSESS THE SPECIES SPECIFIC TOXICITY OF KINASE INHIBITORS.** N. Shangari1, A. Reising1, E. Cruz1, F. Pognan2 and A. Wolf.1 Investigative Toxicology, Novartis Pharmaceuticals, East Hanover, NJ and 2Investigative Toxicology, Novartis Pharmacology AG, Basel, Switzerland.

#1924  
**Poster Board Number** .................................622  
**A 28-DAY TOXICITY STUDY OF KRX-0502 (FERRIC CITRATE) IN RATS BY DIETARY ADMINISTRATION.** E. Cullen1, R. Mandella2, C. Auletta2 and R. Niestro1.1 Keryx Biopharmaceuticals, Inc., Seattle, WA and 2Novo Nordisk, Bagsværd, Denmark.

#1925  
**Poster Board Number** .................................623  
**EARLY GENTAMICIN TOXICITY URINE BIOMARKER IDENTIFICATION IN RATS USING AN NMR CHEMOMETRIC AND METABOLOGINOMIC APPROACH.** A. M. Weljie1, L. Schnackenberg2, P. Espandiari3, J. Zhang4, D. Chang4, J. Hanig2, J. Newton1 and R. Beger1.1 Chemonix Inc, Edmonton, AB, Canada; 2National Center for Toxicological Research, FDA, Jefferson, AR and 3Center for Drug Evaluation and Research, FDA, Silver Spring, MD.

#1926  
**Poster Board Number** .................................624  
**URINE COLLECTION AND ANALYSIS IN REGULATORY TOXICOLOGY STUDIES: A CROSS-LABORATORY COMPARISON.** D. Everett1, S. Robinson1, K. Chapman3, D. Spencer-Briggs1, R. Hill1 and A. Danks3.1 AstraZeneca, Alderley Edge, United Kingdom; 2NCIRS, London, United Kingdom; 3Huntingdon Life Sciences, Huntingdon, United Kingdom; 4Sequani Limited, Ledbury, United Kingdom; 5Charles River Laboratories, Tranent, United Kingdom and 6Covance Laboratories Ltd, Harrogate, United Kingdom.

#1927  
**Poster Board Number** .................................625  
**METABOLOGINOMIC ANALYSIS OF URINE IN CISPLATIN-INDUCED RENAL TOXICITY IN RATS AND MICE.** R. D. Beger1, J. Schnackenberg1, P. Espandiari2, R. Holland1, T. Schmitt2, J. Zhang3, K. Nagothu4, D. Portilla4, J. Hanig5 and N. Sadrieh6.1 National Center for Toxicological Research, Jefferson, AR; 2Center for Drug Evaluation and Research, Silver Spring, MD and 3University of Arkansas for Medical Sciences, Little Rock, AR.

#1928  
**Poster Board Number** .................................626  
**PRECLINICAL EVALUATION OF IMMUNOMODULATORY ACTIVITY AND SAFETY OF COX-2 RECOMBINANT HUMAN INTERLEUKIN-21.** K. Van Ness1, S. Hughes1, R. Ponce1, S. Laursen1 and D. Miller1.1 ZymoGenetics, Inc., Seattle, WA and 2Novo Nordisk, Bagsvaerd, Denmark.

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#1929  
**Poster Board Number** .................................627  
**INDUCTION OF IMMUNE TOLERANCE TO AMPICILLIN FOLLOWING ORAL DOSING IN SPRAGUE‐DAWLEY RATS.** A. Hillegas, C. Genell and C. Maier. Safety Assessment, GlaxoSmithKline, King of Prussia, PA. Sponsor: E. Gore.

#1930  
**Poster Board Number** .................................628  
**SAFETY EVALUATION OF A ONE-ARMED RECOMBINANT HUMAN ANTIBODY TO C-MET (METMA) IN CYNOMOLGUS MONKEYS.** T. Getlezichter1, A. Vaidyanathan1, K. McDorman1, R. Kaiser2, T. Davancace3, H. Xiang1, A. Reyes1 and S. Kaur1.1 Safety Assessment, Genentech, South San Francisco, CA and 2Toxicology, Charles River, Reno, NV.

#1931  
**Poster Board Number** .................................629  
**IDENTIFICATION AND CHARACTERIZATION OF NOVEL AHR LIGANDS ACROSS SPECIES.** C. Sorrentino1, W. Hu2, M. Fielden3 and M. S. Denison1.1 Environmental Toxicology, University of California Davis, Davis, CA; 2Entelos, Foster City, CA and 3Roche Palo Alto, Palo Alto, CA.

#1932  
**Poster Board Number** .................................630  
**ASSESSMENT OF PRILOCAIN, LIDOCAINE, p-TOLUIDINE AND 2,6-DIMETHYLAMINOLINE DNA ADDUCTS FORMATION IN F344 RATS.** J. Duan, A. M. Jeffrey and G. M. Williams. Department of Pathology, New York Medical College, Valhalla, NY.

#1933  
**Poster Board Number** .................................631  

#1934  
**Poster Board Number** .................................632  
**THE EVALUATION OF ATACCEP TO PROTECTIVE IMMUNITY IN THE MOUSE STREPTOCOCCAL HOST RESISTANCE MODEL.** J. Heffernan1, E. Burleson1, R. Roque1, K. Waggle1, M. Carbonatto1 and R. Ponce1.1 ZymoGenetics, Inc, Seattle, WA; 2Burleson Research Technologies, Morrisville, NC and 3Merck Serono S.A., RBM S.p.A., 10010 Colleretto Giacosa, Italy.

#1935  
**Poster Board Number** .................................633  
**TOXICITY ASSESSMENT WITH KINASE INHIBITORS.** A. M. Giusti, P. Della Torre, R. Castoldi, M. Cattoni and M. Brughera. Accelerata Preclinical Development, Nerviano Medical Sciences, Nerviano (MI), Italy.

#1936  
**Poster Board Number** .................................634  
**SUBCHRONIC ORAL TOXICITY OF THE CORTICOTROPIN-RELEASING HORMONE (CRH) RECEPTOR ANTAGONIST, ANTALARMIN, IN RHESUS MONKEYS.** W. D. Johnson1, J. Harder1, D. L. McCormick2, C. E. Detrisac1, K. Calis1, P. W. Gold1, K. Rice1, H. Manji1, G. Kuno1, M. Heilig1, C. Contoreggi2, F. Vocci1, J. Winslow1, G. Chrousos1, C. Zarate1, G. Cizza1, E. R. Glaze1 and J. E. Tomaszewski2. 1IIT Research Institute, Chicago, IL; 2Pathology Associates, Chicago, IL and 3National Institutes of Health, Bethesda, MD.
#1937

**Poster Board Number** ..........................635

**STRATEGY FOR QUALIFYING HUMANIZED MICE AS TOXICITY MODELS IN METABOLITE SAFETY ASSESSMENT.** M. W. Powley1, T. H. Rushmore2, S. Yu3 and P. R. Tiller3. 1Safety Assessment, Merck Research Laboratories, West Point, PA and 2Drug Metabolism, Merck Research Laboratories, West Point, PA.

#1938

**Poster Board Number** ..........................636

**THE USE OF OXYGEN AND PH SENSITIVE FLUORESCENT PROBES IN THE INVESTIGATION OF PERTURBED CELLULAR METABOLISM.** J. Hynes1, T. O’Riordan2, D. Papkovsky1 and J. Will2. 1Drug Safety R&D, Pfizer, Inc., San Diego, CA and 2Luxcel Biosciences, Cork, Ireland.

#1939

**Poster Board Number** ..........................637

**LACK OF EFFECT OF LACTATE DEHYDROGENASE AND LACTIC ACID IN THE ENZYMATIC METHOD FOR ETHYL ALCOHOL DETERMINATION.** D. H. Petroni and W. J. George. Division of Toxicology, Pharmacology, Tulane University School of Medicine, New Orleans, LA.

#1940

**Poster Board Number** ..........................638

**NCC55-0396, A POTENTIALLY SAFE THERAPEUTIC T-TYPE CA2+ CHANNEL-SPECIFIC ANTAGONIST, DOES NOT STRONGLY INHIBIT CYP3A4.** P. H. Bul1,2, A. Quesada1, A. Handforth1 and O. Hankinson1. 1Pathology and Laboratory Medicine, University of California, Los Angeles, Los Angeles, CA, 2Molecular Toxicology IDP, University of California, Los Angeles, Los Angeles, CA and 3Neurology and Research Services, Veterans Affairs Greater Los Angeles, Los Angeles, CA.

#1941

**Poster Board Number** ..........................639

**EVALUATION OF A NOVEL HIGH CONTENT BIOLOGY-BASED METHOD TO DETECT COMPOUNDS WITH STEATOTIC POTENTIAL.** J. Milano1, F. Ciaccio1, J. K. Morelli1 and F. Poppan1. 1Safety Assessment, AstraZeneca, Wilmington, DE and 2Current Address: Biological and Molecular Toxicology, Novartis Pharmacology AG, Schweizerhalle, Switzerland.

#1942

**Poster Board Number** ..........................640

**CUTANEOUS CLINICAL ADVERSE DRUG REACTIONS IN A TERTIARY CARE CENTER.** G. Madan Mohana Rao. Dr. Reddy’s Medical Centre, Savannalamore, Westmoreland, Jamaica.

#1943

**Poster Board Number** ..........................641

**MECHANISTIC DIFFERENCES IN TOXICOLOGICAL RESPONSE TO PHOSPHOLIPIDOSGENES BY DOG AND RAT HEPATOCYTES.** J. K. Morelli and P. J. Ciaccio. Safety Assessment U.S., AstraZeneca Pharmaceuticals, Wilmington, DE.

#1944

**Poster Board Number** ..........................642

**ACETAMINOPHEN-PROTEIN ADDUCTS ARE NOT SUFFICIENT FOR HEPATOCELLULAR NECROSIS IN MICE: MODULATION OF TOXICITY BY GENDER AND GLUTAMATE CYSTEINE LIGASE MODIFIER SUBUNIT.** T. J. Kavanagh, University of Washington, Seattle, WA and Debra Laskin, Rutgers University, Piscataway, NJ.

#1945

**Poster Board Number** ..........................643

**CHRONIC ETHANOL ADMINISTRATION RESULTS IN DOWN REGULATION OF PEROXIREDOXIN 6 AND OXIDATIVE STRESS.** J. Roede, B. J. Stewart and D. R. Petersen. Pharmaceutical Sciences, University of Colorado Health Sciences Center, Denver, CO.

#1946

**Poster Board Number** ..........................644


#1947

**Poster Board Number** ..........................645

**GLUTATHIONE DEPLETION ACTIVATES SPECIFIC MITOGEN-ACTIVATED PROTEIN KINASE (MAPK) IN MICE.** M. E. Gonsebatt and J. H. Limón Pacheco. Medicina Genómica y Toxicología Ambiental, IIB, Universidad Nacional Autónoma de México, Mexico, D.F., Mexico.

#1948

**Poster Board Number** ..........................646

**INCREASED SENSITIVITY OF GLUTATHIONE S-TRANSFERASE P-NULL MICE TO CYCLOPHOSPHAMIDE TOXICITY.** D. J. Conklin1, R. A. Prough2 and A. Bhatnagar1. 1Inst. Mol. Card., University of Louisville, Louisville, KY and 2Biochem., University of Louisville, Louisville, KY.
Program Description (Continued)

Abstract #

#1949 Poster Board Number..........................647 MICE THAT DO NOT EXPRESS GLUTATHIONE SULFUR TRANSFERASE ARE MORE SUSCEPTIBLE THAN ARE WILD TYPE MICE TO INFECTION WITH GROUP B STREPTOCOCCUS, M. M.Ralston1, K. D. Bongiovanni1, A. L. Jones2 and C. V. Smith.1 Seattle Children’s Hospital Research Institute, Center for Developmental Therapeutics, Seattle, WA and 2Center for Childhood Infections and Prematurity, Seattle Children’s Hospital Research Institute, Seattle, WA.

#1950 Poster Board Number..........................648 EXPRESSION AND FUNCTION OF ALDEHYDE DEHYDROGENASE 3B1, S. A. Marchetti1, D. J. Orlicky2 and V. Vasiliev.1 1Pharmaceutical Sciences, University of Colorado Health Sciences Center, Denver, CO and 2Pathology, University of Colorado Health Sciences Center at Fitzsimmons, Aurora, CO.

#1951 Poster Board Number..........................649 ALDH1A1 IS A NOVEL ALDH THAT PROTECTS AGAINST OXIDATIVE DAMAGE, C. Brocker2, M. Cantore1, A. Pappa2, N. Lassern1, T. Esser1, S. A. Marchetti1, T. Chavakis1 and V. Vasiliev.1 1Pharmaceutical Sciences, University of Colorado Health Sciences Center, Denver, CO and 2Experimental Immunology Branch, National Cancer Institute, National Institutes of Health, Bethesda, MD.

#1952 Poster Board Number..........................650 ORAL ADMINISTRATION OF POLAPREZINC, AN ANTI-ULCER DRUG, PROTECTS MICE AGAINST ENDOTOXIN SHOCK, T. Matsura1, C. Moriya1a1, Y. Yamashita1, H. Morikawa1, T. Nishida1, S. Ohata1, C. Kusumoto1, J. Nakada1 and K. Yamada1. 1Medical Biochemistry, Tottori University Faculty of Medicine, Tottori, Japan and 2Anesthesiology, Aichi Cancer Center Hospital, Nagoya, Japan. Sponsor: V. Kagan.

#1953 Poster Board Number..........................651 THE ROLE OF REACTIVE OXYGEN SPECIES (ROS) IN AIRWAY HYPER-RESPONSIVENESS: THE EFFECTS OF 2-CYANO-3, 12-DIOXOOLEANA-1, 9(11)-DIEN-28-OIC ACID (CDDO), D. Hochman1, D. Nanes2, S. Schultz2 and E. Brooks2. 1Experimental Pathology, University of Texas Medical Branch, Galveston, TX, 2Pediatrics, University of Texas Medical Branch, Galveston, TX and The University of Houston, Houston, TX.

#1954 Poster Board Number..........................652 DISTINCT ROLES OF REACTIVE OXYGEN AND NITROGEN INTERMEDIATES IN ACUTE LUNG INJURY INDUCED BY OZONE AND BLEOMYCIN, A. M. Grovel1, J. D. Laskin1, A. J. Gow2, C. Guo2 and D. L. Laskin.1 1Rutgers University, Piscataway, NJ and 2UMDNJ-RW Johnson Med Sch, Piscataway, NJ.

#1955 Poster Board Number..........................653 DISRUPTION OF ANTIOXIDANT DEFENSE AND DNA REPAIR SYSTEMS DURING 2-ACETYLAMINOFLUORENE-INDUCED HEPATOCARCINOGENESIS IN RATS, T. V. Bagnyukov1, C. L. Powell2, B. Montgomery1, F. A. Beland3 and I. F. Pogribny.1 1Division of Biochemical Toxicology, Jefferson, AR and 2Department of Genetics, University of North Carolina, Chapel Hill, NC.

#1956 Poster Board Number..........................654 670 NM PHOTOBIOMODULATION NORMALIZES ANTIOXIDANT ENZYME ACTIVITIES SUPPRESSED IN STREPTOZOTOXICIN-INDUCED DIABETIC RAT, J. Lim1, R. A. Sanders1, R. Wilson1, A. C. Snyder1, S. Gopalakrishnan1, J. T. Eells2, J. B. Watkins3 and D. S. Henshel1. 1SPEA, Indiana University, Bloomington, IN, 2Medical Sciences, Indiana University, Bloomington, IN and 3Health Sciences, University of Wisconsin-Milwaukee, Milwaukee, WI.

#1957 Poster Board Number..........................655 SUBCHRONIC TOXICITY OF INHALED TOLUENE IN RATS: OXIDATIVE STRESS MARKERS IN BRAIN, D. A. Moore-Smith1, J. H. Richards1, T. E. Samsam1, P. Evansky2, J. P. Bushnell3 and P. R. Kodavanti1. 1Neurotoxicology Division, U.S. EPA, RTP, NC, 2Experimental Toxicology Division, U.S. EPA, RTP NC and 3Department of Biology, Livingstone College, Salisbury, NC.

#1958 Poster Board Number..........................656 SUPPRESSION OF DFP-INDUCED OXIDATIVE INJURY AND DENDRITIC DAMAGE IN RAT BRAIN, D. Milatovic1, S. Zaja-Milatovic1, R. C. Gupta2 and M. Aschner2. 1Pediatrics, Vanderbilt University, Nashville, TN and 2Pathology, University of Pittsburgh, Pittsburgh, PA.

#1959 Poster Board Number..........................657 A BIOTIN-HYDROXYLAMINE LABELING METHOD FOR THE DETECTION OF OXIDIZED PROTEINS USING WESTERN BLOT ANALYSIS AND MASS SPECTROMETRY, W. Chung, C. L. Miranda and C. S. Maier. Chemistry, Oregon State University, Corvallis, OR.

#1960 Poster Board Number..........................658 A UPLC/MS/MS PROCEDURE FOR THE DETERMINATION OF ISOPROSTANES IN HUMAN SERUM, A. R. Molnari2, T. I. Laha1, M. J. Edenfield1 and S. M. Sadrzadeh2. 1Laboratory Medicine, University of Washington, Seattle, WA and 2Unaffiliated Consultant, Seattle, WA.

#1961 Poster Board Number..........................659 PHOSPHOLIPID PEROXIDATION BIOMARKERS OF ALZHEIMER’S DISEASE IN THE BRAIN: SELECTIVE OXIDATION OF PHOSPHATIDYLSERINE, V. A. Tyurin1,2, Q. Zhao1, A. Mnuskin1, R. L. Hamilton1, S. T. DeKosky2, W. E. Reynolds2 and V. E. Kagan1,3. 1EOH, University of Pittsburgh, Pittsburgh, PA, 2CFRAH, University of Pittsburgh, Pittsburgh, PA, 3Pathology, University of Pittsburgh, Pittsburgh, PA, 4Neurology, University of Pittsburgh, Pittsburgh, PA and 5Sidney Kimmel Cancer Center, San Diego, CA.
Program Description (Continued)

Abstract #

#1962
Poster Board Number .................................660
EVIDENCE OF OXIDATIVE STRESS IN LUNG, LIVER AND HEART FROM SHEEP EXPOSED TO CHLORINE (Cl2) GAS. M. A. Dubick, A. I. Batchinsky, J. L. Barr and L. C. Cancio. U.S. Army Institute of Surgical Research, San Antonio, TX.

#1963
Poster Board Number .................................661
NRF2 PLAYS A PROTECTIVE ROLE IN RESPONSE TO PRO-OXIDANT EXPOSURE OF ZEBRAFISH EMBRYOS (DANIO RERIO). L. Van Tiem, A. Timme-Laragy and R. Di Giulio. ITEHP, Duke University, Durham, NC.

#1964
Poster Board Number .................................662

Wednesday Afternoon, March 19
1:30 PM to 2:30 PM
Exhibit Hall 4C-4

EXHIBITOR HOSTED SESSION: CELLCIPH™ CYTOTOXICITY PROFILING FOR INVESTIGATIONAL SAFETY: CELLULAR SYSTEMS BIOLOGY WITH 33-FEATURES IN HEPG2 AND PRIMARY RAT HEPATOCYTES
Presented by: Cellumen Inc.

Compounds failing Cellumen’s CellCiph™ Safety Index fail preclinical safety; 100%—no false positives. Recently validated in a 10-pharma collaborative evaluation, the 33-feature, CellCiph™ profiling panel for HepG2 cells has been extended for primary rat hepatocytes. Cellular systems biology (CSB™) offers a powerful filter for predicting hepatotoxicity in investigational safety.

Wednesday Afternoon, March 19
1:30 PM to 2:30 PM
Exhibit Hall 4C-3

EXHIBITOR HOSTED SESSION: EVALUATION OF THE USE OF AN UNSUPERVISED ECG CLASSIFICATION TOOL IN CARDIOVASCULAR DRUG SAFETY ASSESSMENT
Presented by: NOTOCORD Systems

We will present a new unsupervised ECG beat classification tool (i.e. no need of a priori information) for detecting drug-induced cardiac arrhythmias in long-term ECG recordings from conscious freely moving dogs and non-human primates. Prediction and reliability to classify all beats on-line will also be laid out.

Abstract #

Wednesday Afternoon, March 19
1:30 PM to 4:15 PM
Room 6B

SYMPOSIUM SESSION: ARSENIC AND CARDIOVASCULAR DISEASE

Chairperson(s): J. Christopher States, University of Louisville, Louisville, KY and Aaron Barchowsky, University of Pittsburgh, Pittsburgh, PA.

Endorsed by:
Mechanisms Specialty Section
Metals Specialty Section*
Molecular Biology Specialty Section
Reproductive and Developmental Toxicology Specialty Section

Epidemiological studies indicate that chronic arsenic ingestion causes cardiovascular disease in humans. However, the mechanisms of arsenic-induced vascular diseases are unknown. Widespread exposure to arsenic in drinking water in the U.S. likely contributes to atherogenesis and death from cardiovascular disease. This symposium will address mechanistic studies of arsenic-induced vascular disease in experimental mouse models and the influence of dietary factors in exposed humans. The presentations will focus on atherosclerotic changes in arsenic exposed mice, arsenic induced activation of signaling cascades triggering vascular remodeling, prenatal arsenic exposure induced epigenetic changes and epidemiological studies of dietary modification of arsenic induced cardiovascular disease.

#1965 1:30
ARSENIC AND CARDIOVASCULAR DISEASE. J. States1 and A. Barchowsky2.
1Pharmacology & Toxicology, University of Louisville, Louisville, KY and 2Environmental & Occupational Health, University of Pittsburgh, Pittsburgh, PA.

#1966 1:35
THE RELATIONSHIPS OF ARSENIC EXPOSURE FROM DRINKING WATER WITH MOLECULAR, PRECLINICAL, AND CLINICAL ENDPOINTS OF CARDIOVASCULAR DISEASE IN BANGLADESH. Y. Chen1, J. H. Graziano2, T. B. Knudsen2, H. L. Miller1, Y. Piao4, M. S. Ko4, S. E. D’Souza2, A. Barchowsky.
2Pharmacology & Toxicology, University of Louisville, Louisville, KY, 4Physiology, University of Louisville, Louisville, KY, 1Physiology, University of Louisville, Louisville, KY, 3Medicine, University of Louisville, Louisville, KY and 3Medicine, University of Louisville, Louisville, KY.

#1967 2:15
ARSENIC-INDUCED ATEROGENESIS: CONTRIBUTION OF OXIDATIVE STRESS, INFLAMMATION AND UNFOLDED PROTEIN RESPONSE. S. Srivastava1, P. Haberzettl, E. N. Vladykovskaya, S. E. D’Souza2 and J. States1. 1Medicine, University of Louisville, Louisville, KY, 2Medicine, University of Louisville, Louisville, KY, 3Medicine, University of Louisville, Louisville, KY and 4Pharmacology & Toxicology, University of Louisville, Louisville, KY.

#1968 2:55
PRENATAL ARSENIC EXPOSURE ALTERS HEPATIC DEVELOPMENTAL PROGRAMMING PREDISPOSING TO ATEROSCLEROSIS. J. States1, A. V. Singh2, H. L. Miller, Y. Piao, M. S. Ko, S. Srivastava and T. B. Knudsen. 1Pharmacology & Toxicology, U. Louisville, Louisville, KY, 2Molecular, Cellular & Craniofacial Biology, U. Louisville, Louisville, KY, 3Medicine, U. Louisville, Louisville, KY and 4Laboratory of Genetics, National Institute on Aging, Baltimore, MD.
**Program Description (Continued)**

**Abstract #**

#1969 3:35 **SIGNALING MECHANISMS FOR VASCULAR RESPONSES TO ARSENIC.** A. Barchowsky1, L. R. Klei2, A. C. Straub2 and D. B. Stoltz2. 1. Environmental and Occupational Health, University of Pittsburgh, Pittsburgh, PA and 2. Cell Biology, University of Pittsburgh, Pittsburgh, PA.

**Wednesday Afternoon, March 19**

1:30 PM to 4:15 PM

**Room 6C**

**NANOTECHNOLOGY**

**SYMPOSIUM SESSION: NANOMATERIAL PHARMACOKINETICS: WHERE WE ARE AND WHERE WE NEED TO GO**

**Chairperson(s):** Justin Teeguarden, Pacific Northwest National Laboratory, Richland, WA and Nigel Walker, NIEHS, Research Triangle Park, NC.

**Endorsed by:**
- Biological Modeling Specialty Section
- Inhalation and Respiratory Specialty Section
- Nanotoxicology Specialty Section*
- Risk Assessment Specialty Section

The rapid development and commercialization of new nanomaterial products including catalysts, cosmetics, drug delivery systems, presents an urgent need for toxicological assessment of these new submicron particulate products. Understanding the unique kinetics of particle uptake, distribution and elimination in vivo and particokinetics in vitro are central to the safety assessment of nanomaterials. This symposium will present the latest findings related to the physiological and biochemical processes controlling nanomaterial pharmacokinetics as well as specific data on the portal of entry (skin, lung) and systemic kinetics of several important classes of nanomaterials including PEBBLEs, polystyrene spheres and quantum dots. The session will conclude by bringing together current empirical knowledge on the kinetics of nanomaterials with the material property and physiological determinants of tissue uptake to develop a framework for developing physiologically motivated kinetic models for nanomaterials.

#1970 1:30 **NANOMATERIAL PHARMACOKINETICS AND PHARMACOKINETIC MODELING: WHERE WE ARE AND WHERE WE NEED TO GO.** N. Walker, National Institute of Environmental Health Sciences, RTP, NC.

#1971 1:45 **PHYSICAL AND BIOLOGICAL BARRIERS TO THE ABSORPTION OF NANO-SCALE MATERIALS.** P. J. Sinko. Pharmaceuticals, EM School of Pharmacy, Rutgers University, Piscataway, NJ. Sponsor: J. Teeguarden.

#1972 2:15 **SYSTEMIC KINETICS AND COMPARTMENTAL MODELING OF NANOMATERIALS, M. Philbert, Toxicology, University of Michigan, Ann Arbor, MI.**

#1973 2:45 **BIODISTRIBUTION OF NANO AND MICRON SIZED FLUORESCENT POLYSTYRENE LATEX SPHERES FOLLOWING PARENTERAL OR LUNG EXPOSURE.** K. Saro. Miami Valley Laboratories, Procter & Gamble Company, Cincinnati, OH.

#1974 3:15 **PHARMACOKINETICS AND PHARMACOKINETIC MODELING OF QUANTUM DOTS IN SKIN.** J. Riviere. Veterinary Medicine, North Carolina State University, Raleigh, NC.

**Abstract #**

#1975 3:45 **PHYSIOLOGICAL AND MATERIAL PROPERTY DETERMINANTS OF NANOMATERIAL KINETICS: A PHYSIOLOGICALLY BASED FRAMEWORK FOR NANOMATERIAL DOSIMETRY AND KINETICS.** J. G. Teeguarden1, P. M. Hinderliter2, B. D. Thrall3 and J. P. Pounds4. 1. Biological Monitoring and Modeling, Pacific Northwest National Laboratory, Richland, WA and 2. Cell Biology, Pacific Northwest National Laboratory, Richland, WA.

**Wednesday Afternoon, March 19**

1:30 PM to 4:15 PM

**Room 608**

**WORKSHOP SESSION: ADVANCES IN TECHNOLOGY AND INCREASING ACCEPTANCE FOR ZEBRAFISH USE IN DRUG DISCOVERY**

**Chairperson(s):** Michael Carvan, University of Wisconsin Milwaukee, Milwaukee, WI and Robert Tanguay, Oregon State University, Corvallis, OR.

**Endorsed by:**
- Comparative and Veterinary Specialty Section
- Drug Discovery Toxicology Specialty Section*
- Reproductive and Developmental Toxicology Specialty Section

Drug discovery is an increasingly expensive and inherently risky process, with high rates of attrition often at late stages of R&D primarily due to organ toxicity or safety pharmacology issues. High-profile withdrawals of drugs from the market due to unforeseen, dangerous side effects have drawn extra attention to the difficulties of predicting toxicity using traditional methods and the U.S. FDA has also acknowledged a technology deficit in toxicity testing at preclinical stages. The zebrafish has emerged as a valuable vertebrate model for use by the pharmaceutical industry for expediting the process of prioritization of candidate drugs for development and flagging toxicity early in the R&D process. Vast amounts of academic studies over the past three decades have shown that zebrafish have conserved genetic pathways and that the ease of their genetic manipulation has led to identification of numerous mutations that phenocopy human diseases. In addition, their small size allows high-throughput screening in microtiter plates using minuscule amounts of compounds. This has consequently made the developing zebrafish embryo an attractive model vertebrate for use in safety pharmacology and drug toxicity testing. These endeavors should help reduce the cost of drug discovery, reduce the use of higher vertebrates and decrease the risk of advancing potentially toxic compounds towards clinical testing. This symposium will focus on recent advances in zebrafish-based technologies including automation and screening of transgenics, validation of toxicity screens using this zebrafish model that show good concordance with mammals, and other novel discoveries made possible due to the zebrafish.

#1976 1:30 **ADVANCES IN TECHNOLOGY AND INCREASING ACCEPTANCE FOR ZEBRAFISH USE IN DRUG DISCOVERY.** M. J. Carvan1 and R. L. Tanguay2. 1. Great Lakes WATER Institute, University of Wisconsin-Milwaukee, Milwaukee, WI and 2. Department of Environmental & Molecular Toxicology, Oregon State University, Corvallis, OR.

#1977 2:10 **ZEBRAFISH USE IN DRUG DISCOVERY.** A. J. Hill. Biology, Summit plc, Abingdon, Oxon, United Kingdom.
Since the last atrazine risk assessment in 2002, the EPA Office of Water has discussed developing a triazine cumulative risk assessment of the regulated parent compounds and their common degradation products of concern in drinking water. The chlorotriazine herbicides metabolize/degrade to the same subset of residues, which are reported to be biologically active. These residues also occur in water as common chlorodegradates of the parent compounds. Atrazine is reported to have a short half-life in the rat (less than 1 day), and is primarily excreted in the urine. Recent studies using acute exposures and lower doses (at or lower than the current NOAEL/LOAELs of the parent compounds) have shown adverse developmental outcomes in the brain, prostate, and mammary gland of rodent models, in addition to those effects reported at higher doses. Because of the growing number of health effects following chlorotriazine exposure in mammals, analytical tools and high quality standards have been developed to measure the metabolites/degradates and their related excretory or conjugated forms. These data can be used to determine the disposition of the individual metabolites in the body fluids and affected tissues. Furthermore, the measurement of these triazine residues in rodent models have only recently been reported in mice, building on the limited pharmacokinetic information from male and virgin female rats. Post-exposure metabolite/degrade analyses in pregnant and lactating rats discovered unique patterns of analytes based on whether the exposure was a mixture of residues or the parent compound alone, as well as a dose effect. The developmental health effects and the measurement of the chlorotriazine metabolites in affected tissues or body fluids in multiple species and under varied reductive/developmental conditions are important data that may be used for future risk assessment of these high use herbicide residues. This abstract does not necessarily reflect EPA policy.

Abstract #

#1987 1:30 INTERDISCIPLINARY APPROACHES FOR IMPROVING CHEMICAL HAZARD TESTING PAREDIGMS. I. Rusyn1 and D. Dix2. 1Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, Chapel Hill, NC and 2National Center for Computational Toxicology, U.S. Environmental Protection Agency, Research Triangle Park, NC.


#1989 2:07 APPROACHES FOR PRIORITIZING AND TESTING OF CHEMICALS FOR TOXICITY. B. Gollapudi. The Dow Chemical Company. Midland, MI.


#1991 3:11 MODELING TOXICITY FROM HIGH THROUGHPUT SCREENING DATA ON ENVIRONMENTAL CHEMICALS. A. Tropsha1, H. Zhu1, A. Richard2 and I. Rusyn3. 1University of North Carolina, Chapel Hill, NC and 2Environmental Protection Agency, Research Triangle Park, NC.


Wednesday Afternoon, March 19
1:30 PM to 4:15 PM
Room 6E

PLATFORM SESSION: APOPTOSIS: CARDIOPULMONARY TARGETS

Chairperson(s): Joseph Cerreta, St. Johns University, Queens, NY and Yulia Tyurina, University of Pittsburgh, Pittsburgh, PA.

#1993 1:30 IMMUNOLOCALIZATION OF GSTA4-4 IN ENDOTHELIAL CELLS AND POSSIBLE ROLE IN PROTECTION AGAINST APOPTOSIS AND ATHEROSCLEROSIS. Y. Yang, Y. Xu, V. L. Popov and P. J. Boor. Department of Pathology, University of Texas Medical Branch, Galveston, TX.

#1994 1:30 GONIOTHALAMIN INDUCES CORONARY ARTERY SMOOTH MUSCLE CELLS APOPTOSIS IN P38 DEPENDENT AND NQO1 INDEPENDENT MANNER. M. K. Chau1, N. F. Rajah1, L. B. Din1, D. Siegel1, D. Ross1 and S. H. Inayat-Hussain1. 1Environmental Health Programme, Faculty of Allied Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia and 2Department of Pharmaceutical Sciences, School of Pharmacy, University of Colorado at Denver and Health Sciences Center, Denver, CO.

Abstract #

#1995 1:30 PARQUAT INDUCED APOPTOSIS IN RAT PLEURAL MESOTHELIUM CELLS (RPNC) INVOLVES RELEASE OF CYTOCHROME C AND CASPASE-9 ACTIVATION. K. H. Bijlani, H. R. Sukhija, J. O. Cantor and J. M. Cerreta. PHS, St. John’s University College of Pharmacy and Allied Health Professions, Queens, NY. Sponsor: L. Trombetta.

#1996 1:30 A ROLE FOR CASPASE 8 IN AMIODARONE INDUCED APOPTOSIS IN RAT PLEURAL MESOTHELIUM CELLS (RPNC). R. Shah, J. O. Cantor and J. M. Cerreta. PHS, St. John’s University College of Pharmacy and Allied Health Professions, Queens, NY. Sponsor: L. Trombetta.


#1999 1:30 CHOLESTEROL SECOALDEHYDE INDUCES APOPTOSIS IN J774 MACROPHAGES VIA MITOCHONDRIAL PATHWAY BUT NOT INVOLVING REACTIVE OXYGEN SPECIES AS MEDIATORS. X. Gao1, A. C. Raghava Menon1, O. D’Avreigne2, K. G. Kousoulos1 and R. M. Uppu1. 1Environmental Toxicology and the Health Research Center, Southern University and A & M College, Baton Rouge, LA and 2Department of Biological Sciences, Southern University and A & M College, Baton Rouge, LA.


#2001 1:30 3-METHYLINDOLE INDUCED DNA DAMAGE PARTITIONS BETWEEN REPAIR OR APOPTOSIS IN HUMAN BRONCHIAL EPITHELIAL CELLS, DEPENDING ON DOSAGE. N. Cutler, J. M. Weems, W. K. Nichols and G. S. Yost. Pharmacology & Toxicology, University of Utah, Salt Lake City, UT.
Program Description (Continued)

Abstract #
Wednesday Afternoon, March 19
1:30 PM to 4:15 PM
Room 602

PLATFORM SESSION: IMMUNOTOXICOLOGY: T CELLS

Chairperson(s): Barbara Kaplan, Michigan State University, East Lansing, MI and Narendra Singh, University of South Carolina School of Medicine, Columbia, SC.

#2002 1:30 THE MECHANISM BY WHICH CANNABIDIOL, A PLANT-DERIVED CANNABINOID, SUPPRESSES IMMUNE FUNCTION INVOLVES SUPPRESSION OF NUCLEAR FACTOR OF ACTIVATED T CELLS (NFAT) TRANSCRIPTIONAL ACTIVATION, BUT NOT SUPPRESSION OF NFATC1 OR NFATC2 mRNA EXPRESSION. B. L. Kaplan and N. E. Kaminski. Center for Integrative Toxicology, Pharmacology and Toxicology, Michigan State University, East Lansing, MI.

#2003 1:58 ATTENUATION OF EXPERIMENTAL AUTOIMMUNE HEPATITIS BY EXOGENOUS AND ENDOGENOUS CANNABINOIDS: INVOLVEMENT OF REGULATORY T CELLS. V. L. Hegde, S. Hegde, M. Nagarkatti and P. S. Nagarkatti. Pathology, Microbiology & Immunology, University of South Carolina School of Medicine, Columbia, SC.

#2004 2:26 C-FLIP PLAYS IMPORTANT ROLE IN TCDD (2, 3, 7, 8-TETrACHLoroDiBEnZO-P-DiOXiN)-INDUCED APOPTOSIS IN PRIMARY T CELLS AND ESTABLISHED T CELL LINE IN VITRO. N. P. Singh, M. Nagarkatti and P. S. Nagarkatti. Pathology, Microbiology, and Immunology, University of South Carolina School of Medicine, Columbia, SC.

#2005 2:54 INORGANIC MERCURY MODULATES CD95/FAS DEPENDENT CROSS-REGULATION OF T-CELL ANTIGEN RECEPTOR SIGNAL TRANSDUCTION. M. D. Luaisa and M. J. McCabe. Department of Environmental Medicine, University of Rochester, Rochester, NY.

#2006 3:21 EX-VIVO CHARACTERIZATION OF T-REGULATORY TYPE CD4+ T CELLS IN MICE EXPOSED TO TCDD. N. B. Marshall1,2, L. B. Steppan1, W. R. Vorachek1, D. V. Mournich1 and N. E. Kaminski1,2. Microbiology, Oregon State University, Corvallis, OR, 1Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR and 2AVI BioPharma Inc., Corvallis, OR.

#2007 3:48 SUPPRESSION OF T CELL CO-STIMULATOR ICOS BY DELTA-9-TETRAHYDROCANNABINOL. H. Lu1,2, B. L. Kaplan1,2 and N. E. Kaminski1,2. Pharmacology and Toxicology, Michigan State University, East Lansing, MI and 1Center for Integrative Toxicology, Michigan State University, East Lansing, MI.

Abstract #
Wednesday Afternoon, March 19
1:30 PM to 4:15 PM
Room 605

PLATFORM SESSION: ISSUES IN REGULATORY RISK ASSESSMENT

Chairperson(s): George Alexeeff, Cal/EP A, Oakland, CA and Philip Bolger, U.S. FDA, College Park, MD.

#2008 1:30 CONTAMINANTS AND A GLOBIALIZED FOOD SUPPLY. P. M. Bolger. Center for Food Safety and Applied Nutrition, U.S. FDA, College Park, MD.


up-to-date information at www.toxicology.org
Wednesday Afternoon, March 19  
1:30 PM to 4:15 PM  
Room 618

# DEVELOPMENTAL BASIS OF DISEASE

PLATFORM SESSION: NEW INSIGHTS FOR DEVELOPMENTAL TOXICOLOGY

Chairperson(s): Barbara Abbott, U.S. EPA, Research Triangle Park, NC and Evan Gallagher, University of Washington, Seattle, WA.

#2017 1:30 IS VALPROIC ACID TERATOGENICITY DEPENDENT ON HISTONE DEACETYLASE INHIBITION? M. Stigson1, M. Jergil2, M. Forsberg3, M. Fernandez4, H. Nau1, A. Gustafson1 and L. Dencker5. 1Pharmaceutical Biosciences, Uppsala University, Uppsala, Sweden; 2Medical Biochemistry and Microbiology, Uppsala University, Uppsala, Sweden; 3Food Toxicology, Veterinary Medical University, Hannover, Germany; 4Safety Assessment, AstraZeneca R&D Södertälje, Södertälje, Sweden.


#2019 2:08 HUMAN FETAL LIVER HEMATOPOIETIC STEM CELLS AS A TOOL FOR UNDERSTANDING IN UTERO INJURY OF TRANSPLACENTAL CHEMICALS. E. P. Gallagher1, J. Shao1, S. Tilton1 and C. Moneypenny2. 1Environmental and Occupational Health Sciences, University of Washington, Seattle, WA and 2Pathobiology, University of Florida, Gainesville, FL.

#2020 2:27 PREFERENTIAL EXPRESSION OF XENOBIOTIC EFFLUX TRANSPORTERS IN MOUSE FETAL MEMBRANES COMPARED TO PLACENTA. L. Aleksunes1, Y. Cui2, J. Hunt3 and C. Klausen3. 1Pharmacology, Toxicology and Therapeutics, University of Kansas Medical Center, Kansas City, KS and 2Anatomy and Cell Biology, University of Kansas Medical Center, Kansas City, KS.

#2021 2:45 PARACRINE HH SIGNALING IN PROSTATE: STAGE-SPECIFIC EFFECTS ON EPITHELIAL PROLIFERATION. M. Yu4, J. Zhang5 and W. Bushman6. 1Molecular and Environmental Toxicology Center, University of Wisconsin-Madison, Madison, WI and 2Surgery, University of Wisconsin-Madison, Madison, WI. Sponsor: R. Peterson.
Program Description (Continued)

Abstract #

#2028 2:12 TARGETED DISRUPTION OF THE NUCLEAR FACTOR-E2-RELATED FACTOR-2 (NRF2) GENE PREVENTS FORMATION OF CHOLESTEROL GALLSTONES IN MICE. A. Slitt1, Q. Cheng1, H. Jiang2, S. Kulkarni2, J. Y. Chan2 and D. Q. Wang2. 1Biomedical and Pharmaceutical Sciences, University of Arizona, Tucson, AZ, 2Department of Medicine, Harvard Medical School, Boston, MA and 3Department of Pathology, University of California, Irvine, CA. Sponsor: J. Manautou.

#2029 2:33 HEPATOCYTE-SPECIFIC DEVIATION OF KEAP1 ALTERS EXPRESSION OF HEPATIC DRUG METABOLIZING ENZYMES AND TRANSPORTERS. Q. Cheng1, L. M. Aleksunes2, J. E. Manautou2, N. J. Cherrington3, K. Taguchi4, M. Yamamoto4 and A. L. Slitt1. 1Biomedical and Pharmaceutical Sciences, University of Arizona, Tucson, AZ and 2Graduate School of Comprehensive Human Sciences, University of Tsukuba, Tennoudai, Tsukuba, Japan.

#2030 2:54 THE NRF2 ACTIVATOR OLITIPRAZ ALSO ACTIVATES THE CONSTITUTIVE ANDROSTANE RECEPTOR. M. D. Merrell1, J. P. Jackson1, L. M. Augustine1, C. D. Fisher1, A. L. Slitt1, J. M. Mahler2, W. Huang2, D. D. Moore2, C. D. Kunst2 and N. J. Cherrington3. 1Department of Pharmacology and Toxicology, University of Arizona, Tucson, AZ, 2Department of Biomedical and Pharmaceutical Sciences, University of Rhode Island, Kingston, RI, 3Pharmacological Sciences, University of Connecticut, Storrs, CT. "Pharmacology and Toxicology, University of Arizona, Tucson, AZ, and 4Graduate School of Comprehensive Human Sciences, University of Tsukuba, Tennoudai, Tsukuba, Japan.

Abstract #

Wednesday Afternoon, March 19
1:30 PM to 4:15 PM
Room 2A

PLATFORM SESSION: SELECTIVE DOPAMINERGIC NEUROTOXICITY: GENETICS AND MECHANISMS


#2034 1:30 MUTATION OF THE PARKINSON’S GENE DJ-1 INCREASES THE INFLAMMATORY RESPONSE IN MOUSE ASTROCYTES. A. K. Ashley1, T. Kato2, J. A. Moreno1, W. H. Herrnman2 and M. E. Legare2,3. 1Cell and Molecular Biology Program, Colorado State University, Fort Collins, CO and 2Environmental and Radiological Health Sciences, Colorado State University, Fort Collins, CO.

#2035 1:54 OXIDATIVE STRESS-INDUCED PHOSPHORYLATION OF PKD1 ACTIVATION LOOP IS REGULATED BY PROTEIN KINASE C-Delta PROTEOLYTIC ACTIVATION IN CELL CULTURE MODELS OF DOPAMINERGIC DEGENERATION. A. Asai2, A. Kanthasamy, V. Anantharam and A. G. Kanthasamy. Biomedical Sciences, Iowa State University, Ames, IA.

#2036 2:18 DEFINING “NEUROINFLAMMATION”: LESSONS FROM MPTP- AND METHAMPHETAMINE-INDUCED NEUROTOXICITY. J. P. O’Callaghan. CDC-NIOSH, Morgantown, WV.

#2037 2:42 PROLYL HYDROXYLASE INHIBITION PROTECTS AGAINST MPP+ TOXICITY IN VITRO. D. Lee, R. Subramanian and J. K. Andersen. Buck Institute for Age Research, Novato, CA.

#2038 3:06 NUCLEAR FACTOR KAPPA B MEDIATES SELECTIVE INDUCTION OF NEURONAL NITRIC OXIDE SYNTHASE IN ASTROCYTES DURING MILD INFLAMMATORY STIMULATION WITH 1-METHYL-4-PHENYL-1,2,3,6-ΤΕΤΡΑΗΔΡΟΡΥΛΙΝΙΔΙΝΕ. D. L. Carbone and R. B. Tjalkens. Environmental and Radiological Health Sciences, Colorado State University, Fort Collins, CO.

#2039 3:29 ALTERED DOPAMINE LEVELS AND NEURODEGENERATION IN THE SUBSTANIA NIGRA IN RESPONSE TO INTRANIGRAL INJECTION OF ROTENONE IN MICE. J. Carlsen and J. Eells. Mississippi State University, Starkville, MS. Sponsor: M. Ross.

#2040 3:52 CHARACTERIZATION OF THE DIFFERENCES IN THE OXIDATIVE EVENTS IN PROTEINS IN TWO DIFFERENT PESTICIDE MODELS OF PD. P. Mastroberardino1, A. L. McCormack1, D. A. Di Monte2, G. W. Miller2 and J. T. Greenamyre1. 1Neurology, University of Pittsburgh, Pittsburgh, PA, 2Center for Neurodegenerative Disease, Emory University, Atlanta, GA and 3Basic Research Department, The Parkinson’s Institute, Sunnyvale, CA.

up-to-date information at www.toxicology.org 263
benefits of using DecaBDE as a flame retardant outweigh the potential
ment. Nonetheless, some scientists suggest that despite these findings, the
of DecaBDE appear to be increasing in humans, wildlife, and the environ-
been banned or withdrawn worldwide. However, DecaBDE is the subject
uses in high impact polystyrene and textile applications include housing of
and upholstery textiles (e.g., sofas, office chairs). It is the only polybrominated
decabromodiphenyl ether (DecaBDE) is a high production volume chemical
264
Program Description (Continued)

Wednesday Afternoon, March 19
2:45 PM to 3:45 PM
Exhibit Hall 4C-3
EXHIBITOR HOSTED SESSION: AN ALTERNATIVE TO
ANIMAL USE: TODAY AND PROSPECTIVE

Presented by: SkinEthic Laboratories
SkinEthic is devoted to develop and produce reliable and robust in vitro
alternative methods to animal use in cosmetic, chemical and pharmaceuti-
cal industries. SkinEthic models provide relevant tools for efficacy and
safety screening tests in order to support integrated decision making during
research and development phases. Some screening tests are referenced and
validated as alternatives to animal use. Others are in the process of valida-
tion under ECVAM and OECD guidelines.

Wednesday Afternoon, March 19
2:45 PM to 3:45 PM
Exhibit Hall 4C-4
EXHIBITOR HOSTED SESSION: IN VIVO MICRO-
ULTRASOUND IMAGING FOR QUANTIFICATION OF
ANATOMICAL, FUNCTIONAL AND MOLECULAR
BIOMARKERS IN PRECLINICAL IMAGING

Presented by: VisualSonics
This workshop will describe new developments in in vivo micro-imaging for
Quantification of Anatomical, Functional and Molecular Biomarkers in Preclinical Imaging. Specifically, examples of real-time ultrasound imaging for performing detailed studies of abdominal and cardiovascular
phenotypes and analyses as well as assessment of teratogenic effects will
be reviewed. Possibilities for guided interventional procedures (both thera-
petic and toxic) will also be discussed.

Wednesday Afternoon, March 19
4:30 PM to 5:50 PM
Room 615
INFORMATIONAL SESSION: IMPLEMENTATION OF THE ICH
S8 IMMUNOTOXICITY TESTING GUIDELINE

Chairpersons(s): Thomas Kawabata, Pfizer Global Research and
Development, Groton, CT and Pramila Singh, PPD Industries, Inc.,
Morrisville, NC.

Endorsed by:
Immunotoxicology Specialty Section*

The ICH S8 Guideline, “Immunotoxicity Studies for Human Pharmaceu-
ticals” provides recommendations for nonclinical safety testing of low
molecular weight drugs for potential to induce harmful effects via suppres-
sion of the immune system. It applies to new drugs; existing drugs in which
indicated indication or label changes may result in unaddressed immunological
issues; and drugs in which signs of immunosuppression arise during clinical
trials or following market approval. Preparation of the S8 guidance docu-
ment progressed through the combined efforts of pharmaceutical industry
representatives (PhRMA, IPMA, EFPIA) and members from tripartite
government regulatory agencies (FDA, MHLW, CHMP) who recognized the
need for globally harmonized regulatory guidance on immunotoxicological
testing in drug development. Over the years leading up to the adoption of
the S8 Guideline by regional regulatory agencies (2005-2006), there was
significant debate and even some confusion over the compulsory versus
voluntary nature of the testing recommendations and on how to apply the
guidance in concert with pharmaceutical industry objectives. The purpose
of this informational seminar is to provide a forum for the discussion of the
practical implementation of the S8 Guideline including industry case
examples and questions that remain unanswered. A panel consisting of
members of the ICH S8 Expert Working Group responsible for creating the
S8 Guideline and representing the U.S., Europe, and Japan will be avail-
able to answer questions from the audience. This session is intended to be
an interactive forum with the expert panel, audience, and selected speakers
from industry who have comments or questions on the scope and applica-
tion of the S8 Guideline in current industry practice. The session will begin
with a brief introduction followed by an overview of the development of the
S8 Guideline and the rationale for the recommendations made. This will be
followed by two individual oral presentations by industry professionals with
key opinions to consider about the practical application of the Guideline, an
open question and answer session, and concluding thoughts.

Abstract #

2:45 TOXICITY OF DECA-BDE, Linda Birnbaum
4:58 EXPOSURE TO DECA-BDE, Tom Webster
5:11 DEGRADATION OF DECA-BDE VIA A BIOTIC
AND ABiotic PATHWAYS, Heather Stapleton
5:24 RISK CHARACTERIZATION - CONSIDERATIONS FOR BIOAVAILABILITY,
PHARMACOKINETICS, AND LIMITATIONS TO INTERPRETING AVAILABLE TOXICITY
DATA. Bob Campbell
5:37 COST BENEFIT ANALYSIS MODEL FOR
DECA-BDE AND FIRE SAFETY. Martin van den
Berg

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open question and answer session, and concluding thoughts.

Abstract #

#2041 4:30 A CASE STUDY ON THE RISKS AND
BENEFITS OF DECA-BDE, A MAJOR
BROMINATED FLAME RETARDANT. D.
Staskal. ChemRisk, Austin, TX.
4:45 TOXICITY OF DECA-BDE, Linda Birnbaum
4:58 EXPOSURE TO DECA-BDE, Tom Webster
5:11 DEGRADATION OF DECA-BDE VIA A BIOTIC
AND ABiotic PATHWAYS, Heather Stapleton
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DATA. Bob Campbell
5:37 COST BENEFIT ANALYSIS MODEL FOR
DECA-BDE AND FIRE SAFETY. Martin van den
Berg
**Program Description (Continued)**

Abstract #

#2042  4:30  IMPLEMENTATION OF THE ICH S8 IMMUNOTOXICITY TESTING GUIDELINE. P. Singh and T. Kawabata. PPD, Morristown, NJ and Pfizer, Groton, CT.

4:35  OVERVIEW AND HISTORY OF THE DEVELOPMENT OF THE ICH S8 GUIDELINE. Jan Willem van der Laan

5:00  FILLING THE GAP: IMMUNOTOXICITY OF BIOTECHNOLOGY PRODUCTS. Daniel Wierda

5:25  GUIDELINE POSITIONS ON ADDITIONAL IMMUNOLOGICAL PARAMETERS. Gary Burleson

5:30  CONCLUDING REMARKS. Tom Kawabata

Wednesday Afternoon, March 19
4:30 PM to 5:50 PM
Room 6C

**CAREER DEVELOPMENT**

**INFORMATIONAL SESSION: NIEHS OUTSTANDING NEW ENVIRONMENTAL SCIENTISTS (ONES) Awardees**

Chairperson(s): James Mastin, NIEHS, Research Triangle Park, NC and Carole Shreffler, NIEHS, Research Triangle Park, NC.

Endorsed by:
Inhalation and Respiratory Specialty Section*

Concerned with assuring the quality of biomedical research, the National Institute of Environmental Health Sciences launched an initiative to support the future generation of exceptionally talented and creative new scientists. For NIEHS, this involves helping to develop a cadre of talented early-career scientists who will further the understanding of the impact of environmental exposures on human health through disciplines such as toxicology, epidemiology, and clinical research, as well as multi-disciplinary translational research. To identify outstanding scientists at the formative stages of their career and assist them in launching an innovative research program with a defined impact in the environmental health sciences, NIEHS has established the ONES program to fund R01 research grants intended for researchers who have not received their first R01 research grant. It is designed to be highly competitive, each school only being allowed to submit one application, with a limited number awarded each year. These R01s are distinguished from other R01 research grants in that they provide funding for developing necessary resources and for career development activities in addition to funding for research expenses. Research programs supported by this announcement seek to promote career advancement for new scientists who intend to make a long-term career commitment to research in the mainstream of the environmental health sciences, and bring innovative, ground-breaking research initiatives and thinking to bear on the problems of how environmental exposures affect human biology, human pathophysiology and human disease. The first round of awardees included researchers investigating the effects of air pollution on pulmonary and cardiovascular disease, the mechanisms of arsenic carcinogenesis, mechanisms of repair of environmentally induced DNA damage, and sensory neuron signaling in response to environmental exposures. This session will provide attendees the opportunity to hear the exciting, innovative research being conducted by these talented new researchers and introduce the recipients of the second round of ONES awardees.

#2043  4:30  NIEHS OUTSTANDING NEW ENVIRONMENTAL SCIENTISTS (ONES) Awardees. J. P. Mastin and C. Shreffler. DERT, NIEHS, Research Triangle Park, NC.

4:44  TRPAI CHANNELS AS NEURONAL SENSORS FOR ENVIRONMENTAL TOXICANTS. Sven Eric Jordt

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**WEDNESDAY EVENING**

Wednesday Evening, March 19
6:00 PM to 7:30 PM
Sheraton Grand Ballroom A

SPECIAL INTEREST GROUP MEETING/RECEPTION: WOMEN IN TOXICOLOGY

Wednesday Evening, March 19
6:00 PM to 7:30 PM
See Daily Pocket Calendar on page 13 for room listings

SPECIALTY SECTION MEETINGS/RECEPTIONS: DERMAL TOXICOLOGY, IMMUNOTOXICOLOGY, MIXTURES, MOLECULAR BIOLOGY, AND REPRODUCTIVE AND DEVELOPMENTAL TOXICOLOGY
Increased biofuel production has altered land use and created ethical
concerns, economic changes, and soil sustainability questions. Biofuel
combustion, with an emphasis on biodiesel exhaust as one of the better
studied biofuels. Comparison to emissions from petroleum diesel engines
will allow assessment as to how similar the emissions may be in terms
of toxic components, assisting in risk assessment for biodiesel exhaust; 3. to
present an overview of the known toxicology of biofuel emissions, with
reference to petroleum diesel exhaust literature, to identify areas where
assessment of the effects of biofuel emissions exposure should be pursued.

[This abstract may not reflect EPA policy.]

#2044 7:30 BIOFUEL COMBUSTION: AN EMERGING
HEALTH PROBLEM? M. C. Madden1 and F.
Casse2. 1ORD, NHEERL, HSD, Clinical Research
Branch, U.S. EPA, Chapel Hill, NC and 2Center of
Environmental Health Research, National Institute
for Public Health and Environment, Bilthoven,
Netherlands.

7:38 LIQUID BIOFUELS: BIOLOGICAL
SOURCES, RATIONALE FOR
DEVELOPMENT, AND THE OUTLOOK
FOR FUTURE USE IN THE U.S. Christopher
Somerville

8:14 THE PRODUCTION AND USE OF LIQUID
BIOFUELS: SOME OBSERVATIONS FROM A
EUROPEAN PERSPECTIVE. Flemmie Cassee

8:32 THE TOXICOLOGY OF BIOFUELS
COMBUSTION EMISSIONS. Michael Madden

Thursday Morning, March 20
8:30 AM to 12:00 NOON
Ballroom 6C & E

© OXIDATIVE SIGNALING AND REDOX BIOLOGY

POSTER SESSION: OXIDATIVE INJURY AND REDOX
BIOLOGY II: IN VITRO

Chairperson(s): Louise Ball, University of North Carolina Chapel Hill,
Chapel Hill, NC.

Displayed: 8:30 AM–12:00 NOON

Attended: 8:30 AM–10:15 AM

#2045 Poster Board Number ......................101
MODULATION OF CELLULAR
ANTIOXIDANT ENZYMES ACTIVITIES AND
GLUTATHIONE LEVEL BY THE DRINKING
WATER CHLORINATION BY-PRODUCT,
DICHLOROACETATE. E. Hassoun and J. Mehta.
Pharmacology, The University of Toledo, Toledo,
OH.

#2046 Poster Board Number ......................102
INCREASED MITOCHONDRIAL
THIOREDOXIN POTENTIATED
N-ETHYLMALEIMIDE-INDUCED
CYTOXICITY. Y. Chen1, Y. Gir2, D. P. Jones3
and J. Cal. 1Ophthalmology, Vanderbilt University,
Nashville, TN and 2Medicine, Emory University,
Atlanta, GA.
Program Description (Continued)

Abstract #  Post#Poster Board Number ........................................103  Abstract #  Post#Poster Board Number ........................................110
#2047  NRF2-DEPENDENT ANTI-OXIDANT  CYANIDE NEUROTOXICITY:  #2048  PATHWAY IN ASTROCYTES EXPOSED TO INVOLVEMENT OF UCP-2 UPREGULATION, METHYLMERCURY (MEHg). L. Wang1, H. DEPLETION AND BNIP3. L. Li, X. Zhang, Jiang2, M. Aschner3 and J. Cai4. Ophthalmology, Vanderbilt University, Nashville, TN and Pediatrics, Vanderbilt University, Nashville, TN.
#2049  MILD ENDOPLASMIC RETICULUM (ER) STRESS PRECONDITIONING ATTENUATES METHYLMERCURY (MEHg)-INTOXICATION IN MYOCYGENIC CELLELINE. F. Usuki. National Institute for Minamata Disease, Minamata, Kumamoto, Japan. Sponsor: A. Naganuma.
#2050  INCREASED OXYGEN UTILIZATION AND OXIDATIVE STRESS IN CHO CELLS DURING DIQUAT REDOX CYCLING. K. C. Fussell1, J. P. Gray1, P. Smith2, D. E. Heck1 and J. D. Laskin1. Pharmacology & Toxicology, Rutgers University, Piscataway, NJ; Biocurrents Research Center, Marine Biological Laboratory, Woods Hole, MA; Cancer Biology & Pharmacology, University of Illinois College of Medicine, Peoria, IL and Environmental & Occupational Med, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ.
#2051  THE ROLE OF GLUTATHIONE IN M1-1, 2-DITHIOLE-3-Thione-MEDIATED CYTOPROTECTION AGAINST ACROLEIN-INDUCED NEUROTOXICITY. Z. Jia, H. Zhu, Y. Li and H. P. Misra. Division of Biomedical Sciences, Edward Via Virginia College of Osteopathic Medicine, Virginia Tech Corporate Research Center, Blacksburg, VA.
#2052  OFLOXACIN-INDUCED INJURIES OF JUVENILE RABBIT CHONDROCYTES IN CULTURE THROUGH OXIDATIVE STRESS. S. Peng and Q. Li. Research center for pharmacology and toxicology, Beijing Institute of disease control and prevention, Beijing, China.
#2053  THE EFFECT OF THE LIPID PEROXIDATION PRODUCT 4-HYDROXY-2-NONENAL ON ESTERASE AND LIPASE ACTIVITIES IN HUMAN THP-1 MONOCYTES/MACROPHAGES. A. Crow, K. Hardin, A. Borazjani and M. K. Ross, Mississippi State University, Mississippi State, MS.

up-to-date information at www.toxicology.org  267
Program Description (Continued)

Abstract #

#2061 Poster Board Number ..................117 OXIDANT-INDUCED ARACHIDONIC ACID OXIDATION AND RELEASE FROM ISOLATED RABBIT RENAL MITOCHONDRIA: ROLE OF iPLAγ AND J. L. Blum1, G. R. Kinsley1, P. Moniani1, B. S. Cummings2 and R. G. Schnellmann1. Pharmaceutical and Biomedical Sciences, Medical University of South Carolina, Charleston, SC and 2Pharmaceutical and Biomedical Sciences, University of Georgia, Athens, GA.

#2062 Poster Board Number ..................118 iPLAγ PREVENTS OXIDANT-INDUCED LIPID PEROXIDATION AND Ca2+ RELEASE IN ISOLATED RABBIT KIDNEY CORTEX MICROSONES. A. C. Eaddy and R. G. Schnellmann. Pharmaceutical Sciences, Medical University of South Carolina, Charleston, SC.

#2063 Poster Board Number ..................119 DEVELOPMENT OF A DOMINANT- INHIBITORY MUTANT OF THE CATALYTIC SUBUNIT OF GLUTAMATE CYSTEINE LIGASE. C. C. Franklin and D. S. Backos. Department of Pharmaceutical Sciences, Toxicology Graduate Program, University of Colorado Health Sciences Center, Denver, CO.


#2065 Poster Board Number ..................121 PROSTAGLANDIN INDUCED GSH EFFLUX THROUGH ABCG2. H. M. Leitner1, E. Min2 and B. J. Day. 1Pharmaceutical Sciences, UCHSC at Denver, Denver, CO and 2Medicine, National Jewish Medical and Research Center, Denver, CO.

#2066 Poster Board Number ..................122 ABSENCE OF NITRIC OXIDE SYNTHASE IN ESSENTIALLY PURE LIVER MITOCHONDRIA. P. Venkatakrishnan, E. S. Nakayasu, I. C. Almeida and R. T. Miller. Biological Sciences, University of Texas at El Paso, El Paso, TX.

#2067 Poster Board Number ..................123 ROS AND CHEMOKINE RELEASE IN A549 CELLS IN RESPONSE TO FE AND SE EXPOSURE. P. A. Potnis, K. S. Squibb and A. Elhawab. Toxicology, University of Maryland, Baltimore, Baltimore, MD.

#2068 Poster Board Number ..................124 POLYCHLORINATED BIPHENYL (PCB)-INDUCED OXIDATIVE STRESS MEDIATES CYTOTOXICITY IN HUMAN BREAST EPITHELIAL CELLS, Y. Zhu1, N. Aykin-Burns1, A. L. Kalen1, L. Li1, H. J. Lehnert1, L. W. Robertson2, P. C. Goswami2 and D. R. Spitz3. 1Radiation Oncology, University of Iowa, Iowa City, IA and 2Occupational and Environmental Health, University of Iowa, Iowa City, IA.

Abstract #

#2069 Poster Board Number ..................117 INTERACTIONS OF DINITROBENZENES WITH CALMODULIN-FREE NEURONAL NOS. C. N. Joshi and T. Miller. Biological Sciences, University of Texas at El Paso, El Paso 79968, TX.

#2070 Poster Board Number ..................118 MITOCHONDRIAL PEROXIREDOXIN III FUNCTION IN PROTECTION AGAINST OXIDATIVE STRESS. R. Xie1, J. Dong1, S. S. Lau1 and T. Monks1. Pharmacology and Toxicology, University of Arizona Health Sciences Center, Tucson, AZ and 2Dow AgroSciences, Beijing, China.

#2071 Poster Board Number ..................119 HYPEROXIA ENHANCES LPS-INDUCED HMGB1 RELEASE FROM ALVEOLAR MACROPHAGES AND EPITHELIAL CELLS. M. G. Muralidhar1, S. Gangisetti1, T. Emtzejari-Zaheri1, A. R. Pathak1, K. Degenhardt1, H. Wang1, K. J. Tracey1 and L. Munte11. 1Department of Pharmaceutical Sciences, St. John’s University College, Queens, NY and 2Cardiopulmonary Research, The Feinstein Institute for Medical Research, North Shore-LI Health System, Manhasset, NY.

#2072 Poster Board Number ..................120 MECHANISTIC STUDY OF NRF2 ACTIVATION BY ARSENIC. X. Wang, Z. Sun and D. D. Zhang. U of Arizona, Tucson, AZ.

#2073 Poster Board Number ..................121 MODERATE CONCENTRATIONS OF HYDROGEN PEROXIDE RESCUE HYPEROXIA-INDUCED MACROPHAGE DYSFUNCTION. B. Phan1, T. Emtzejari-Zaheri1, R. Lockshin2 and L. Munte11. 1Pharmaceutical Sciences, St. John’s University College of Pharmacy, Queens, NY and 2Cardiopulmonary Research, The Feinstein Institute for Medical Research, North Shore-Long Island Jewish Health System, Manhasset, NY.

#2074 Poster Board Number ..................122 THE IKKβ CROSSTALKS WITH THE TGFβ PATHWAYS IN ARSENIC TOXICITY. Z. Peng, Z. Tang and Y. Xia. University of Cincinnati, Cincinnati, OH.


#2076 Poster Board Number ..................124 EFFECTS OF SODIUM ARSENITE ON ROS PRODUCTION AND CELL PROLIFERATION MEDIATED BY C-MYC AND NF-κB. SOT’s 47th Annual Meeting & ToxExpo™ MIB. A. Elnabawi. Toxicology, University of Maryland, Baltimore, MD.
Thursday Morning, March 20
8:30 AM to 12:00 NOON
Ballroom 6C & E

Poster Board Number #2077

OXIDATIVE POTENTIAL AND CELLULAR EFFECTS INDUCED BY PM10 OBTAINED IN MEXICO CITY AND AT A RECEPTOR SITE.

Abstract #

Poster Board Number #2077

OXIDATIVE POTENTIAL AND CELLULAR EFFECTS INDUCED BY PM10 OBTAINED IN MEXICO CITY AND AT A RECEPTOR SITE. A. R. Osornio-Vargas1, R. Quintana1, V. Gomez2, J. Serrano2, I. Vazquez2, G. Flores3, J. Miranda2, E. Vega4, H. Ruiz5, S. Escalona5, B. de Froy6, A. de Vizcay6, C. Garcia1, I. Rosas7 and L. Tan Molina8.

1INCan, Mexico City, DF, Mexico, 2UNAM, Mexico City, DF, Mexico, 3IMP, Mexico City, DF, Mexico, 4CINVESTAV, Mexico City, DF, Mexico, 5St. Louis University, St. Louis, MO and 6MCE2, San Diego, CA.

Abstract #

Poster Board Number #2078

DNA DAMAGE BY A TWO-ELECTRON OXIDATION (EPOXIDATION) MECHANISM.

L. M. Ball, W. Ye1, J. E. Olson1, K. M. Koshyap1, K. Jayaraj1, G. Boysen1, A. Gold1 and R. Sangiah1.

1Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, Chapel Hill, NC and 2School of Pharmacy, University of North Carolina at Chapel Hill, Chapel Hill, NC.

Abstract #

Poster Board Number #2079

OXIDATIVE DNA DAMAGE IN NCI-H292 CELLS EXPOSED TO CIGARETTE SMOKE AT THE AIR-LIQUID INTERFACE.


Abstract #

Poster Board Number #2080

UNCONJUGATED BILIRUBIN CAUSES CHANGES IN INTRACELLULAR REDOX STATUS, CHANGES TO THE DISULFIDE PROTEOME, AND UPREGULATION OF SEVERAL GENES INVOLVED IN ER STRESS. G. H. Oakes1, A. Awaysheh1, L. B. Dale1 and J. R. Bend2.

1Physiology and Pharmacology, Siebens Drake Medical Research Institute, University of Western Ontario, London, ON, Canada, 2Pathology, Siebens-Drake Medical Research Institute, University of Western Ontario, London, ON, Canada and 3Cell Biology Group, Robart’s Research Institute, London, ON, Canada.

Abstract #

Poster Board Number #2081


Abstract #

Poster Board Number #2082

APPLICATION OF CONFOCAL AUTOFLUORESCENCE SPECTROSCOPY FOR ANALYSIS OF NADH STATUS IN THE HEPG2 AND THE C6 GLIOMA CELLS AND ITS CHANGE UPON EXPOSURE TO CD. M. S. Yang1, J. Zheng2, W. Y. Ng1, W. Zheng3, T. Lin1 and J. Y. Qu1.

1Department of Biology, Hong Kong Baptist University, Kowloon, Hong Kong, China and 2Department of Electronic & Computer Engineering, Hong Kong University of Science and Technology, Kowloon, Hong Kong, China.

Abstract #

Poster Board Number #2083


1Drug Safety Evaluation, Allergan Inc, Irvine, CA and 2Vitron Inc, Tucson, AZ.

Abstract #

Poster Board Number #2084


Abstract #

Poster Board Number #2085

ROLE OF METALLOTHIONEIN IN HEPATIC TOXICITY CAUSED BY VANADIUM COMPOUND IN MICE. T. Hasegawa1, M. Satoh1, A. Shimada1 and Y. Seko1.

2Environmental Biochemistry, Yamanashi Institute of Environmental Sciences, Fujiyoshida, Yamanashi, Japan, 3Aichi Gakuen University, Nagoya, Aichi, Japan and 4Tottori University, Tottori, Japan.

Abstract #

Poster Board Number #2086


1Biología Celular y Tisular, UNAM, Mexico City, Mexico and 2Neuromorfologia, FES Iztacala, UNAM, Mexico City, Mexico.

Abstract #

Poster Board Number #2087

HIF-1α AND COX-2 MEDIATE SYNERGISTIC RELEASE OF ANGIOGENIC FACTORS FROM HUMAN LUNG FIBROBLASTS IN RESPONSE TO NICKEL AND MICROBIAL STIMULI. K. A. Brant, R. M. Ward and J. P. Fabisiak. Environmental and Occupational Health, University of Pittsburgh, Pittsburgh, PA.

Abstract #

Poster Board Number #2088

OVEREXPRESSION OF F-BOX PROTEIN, HRT3 OR YLR224W, CONFRS RESISTANCE TO METHYLMERCURY IN YEAST CELLS. G. Hwang and A. Nagamura.

Tohoku University, Sendai, Japan.

Abstract #

Poster Board Number #2089

RUPTURED NAVEL ATTENDED

DISPLAYED: 8:00 AM–12:00 NOON

Chairperson(s): Steve Lasley, University of Illinois, Peoria, IL.

Displayed: 8:00 AM–12:00 NOON

Attended: 10:15 AM–12:00 NOON

Society of Toxicology 2008

J. Serrano2, I. Vazquez1, G. Flores1, J. Miranda2, V. Yang1, A. R. Osornio-Vargas1,2, R. Quintana1, V. Gomez2, J. Serrano2, I. Vazquez2, G. Flores3, J. Miranda2, E. Vega4, H. Ruiz5, S. Escalona5, B. de Froy6, A. de Vizcay6, C. Garcia1, I. Rosas7 and L. Tan Molina8.
**Program Description (Continued)**

Abstract #

#2089

**Poster Board Number #2089**

THE ROLE OF MRP2 AND GLUT2 TRANSPORTERS IN THE METABOLISM OF ARSENITE BY PRIMARY HUMAN HEPATOCYTES. F. S. Walton1,2, Z. Drobný1 and M. Styblo1. 1Department of Nutrition, University of North Carolina, Chapel Hill, NC and 2Center for Environmental Medicine, Asthma and Lung Biology, University of North Carolina, Chapel Hill, NC.

#2090

**Poster Board Number #2090**

DNA DAMAGE IN HUMAN LYMPHOCYTES IN VITRO EXPOSED TO COMBINED METALS; ARSENIC, CADMIUM, COBALT AND CHROMIUM. N. Yoshioka, H. Nakashima, Y. Sano and K. Omoe. Department of Preventive Medicine and Public Health, Kento University School of Medicine, Tokyo, Japan.

#2091

**Poster Board Number #2091**

HETEROLOGOUS EXPRESSION SYSTEM IN YEAST REVEALED STRUCTURE-FUNCTION RELATIONSHIP IN METAL TRANSCRIPTION FACTOR, MTF-1. Y. Jin1,2, H. Al-Refaie2 and J. Freedman1. 1NIH, Research Triangle Park, NC and 2Duke University, Durham, NC.

#2092

**Poster Board Number #2092**

UNDERSTANDING COBALT CHLORIDE-INDUCED LUNG INJURY THROUGH CYTOMETRIC, METABOLOMIZATION, PROTEOMIC, AND HISTOLOGICAL ANALYSIS OF BRONCHOALVEOLAR LAVAGE FLUID (BALF). Y. Saini1,4, J. Harkema1,2 and J. LaPres3,5. 1Genetics, Michigan State University, East Lansing, MI, 2Department of Pathobiology and Diagnostic Investigation, Michigan State University, East Lansing, MI, 3The National Food Safety and Toxicology Center, Michigan State University, East Lansing, MI, 4Center for Integrative Toxicology, Michigan State University, East Lansing, MI, and 5Biochemistry and Molecular Biology, Michigan State University, East Lansing, MI.

#2093

**Poster Board Number #2093**

CHRONIC EXPOSURE TO ZINC CHROMATE INDUCES CHROMOSOME INSTABILITY IN HUMAN LUNG CELLS. A. Holmes1,2, Q. Qin3,4, J. L. Young5,6, K. Joyce10, H. Xie1,2, T. Cavas3,4 and J. P. Wise5,6. 1Wisel Laboratory of Environmental and Genetic Toxicology, University of Southern Maine, Portland, ME, 2Maine Center for Toxicology and Environmental Health, University of Southern Maine, Portland, ME, 3Department of Applied Medical Science, University of Southern Maine, Portland, ME and 4Department of Biology, Mersin University, Mersin, Turkey.

#2094

**Poster Board Number #2094**

THE ULTRASTRUCTURAL EFFECTS OF COPPER DIMETHYLTHIOCARBAMATE (CDCC) ON MATERNAL AND NEWBORN BRAINS OF LONG-EVANS RATS. B. Scharf and L. D. Trombeta. 1Biology, St. Johns University, New York and 2Pharmaceutical Sciences, St. Johns University, New York.

#2095

**Poster Board Number #2095**

THE EFFECTS OF ZIRAM ON RAT HIPPOCAMPAL ASTROCYTES. A. Matei and L. D. Trombeta. 1Pharmaceutical Sciences, St. Johns University, New York and 2Laboratory of Environmental and Genetic Toxicology, University of Southern Maine, Portland, ME.

Abstract #

#2096

**Poster Board Number #2096**

STUDY OF INFLUENCE OF COMBINED INTRODUCTION OF MANGANESE AND PIRACETAM ON COGNITIVE FUNCTIONS IN WHITE RATS. A. N. Petrov. The Institute of Toxicology, St-Petersburg, Russian Federation.

#2097

**Poster Board Number #2097**


#2098

**Poster Board Number #2098**

PHARMACOKINETICS OF TUNGSTEN (188W) FOLLOWING ACUTE SODIUM TUNGSTATE INHALATION IN RATS. D. J. Wagner1, P. M. Radcliffe1, A. O. Olabisi1, B. A. Wong2, M. F. Struve2, K. M. Attard2, E. Tewksbury2, P. G. Gunasekar2, G. D. Chapman1 and D. C. Dorman. 1Environmental Health Effect Laboratory [EHEL], Naval Health Research Center, Wright Patterson Air Force Base, OH, 2CIT, The Hamner Institutes, Research Triangle Park, NC and 3College of Veterinary Medicine, North Carolina State University, Raleigh, NC.

#2099

**Poster Board Number #2099**

TUNGSTATE’S EFFECTS ON IMMUNE AND NON-IMMUNE HUMAN CELL TYPES WHEN ANALYZED IN VITRO. D. J. Carson1, A. Overburg2, A. L. Wagner1, A. O. Olabisi1, P. G. Gunasekar1, G. Babcock2 and G. D. Chapman2. 1Cincinnati Shriner’s Hospital for Children, Cincinnati, OH and 2Environmental Health Effect Laboratory [EHEL], Naval Health Research Center, Wright Patterson Air Force Base, OH.

#2100

**Poster Board Number #2100**

ACUTE AND SUBACUTE TOXICITY OF ORALLY ADMINISTERED SODIUM TUNGSTATE IN SPRAGUE-DAWLEY RATS. W. C. McCuin1, L. Crouse1, M. Thompson1, A. Hess-Ruth1, M. Quinn1, M. Bazar1, P. Beall2, K. Mazzuchini2, H. El-Fawal2 and G. Leach2. 1Toxicology, U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD, 2Biotechnology, Hillsborough, NC and 3Division of Health Professions and Natural Sciences, Mercy College, Dobbs Ferry, OH.

#2101

**Poster Board Number #2101**

HEALTH EFFECTS OF EMBEDDED FRAGMENTS OF TUNGSTEN AND TUNGSTEN ALLOYS. L. E. Roscelli1, A. Hess-Ruth1, P. Beall2 and P. Catherine3. 1U.S. Army CHPPM, Aberdeen Proving Ground, MD and 2Biotechnologies, LLC, Hillsborough, NC.

#2102

**Poster Board Number #2102**

REMOVAL OF TISSUE MANGANESE BY P-AMINOSALICYLIC ACID (PAS) IN MANGANESE-EXPOSED RATS IN VIVO. W. Zheng1, Y. Zhang1, Y. Jiang2 and W. Jiang1. 1Purdue University, West Lafayette, IN and 2Guangxi Medical University, Nanning, Guangxi, China.
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<td>#2104</td>
<td>THE EFFECT OF MANGANESE INDUCED PRODUCTION OF REACTIVE OXYGEN SPECIES IN MICROGLIA: RELEVANCE TO DOPAMINERGIC NEURODEGENERATION. B. Liu, Y. Liu, G. Dutta, D. S. Barber and P. Zhang. 1Department of Pharmacodynamics, University of Florida, Gainesville, FL and 2Department of Physiological Sciences, University of Florida, Gainesville, FL and 3McKnight Brain Institute, University of Florida, Gainesville, FL.</td>
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<td>#2104</td>
<td>#2105</td>
<td>ALTERNED COPPER TRANSPORT AT RAT BLOOD-CSF BARRIER FOLLOWING SUBCHRONIC EXPOSURE TO MANGANESE. Y. Zhang and W. Zheng. School of Health Sciences, Purdue University, West Lafayette, IN.</td>
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<td>#2107</td>
<td>COPPER SUPPLEMENTATION REVERSES CARDIOMYOCYTE HYPERTROPHY THROUGH A DIRECT REDUCTION IN THE CELL SIZE. Y. Zhou, Y. Jiang and Y. Kang. University of Louisville, Louisville, KY.</td>
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<td>#2109</td>
<td>EFFECTS OF GLUTATHIONE AND HYDROGEN PEROXIDE ON THE STABILITY OF BILARY METABOLITES OF INTRAVENOUSLY INJECTED ARSENITE IN RATS. Y. Kobayasahi and S. Hirano. 1Environmental Health Sciences Division, National Institute for Environmental Studies, Tsukuba, Japan and 2Research Center for Environmental Risk, National Institute for Environmental Studies, Tsukuba, Japan.</td>
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<td>#2109</td>
<td>#2110</td>
<td>ARSENITE MODIFIES P53-MEDIATED RESPONSE TO CISPLATIN-INDUCED DNA DAMAGE IN OVARIAN CANCER CELLS. C. Mueny, A. A. Pandit and J. States. 1Department of Pharmacology &amp; Toxicology, University of Louisville, Louisville, KY and 2Ctr. Environmental Genomics &amp; Integrative Biology, U. Louisville, Louisville, KY.</td>
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<td>SENSITIVITY TO SODIUM ARSENITE DEPENDS UPON A FUNCTIONAL SPINDLE CHECKPOINT. S. S. McNeely, A. C. Belshoff, B. F. Taylor, M. J. McCabe and J. States. 1Pharmacology, University of Louisville, Louisville, KY and 2Environmental Medicine, University of Rochester, Rochester, NY.</td>
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<td>#2112</td>
<td>#2113</td>
<td>EXPRESSION OF KERATIN 6A AND KERATIN 16 IN ARSENITE AND CADMIUM TRANSFORMED UR OTH E LIAL CELLS IS INDUCED IN VITRO AND IS ASSOCIATED WITH SQUAMOUS DIFFERENTIATION. S. Somji, L. Cao, X. Zhou, S. Sens, S. H. Garrett and D. A. Sens. Pathology, University of North Dakota, Grand Forks, ND.</td>
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<td>#2113</td>
<td>#2114</td>
<td>CHARACTERIZATION OF TUMOR HETEROTRANSPANTS PRODUCED FROM INDEPENDENTLY GENERATED CLONES OF ARSENITE AND CADMIUM TRANSFORMED HUMAN UROTHELIAL CELLS. X. Zhou, S. Somji, S. H. Garrett, M. Sens and D. A. Sens. Pathology, University of North Dakota, Grand Forks, ND.</td>
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<td>#2114</td>
<td>#2115</td>
<td>CO-ADMINISTRATION OF COBALT CHLORIDE PROTECTS AGAINST LIVER INJURY INDUCED BY CADMIUM CHLORIDE IN MICE. S. Himeno, K. Nakashima and H. Fujishiro. Fac. of Pharmaceutical Sciences, Tokushima Bunri University, Tokushima, Japan. Sponsor: M. Satoh.</td>
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<tr>
<td>#2115</td>
<td>#2116</td>
<td>CO-ADMINISTRATION OF COBALT CHLORIDE PROTECTS AGAINST LIVER INJURY INDUCED BY CADMIUM CHLORIDE IN MICE. S. Himeno, K. Nakashima and H. Fujishiro. Fac. of Pharmaceutical Sciences, Tokushima Bunri University, Tokushima, Japan. Sponsor: M. Satoh.</td>
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#2117

Poster Board Number ..............................................213

CELLULAR VITAMIN C INCREASES PROGRAM REPAIRING MISMATCH REPAIR BUT NOT P53, M. F. Reynolds and A. Zhitkovich. Pathology and Laboratory Medicine, Brown University, Providence, RI.

#2118

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V-PROLI/NO, A NITRIC OXIDE DONOR PRODRUG, PROTECTS LIVER CELLS FROM ARSENIC-INDUCED TOXICITY AND APOPTOSIS. W. Qu1, A. Dill1, J. E. Saavedra2, L. K. Keefer3 and M. Waalkes3. 1Inorganic Carcinogenesis Section, LCC, NCI at NIEHS, Research Triangle Park, NC; 2SAIC, NCI at Frederick, Frederick, MD and 3CS, LCC, NCI at Frederick, Frederick, MD.

#2119

Poster Board Number ..............................................215

ELIMINATION OF THIOL CONJUGATES OF INORGANIC MERCURY AND THE ROLE OF THE MULTIDRUG RESISTANCE PROTEIN 2. C. Bridges, R. K. Zalups and L. Joshee. Division of Basic Medical Sciences, Mercer University School of Medicine, Macon, GA.

#2120

Poster Board Number ..............................................216

REACTIVE OXYGEN SPECIES SCAVENGE REDUCE HYPERPROLIFERATION AND ANCHORAGE INDEPENDENT GROWTH OF UROTS LA CELLS CHRONICALLY EXPOSED TO MONOMETHYLARSONOUS ACID. K. E. Eblin, S. E. Buffington and A. J. Gandolfi. College of Pharmacy-Toxicology, University of Arizona, Tucson, AZ.

#2121

Poster Board Number ..............................................217

ALPHA-TOCOPHEROL AVOIDS OVEREXPRESSION OF CLAUDIN-1 LOCATION, AND MAINTAINS PROXIMAL RENAL FUNCTION IN MICE EXPOSED TO DICHROMATE. L. Arreola-Mendoza1, J. L. Reyes1, M. E. Mendoza1 and L. M. Del Razo1. 1Toxicology, Cinvestav-IPN, Mexico D.F, Mexico and 2Physiology & Biophysics, Cinvestav-IPN, Mexico D.F., Mexico.

#2122

Poster Board Number ..............................................218

THE ROLE OF NADPH OXIDASE VERSUS MITOCHONDRIA IN ARSENIC TRIOXIDE-INDUCED APOPTOSIS. K. K. Mann, M. Kourielis, Z. Diaz, S. Marcours and W. H. Miller. Lady Davis Institute for Medical Research, McGill University, Montreal, QC, Canada.
Program Description (Continued)

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#2128  
Poster Board Number ........................................226  
EFFECTS OF FEED BORNE FUSARIUM MYCOTOXINS ON INTESTINE AND IMMUNE RESPONSE OF BIRDS INFECTED WITH COCCIDIA. G. N. Girgis1, T. K. Smith1, J. R. Barton2, S. Sharii3 and H. J. Boermans1, 1Department of Animal and Poultry Science, University of Guelph, Guelph, ON, Canada, 2Department of Pathobiology, University of Guelph, Guelph, ON, Canada, and 3Department of Biomedical Sciences, University of Guelph, Guelph, ON, Canada.

#2129  
Poster Board Number ........................................227  
TCDD PREVENTS DIABETES IN NON-OBESE DIABETIC (NOD) MICE. D. G. Farrer1, L. B. Steppan1, S. Oda4, W. R. Vorachek1, D. Pham1, D. V. Mourich and N. I. Kerkvliet1, 1Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR and 2AVL BioPharma Inc., Corvallis, OR.

#2130  
Poster Board Number ........................................228  
GENISTEIN PROTECTS FEMALE NONOBESE DIABETIC (NOD) MICE FROM DEVELOPING TYPE 1 DIABETES. T. L. Guo1, D. R. Gennone2, W. Aatachou4, J. F. Zheng1 and K. L. White Jr.1, 1Pharmacology and Toxicology, Virginia Commonwealth University, Richmond, VA and 2NTP, DIR, NIEHS, RTP, NC.

#2131  
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#2132  
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THE ROLE OF HMGBl IN THE PATHOGENESIS OF CYSTIC FIBROSIS. T. Entexari-Zaher1, D. Weiss1, S. Gangiset1, K. J. Tracey2, H. Wang2, M. Caryl1 and L. Mantell1, 1Pharmaceutical Sciences, St. John’s University, Queens, NY, 2Cardiopulmonary Research, The Feinstein Institute for Medical Research, North Shore-Long Island Jewish Health System, Manhasset, NY and 3Medicine, University of Vermont College of Medicine, Burlington, VT.

#2133  
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SYSTEMIC AND LOCAL IMMUNOMODULATORY EFFECTS FOLLOWING A SINGLE INTRATRACHEAL EXPOSURE OF 1,2,5,6-DIBENZANTHRACENE (DBA) IN ADULT FEMALE B6C3F1 MICE. D. Smith1, M. J. Smith1 and K. L. White1, 1Pharmacology and Toxicology, VCU, Richmond, VA, 2Biomedical Engineering, VCU, Richmond, VA and 3Philip Morris USA, Richmond, VA.

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ELECTROSPUN NANO-FIBROUS TISSUE ENGINEERING SCAFFOLDS OF POLYDIOXANONE BLENDED WITH ELASTIN: A STUDY OF IN VITRO IMMUNOMODULATORY EFFECTS. M. J. Smith1, D. C. Smith2, K. L. White3 and G. L. Bowlin1, 1Biomedical Engineering, Virginia Commonwealth University, Richmond, VA, 2Pharmacology and Toxicology, Virginia Commonwealth University, Richmond, VA and 3Philip Morris USA, Richmond, VA.

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#2138  
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IMMUNOTOXICITY ASSESSMENT OF YOUNG AND ADULT C57BL/6 MICE FED TRIBUTYL Tin CONTAMINATED FISH IN THEIR DIET. B. Badiwa Bizowe, M. Fortier, S. Pillet, M. Fournier and P. Broussard. Immunotoxicology, INRS-Institut Armand Frappier, Pointe Claire, QC, Canada.

#2139  
Poster Board Number ........................................237  
IMMUNOLOGICAL ALTERATIONS IN B6C3F1 MICE FOLLOWING ORAL EXPOSURE TO A BROMINATED FLAME RETARDANT MIXTURE: DE-71. P. A. Fair1, H. Stavros1, M. Mollenhauer2, D. E. Keil1 and M. Peden-Adams2, 1NOS/NOAA, Charleston, SC, 2MED, Charleston, SC and 3UNLV, Las Vegas, NV.

#2140  
Poster Board Number ........................................238  
EVALUATION OF THE POTENTIAL EFFECTS OF ATRAZINE AND ITS METABOLITES ON THE IMMUNE SYSTEM ROUTINE TOXICITY STUDIES CONDUCTED IN RAT, MOUSE AND DOG. T. Pastoor1, C. Breekreinridge and J. Stevens2, 1Syngenta Crop Protection, Greensboro, NC and 2Department of Pharmacology, Wake Forest School of Medicine, Winston-Salem, NC.

#2141  
Poster Board Number ........................................239  
CHARACTERIZATION OF IMMUNE AND ASTHOMATIC RESPONSES IN CYMONOLGUS MACAQUES FOLLOWING ANTAGONISM OF IL-12/23 ACTIVITY WITH USTEKINUMAB (CTNO 1275). C. Sachs1, J. Benson1, P. Smith1, A. Schantz2, E. Martin3, D. Grader1, Q. Jiao1, J. Corning1, P. Martin1 and G. Treacy3, 1Centocor R&D, Radnor, PA, 2Covance Laboratories, Madison, WY and 3Charles River Labs, Shrewsbury, MA.
Abstract #

#2142  
**Poster Board Number ........................................240**  

**IMMUNOTOXIC EFFECTS OF TRIBUTYRYL TETRADECANOIC ACID ON SPLENOCYTES IN F1 RATS AFTER SUBACUTE ADMINISTRATION.** M. Tsuoda1, M. Tsuji1, Y. Zhang1, S. Kimura1, C. Sugaya1, Y. Inoue1, Y. Kudo1, T. Satoh1, M. Wakasa1, T. Tashiro1, Y. Sugita-Konishi2 and Y. Aizawa1. 1Preventive Medicine and Public Health, Kitasato University School of Medicine, Sagamihara, Kanagawa, Japan, 2Living Science, Mejiro University College, Tokyo, Japan, 3Fukushima Medical University, 8-tetRAClORodiBenzO-pARA-dioxin (TCDD) Research Center, Fukushima, Japan, 4Chemistry and Biological Sciences, Aoyama Gakuin University School of Science and Engineering, Sagamihara, Kanagawa, Japan and 5Division of Microbiology, National Institute of Health Sciences, Tokyo, Japan.

#2143  
**Poster Board Number ........................................241**  

**SIMULTANEOUS TIME COURSE AND DOSE RESPONSE CHARACTERIZATION OF 2, 3, 7, 8-TETRACHLORIDIBENZO-PAR DIOXIN EFFECTS ON THE IN VIVO LPS-ACTIVATED PRIMARY 1GM RESPONSE IN FEMALE C57BL6 MICE.** C. M. North1, R. B. Crawford1, H. Liu1 and N. E. Kaminski1,2. 1Center for Integrative Toxicology, Michigan State University, East Lansing, MI and 2Pharmacology and Toxicology, Michigan State University, East Lansing, MI.

#2144  
**Poster Board Number ........................................242**  

**EVALUATION OF THE EFFECTS OF ANTISENSE OLIGONUCLEOTIDES ON INFILTRATION CLEARANCE AND MACROPHAGE FUNCTION IN MOUSE.** T. Kim1, T. Zanardi1, S. P. Henry1, F. G. Burleson1 and G. R. Burleson1. 1ISIS Pharmaceuticals, Inc, Carlsbad, CA and 2Burleson Research Technologies, Inc., Morrisville, NC.

#2145  
**Poster Board Number ........................................243**  

**PHENOTYPIC CHARACTERIZATION OF LYMPHO CYTIC SUBPOPULATIONS IN THE MINIPIG.** F. Horand, F. Condevaux, J. Briffaux and P. Phothirath. MDS Pharmacology Services, St Germain sur l’Arbre, France.

#2146  
**Poster Board Number ........................................244**  

**VALIDATION OF METHOD FOR DETERMINATION OF ANTI-DA-3803 ANTIBODIES IN RAT SERUM USING ENZYME LINKED IMMUNOSORBENT ASSAY.** W. Choi1, C. Kim1, K. Na2, D. Kim2 and W. Koh1. 1Korea Institute of Toxicology, Daejeon, South Korea and 2Research Laboratory, Dong-A Pharmaceutical Co. Ltd, Yongin, Kyunggi, South Korea.

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**Poster Board Number ........................................245**  


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#2148  
**Poster Board Number ........................................246**  

**DEVELOPMENT OF IN VITRO MODEL TO ASSESS PROINFLAMMATORY PROPERTIES OF 2-MOE OLIGONUCLEOTIDES.** S. Greenlee, S. Burel, T. Machemer, C. Black and S. P. Henry. ISIS Pharmaceuticals, Inc, Carlsbad, CA.

#2149  
**Poster Board Number ........................................247**  


#2150  
**Poster Board Number ........................................248**  


#2151  
**Poster Board Number ........................................249**  


#2152  
**Poster Board Number ........................................250**  

**IMMUNOPHENOTYPING OF CD4 T LYMPHOCYTES FROM WHOLE BLOOD OF CYNOMOGUS MONKEYS BY FLOW CYTOMETRY IS IMPROVED BY USAGE OF CLONE L200.** G. Bannish1, M. S. Russell1, C. S. Page1, D. Lanham2, B. A. Litzenberger1 and M. Wing2. 1Experimental Biology, Huntington Life Sciences, East Millstone, NJ and 2Experimental Biology, Huntington Life Sciences, Cambridgeshire, United Kingdom.

#2153  
**Poster Board Number ........................................251**  


#2154  
**Poster Board Number ........................................252**  

**IMMUNOPHENOTYPING OF RAT WHOLE BLOOD USING AUTOMATED LYYSIS AND FIXATION LEADS TO IMPROVED PROCESS EFFICIENCY AND PRECISION.** C. S. Page1, G. Bannish1, M. S. Russell1, D. Lanham1, B. A. Litzenberger1 and M. Wing2. 1Experimental Biology, Huntington Life Sciences, East Millstone, NJ and 2Experimental Biology, Huntington Life Sciences, Cambridgeshire, United Kingdom. Sponsor: C. Auletta.
Thursday Morning, March 20
8:30 AM to 12:00 NOON
Ballroom 6C & E

POSTER SESSION: AHR MECHANISMS

Chairperson(s): Richard Pollenz, University of South Florida, Tampa, FL and Wade Powell, Kenyon College, Gambier, OH.

Displayed: 8:30 AM–12:00 NOON

Attended: 10:15 AM–12:00 NOON

Poster Board Number ...................................... 253

#2155 PARTIAL PHENOTYPIC AND FUNCTIONAL CHARACTERIZATION OF LEUKOCYTES FROM RYR1 R163C MH MICE. S. R. Goh1,2, S. Y. Yung1, W. L. Gu2, B. J. Chen1,2, S. Tong1, B. T. Yuen1, P. D. Allen1 and I. N. Pessah1,2.

1Center for Children's Environmental Health, UC Davis, Davis, CA, 2Department of Molecular Biosciences, UC Davis, Davis, CA and 3Department of Anesthesiology, Brigham and Women’s Hospital, Boston, MA.

Poster Board Number ...................................... 254

#2156 ROLE OF THE CULLIN 4B, E6AP AND MDM2 UBIQUITIN E3 LIGASE ENZYMES IN LIGAND-DEPENDENT AND INDEPENDENT DEGRADATION OF THE AH RECEPTOR. R. S. Pollenz, Cell Biology, Microbiology and Molecular Biology, University of South Florida, Tampa, FL.

Poster Board Number ...................................... 255

#2157 ROLE OF DNA BINDING AND DIMERIZATION WITH ARNT IN THE LIGAND-INDUCED DEGRADATION OF THE AH RECEPTOR. R. Buzzo, E. J. Dougherty and R. S. Pollenz, Cell Biology, Microbiology and Molecular Biology, University of South Florida, Tampa, FL.

Poster Board Number ...................................... 256

#2158 HISP90 DISPLACEMENT DURING LIGAND-DEPENDENT TRANSFORMATION OF THE ARYL HYDROCARBON RECEPTOR. A. Soshilov and M. S. Denison. Environmental Toxicology, UC Davis, CA.

Poster Board Number ...................................... 257

#2159 IDENTIFICATION OF MURINE AHR RESIDUES THAT MAY PLAY A ROLE IN SIGNAL TRANSDUCTION THROUGH PHOSPHORYLATION. D. P. Vorojeikina, S. K. Park and T. A. Gasiewicz. Environmental medicine, School of Medicine and Dentistry University of Rochester, Rochester, NY.

Poster Board Number ...................................... 258

#2160 EPIDERMAL GROWTH FACTOR RECEPTOR PATHWAY BLOCKS ARYL HYDROCARBON RECEPTOR-MEDIATED TRANSCRIPTION AND DIFFERENTIATION IN EPIDERMAL KERATINOCYTES. C. H. Sutter1, H. Yim2, Y. Li3, M. S. Jennifer2 and T. R. Sutter1. 1Feinstein Center for Genomic Research, University of Memphis, Memphis, TN and 2Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD.

Poster Board Number ...................................... 259

#2161 SERINE 395, A SITE IMPORTANT FOR TRANSCRIPTIONAL ACTIVITY IN THE MOUSE ARYL HYDROCARBON RECEPTOR (AHR), IS PHOSPHORYLATED BY PROTEIN KINASE A. B. Kobielush1, G. D. Minsavage1, D. A. Gasiewicz1, M. L. Easterling2, A. Friedman3 and T. A. Gasiewicz1. 1Environmental Medicine, University of Rochester, Rochester, NY and 2Buerke Daltonics, Billerica, MA.

Poster Board Number ...................................... 260

#2162 IN VIVO LEFLUMONIDE EXPOSURE MIMICS THE EFFECTS OF TCDD IN AN AHR-DEPENDENT MANNER. K. S. Sall, L. K. Mathew, S. Sengupta, N. I. Kerkvliet, S. K. Kolluri and R. L. Tanguay. Department of Environmental & Molecular Toxicology, Environmental Health Sciences Center, Oregon State University, Corvallis, OR.

Poster Board Number ...................................... 261

#2163 LIGAND-DEPENDENT DIFFERENCES OF DNA BINDING BY AHR-ARNT COMPLEXES VERSUS AHR-ARNT2 COMPLEXES IN VITRO. E. J. Dougherty and R. S. Pollenz. Cell Biology, Microbiology and Molecular Biology, University of South Florida, Tampa, FL.

Poster Board Number ...................................... 262

#2164 RELATIVE POTENCIES OF INDIVIDUAL DIOXIN-LIKE COMPOUNDS FOR IN VITRO CYTOCHROME P450 1A1 TRANSACTIVATION OF ARYL HYDROCARBON RECEPTOR FROM BAikal Seal. H. Iwata1, E. Kim2, T. Suda3, S. Tanabe1 and E. A. Petrov2. 1Center for Marine Environmental Studies, Ehime University, Matsuyama, Japan and 2The Eastern-Siberian Scientific and Production Fisheries Center, Ulan-Ude, Russian Federation.

Poster Board Number ...................................... 263

#2165 RESPONSIVENESS OF A XENOPUS LAEVIS CELL LINE TO THE ARYL HYDROCARBON RECEPTOR LIGAND 6-FORMYLINDOL[3, 2-b]CARBAZOLE (FICZ). L. B. Laub1, B. D. Jones2 and W. H. Powell3. 1Biology Department, Kenyon College, Gambier, OH and 2Mathematics Department, Kenyon College, Gambier, OH.

Poster Board Number ...................................... 264

#2166 DISTINCT REGULATION OF THE ARYL HYDROCARBON RECEPTOR ACTIVITY BY DIFFERENT LIGANDS. S. Luecke1, K. Gradin2, L. Poellinger2, A. Rannug2 and M. Backlund1. 1Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden and 2Department of Cell and Molecular Biology, Karolinska Institutet, Stockholm, Sweden.

Poster Board Number ...................................... 265

#2167 LIGAND SPECIFICITY IN MODULATING ARYL HYDROCARBON RECEPTOR DNA BINDING. D. DeGroot, Y. Song, S. R. Rushing and M. S. Denison. Environmental Toxicology, University of California, Davis, Davis, CA.

Poster Board Number ...................................... 266

#2168 NEWSPAPERS AND NEWSPAPER INK CONTAIN AGONISTS FOR THE AH RECEPTOR. B. Zhao, J. E. Bohonowycz, G. He and M. S. Denison. Environmental Toxicology, University of California, Davis, Davis, CA.
#2169  Poster Board Number ..............................307
ARYL-HYDROCARBON RECEPTOR (AHR), AGING AND IMMUNITY. L. B. Stepon, D. G. Farver, D. Pham and N. I. Kerkvliet. Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR.

#2170  Poster Board Number ..............................308
ARYL HYDROCARBON RECEPTOR (AHR) REPRESSIONS ACUTE PHASE RESPONSE GENE EXPRESSION IN A DNA-BINDING INDEPENDENT MANNER. R. D. Patel, A. Kusnadi, C. A. Flaveny and G. H. Perdew. Department of Veterinary & Biomedical Science, The Pennsylvania State University, University Park, PA.

#2171  Poster Board Number ..............................309
COMBINATION OF INFLAMMATORY SIGNALING AND AN AHR LIGAND LEADS TO SYNERGISTIC INDUCTION OF IL-6. B. DiNatale, B. Hollingshead and G. H. Perdew. Department of Veterinary & Biomedical Science, The Pennsylvania State University, University Park, PA.

Thursday Morning, March 20
8:30 AM to 12:00 NOON
Ballroom 6C & E

POSTER SESSION: CHEMOPREVENTION

Chairperson(s): Silvia Barros, University of Sao Paulo, Sao Paulo, Brazil.

Displayed: 8:30 AM–12:00 NOON

Attended: 8:30 AM–10:15 AM

#2172  Poster Board Number ..............................311
USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINES DURING BREAST CANCER TREATMENT – POTENTIAL INTERACTIONS WITH AROMATASE INHIBITORS. M. B. van Duuren, F. M. Martines, S. M. Nijmeijer, P. C. de Jong and M. van den Berg. 1 Institute for Risk Assessment Sciences (IRAS), Utrecht University, Utrecht, Netherlands and 2 Department of Internal Medicine, St Antonius Hospital, Nieuwegein, Netherlands.

#2173  Poster Board Number ..............................312
4-NEROLIDYL-CATECHOL (4NC), A COMPOUND FROM POTHOMORPHE UMBELLLATA, AS A CYTOTOXIC AGENT FOR HUMAN METASTATIC MELANOMA CELLS. S. B. Barros, T. C. Sawada, C. A. Brohem, R. M. Massaro, D. R. Rivelli, R. L. Almeida, C. D. Rokpe, V. V. Silva and S. S. Maria-Engler. Clinical Chemistry and Toxicology, University of Sao Paulo, Sao Paulo, SP, Brazil.

#2174  Poster Board Number ..............................313
**Program Description (Continued)**

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<tr>
<td>#2181</td>
<td>Methylene-2-cyano-3, 11-dioxoolean-1, 12-dien-30-oate (CDODA-Me) is highly cytotoxic to pancreatic cancer cells. I. Jutooni, G. Chaladapaka, S. Chintharlapalli, S. Papineni, and S. Safe. 1 Veterinary Physiology and Pharmacology, Texas A&amp;M University, College Station, TX and 2 Institute of Biosciences and Technology, Texas A&amp;M Health Science Center, Houston, TX.</td>
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<tr>
<td>#2182</td>
<td>Curcumin inhibits bladder cancer cell growth by targeting the specificity factors by both proteasome-dependent and proteasome-independent mechanisms. G. Chaladapaka, I. Jutooni, S. Chintharlapalli, S. Papineni, and S. Safe. 1 Veterinary Physiology and Pharmacology, Texas A&amp;M University, College Station, TX and 2 Institute of Biosciences and Technology, Texas A&amp;M Health Science Center, Houston, TX.</td>
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<tr>
<td>#2183</td>
<td>Guggulsterone, a constituent of Indian Ayurvedic medicinal plant Commiphora Mukul, inhibits angiogenesis in vitro and in vivo. S. V. Singh and D. Xiao. Pharmacology, University of Pittsburgh, Pittsburgh, PA.</td>
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Thursday Morning, March 20
8:30 AM to 12:00 NOON
Ballroom 6C & E

**POSTER SESSION: FISH ALTERNATIVE MODELS OF TOXICITY**

**Chairperson(s):** Jai Dwivedi, University of Texas Medical Branch, Galveston, TX and Sumitra Sengupta, Oregon State University, Corvallis, OR.

**Displayed:** 8:30 AM–12:00 NOON

**Attended:** 10:15 AM–12:00 NOON

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<tr>
<td>#2184</td>
<td>Methyl-2-cyano-3, 11-dioxoolean-1, 12-dien-30-oate (CDODA-Me) is highly cytotoxic to pancreatic cancer cells. I. Jutooni, G. Chaladapaka, S. Chintharlapalli, S. Papineni, and S. Safe. 1 Veterinary Physiology and Pharmacology, Texas A&amp;M University, College Station, TX and 2 Institute of Biosciences and Technology, Texas A&amp;M Health Science Center, Houston, TX.</td>
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<tr>
<td>#2185</td>
<td>Liver toxicity and regeneration: the use of a small fish model—Japanese medaka, A. J. Bernal, B. Yuen and D. Hinton. Integrated Toxicology and Environmental Health Program, Nicholas School of Environment and Earth Sciences, Duke University, Durham, NC.</td>
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**IMPROVED DIFFERENTIAL DISPLAY ANALYSIS BASED ON DEGENERATE Oligonucleotide-Primed PCR. H. Terawaki, K. Igarashi, S. Itoh, A. Ogawa, A. Kubota, A. M. Elmagd, T. Hiraga and D. Endoh. School of Veterinary Medicine, Rakuno Gakuen University, Ebetsu, Japan.**


**DIFFERENCES IN THE STRUCTURE AND FUNCTION OF FATHEAD MINNOW AND HUMAN ERα: IMPLICATIONS FOR IN VITRO TESTING OF ENDOCRINE DISRUPTING CHEMICALS. C. V. Rider, P. C. Hartig, M. C. Cardon and V. S. Wilson. Molecular Biomedical Sciences, NCSU, Raleigh, NC and 1 Reproductive Toxicology Division, U.S. EPA, ORD, NHEERL, RTP, NC.**

Program Description (Continued)

Abstract #

#2192 Poster Board Number ..................................333
IDENTIFICATION AND COMPARISON OF TWO ISOFORMS OF THE FARNESOID X RECEPTOR ALPHA IN JAPANESE MEDAKA (ORYZIAS LATIPES), A DEVELOPING BILIARY TOXICITY MODEL. D. L. Howarth1,2, D. E. Hinton2, and S. W. Kullman1,2. Integrated Toxicology and Environmental Health Program, Duke University, Durham, NC. 1Nicholas School of the Environment and Earth Sciences, Duke University, Durham, NC and 2Environmental and Molecular Toxicology, North Carolina State University, Raleigh, NC.

#2193 Poster Board Number ..................................334
MPTP (1-METHYL-4-PHENYL 1, 2, 3, 6-TETRAHYDROPYRIDINE) INDUCED NEURODEGENERATION IN DASYATIS SABINA (ATLANTIC STINGRAY). J. Dwivedi1, A. Montalvo1 and C. Stevens1. Preventative Medicine and Community Health, University of Texas Medical Branch, Galveston, TX and 2Marine Biomedical Technologies Inc., Galveston, TX.

#2194 Poster Board Number ..................................335
ARYL HYDROCARBON RECEPTOR REPRESSOR (AHRR): MECHANISTIC INSIGHTS FROM STUDIES IN MAMMALIAN AND NONMAMMALIAN MODELS. S. I. Karchner1, M. J. Jenny1, A. M. Tarrant1, B. R. Evans1,2, X. Yang1, D. H. Sherr2 and M. E. Hahn1. 1Woods Hole Oceanographic Institution, Woods Hole, MA and 2Boston University, Boston, MA.

#2195 Poster Board Number ..................................336
REDUCED SOX9B EXPRESSION BY TCDD IMPAIRS CRANIOFACIAL CARTILAGE GROWTH IN ZEBRAFISH EMBRYOS. K. M. Xiong1, R. E. Peterson1 and W. Heideman1,2. 1Biomolecular Chemistry, University of Wisconsin at Madison, Madison, WI and 2School of Pharmacy, University of Wisconsin at Madison, Madison, WI.

#2196 Poster Board Number ..................................337
CHEMICAL GENETICS TO IDENTIFY MOLECULAR PATHWAYS CONTROLLING TISSUE REGENERATION, S. Sengupta1,2, L. K. Mathew1,2 and R. L. Tanguay1,2. EMT, Oregon State University, Corvallis, OR and 2EHSC, Oregon State University, Corvallis, OR.

#2197 Poster Board Number ..................................338
INHIBITOR OF DNA BINDING-1 IS REQUIRED FOR NORMAL ZEBRAFISH CAUDAL FIN REGENERATION. C. Villano, T. Kung and L. White. Biochem and Micro, Rutgers University, New Brunswick, NJ.

#2198 Poster Board Number ..................................339

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#2199 Poster Board Number ..................................340
SELDI PROTEINCHIP-BASED LIVER BIOMARKERS IN FUNGICIDE EXPOSED ZEBRAFISH. A. Bulman1, D. Bencic1, A. Biales1, R. Flick2, G. Ross1 and D. Lattier1. 1LSG, Bio-Rad, Hercules, CA and 2ORD, NERL, EERD, U.S. EPA, Cincinnati, OH. Sponsor: T. Reddy.

Thursday Morning, March 20
8:30 AM to 12:00 NOON
Ballroom 6C & E

POSTER SESSION: CARDIOVASCULAR SYSTEM: VASCULAR EFFECTS

Chairperson(s): Bo Jiang, University of Washington, Seattle, WA and Judith Zelikoff, New York University School of Medicine, Tuxedo, NY.

Displayed: 8:30 AM–12:00 NOON

Attended: 8:30 AM–10:15 AM

#2200 Poster Board Number ..................................341
VASCULAR DILATION AND ANEURYSM DETECTED BY NONINVASIVE HIGH-FREQUENCY ULTRASONOGRAPHY IN APOE DEFICIENT MICE INJECTED WITH ANGIOTENSIN II. E. Suzuki1, N. Shimoji1, S. Tomiska2, H. Kameda1, M. Kammueller1 and Y. Nagae1. 1Safety Profiling and Assessment, Novartis Pharmacology K.K., Tsukuba, Japan and 2Safety Profiling and Assessment, Novartis Pharmacology AG, Basel, Switzerland.

#2201 Poster Board Number ..................................342
INFLAMMATORY PROTEIN AND GENE EXPRESSION IN MONOCYTES AND MACROPHAGES EXPOSED TO CHOLESTEROL SECOALDEHYDE: IMPLICATIONS TO ATHEROSCLEROTIC PLAQUE DEVELOPMENT. A. C. Raghavan1, X. Gao1, O. D’Avergne1, K. G. Kousoulas1, M. I. Kelleher1, J. T. Zelikoff1, J. Lyon1, D. Bolanowski2, R. Tarrant1, B. R. Evans1,2, X. Yang2, M. E. Hahn1 and Y. Nagae2. 1Department of Environmental Medicine, New York University School of Medicine, Tuxedo, NY and 2Department of Medicine Division of Cardiology, University of Louisville, Louisville, KY.

#2202 Poster Board Number ..................................343
EFFECTS OF PRENATAL CIGARETTE SMOKE EXPOSURE ON LIPID PARAMETERS ASSOCIATED WITH OFFSPRING CARDIAC RISK: A STUDY IN MICE. J. T. Zelikoff1, S. P. Ng1, J. Lyon1, D. D. Bolanowski2, D. Conklin2 and A. Bhatnagar2. 1Department of Environmental Medicine, New York University School of Medicine, Tuxedo, NY and 2Department of Medicine Division of Cardiology, University of Louisville, Louisville, KY.
#2203  
**Poster Board Number** ............................................. 344  
**Abstract #**  
**MECHANISMS OF INHIBITION OF VASCULAR CALCIFICATION BY PHOSPHONOFORMIC ACID (FOSCARNET) IN RAT VASCULAR SMOOTH MUSCLE CELLS.** V. Sorribas¹, R. Villa-Bellosta³, J. Ducha¹, R. Morales¹, V. Latorre¹ and A. Anadón¹. ¹Toxicology Department, University of Zaragoza, Zaragoza, Spain and ²Department of Toxicology and Pharmacology, Faculty of Veterinary Medicine, Universidade Complutense, Madrid, Spain.

#2204  
**Poster Board Number** ............................................. 345  
**ARYL HYDROCARBON RECEPTOR-DEPENDENT ALTERATIONS IN HEPATIC AND VASCULAR GENE EXPRESSION IN ADULT ZEBRAFISH.** B. Bugia³ and L. P. Weber¹.². ¹Toxicology, University of Saskatchewan, Saskatoon, SK, Canada and ²Veterinary Biomedical Sciences Center in Shreveport, Shreveport, LA.

#2205  
**Poster Board Number** ............................................. 346  
**VASCULAR SMOOTH MUSCLE DYSFUNCTION INDUCED BY GINSENSID R3, A BIOACTIVE COMPONENT OF GINSENG.** J. Lee, O. Bae, K. Lim, J. Noh and J. Chung. College of Pharmacy, Seoul National University, Seoul, South Korea.

#2206  
**Poster Board Number** ............................................. 347  
**SUBCHRONIC EXPOSURE OF ADULT MICE TO 2, 3, 7, 8-TETRACHLORODIBENZO-P-DIOXIN (TCDD) INCREASES BLOOD PRESSURE AND ALTERS VASCULAR REACTIVITY.** P. G. Kofp and M. K. Walker. Pharmacy, University of New Mexico, Albuquerque, NM.

#2207  
**Poster Board Number** ............................................. 348  
**HYPERTENSIVE HEART DISEASE IN OLDER ARYL HYDROCARBON RECEPTOR NULL MICE PROGRESSES TO SYMPTOMS OF HEART FAILURE.** L. Agbor, P. G. Kofp, A. C. Aragon, M. T. Walsh, M. Goens and M. K. Walker. Pharmacy, University of New Mexico, Albuquerque, NM.

#2208  
**Poster Board Number** ............................................. 349  
**NON-INVASIVE BLOOD PRESSURE MONITORING IN THE CYMONOLUS MONKEY (MACACA FASCICULARIS): HIGH DEFINITION OSCILLOMETRY VERSUS IMPLANTED TELEMETRIC DEVICES.** B. Schmelzi¹, M. Niehoff¹, B. Egner², S. Korte² and G. Weinbauer². ²Gcove Laboratories GmbH, Muenster, Germany and ¹San+MedVet GmbH, Babenhausen, Germany.

#2209  
**Poster Board Number** ............................................. 350  
**EFFECTS OF NO MODULATORS ON CARDIOVASCULAR RISK FACTORS IN MILD HYPERHOMOCYSTEINEMIC RAT MODEL.** M. Sharma¹, S. Rai¹, R. Tiwari¹, M. Tiwari¹ and R. Chandara¹. ¹Dr. B. R. Ambedkar Centre for Biomedical Research University of Delhi, University of Delhi, Delhi, India and ²University of Rhode Island, Department of Biomedical Pharmaceutical Sciences, Kingston, RI.

#2210  
**Poster Board Number** ............................................. 351  

#2211  
**Poster Board Number** ............................................. 352  
**AN INVESTIGATION OF PARAOXONASE-1 (PON1) ACTIVITIES IN THE SERUM OF SOUTHERNERS AS RELATED TO GENDER AND RACE.** K. A. Davis¹, H. Chambers², A. Crow³ and J. E. Chambers¹. ¹Ctr Environment Hlth Sci, Coll Vet Med, Mississippi State University Mississippi State, MS and ²Entomology and Plant Path, Mississippi State University, Mississippi State, MS.

#2212  
**Poster Board Number** ............................................. 353  
**CHARACTERIZATION OF ENDOTHELIAL DYSFUNCTION INDUCED BY NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITOR ANALOGUES AND THEIR PHOSPHORYLATED METABOLITES.** V. Y. Hebert, B. Jiang, A. R. Khandelwal and T. R. Dugas. Pharmacology, Louisiana State University Health Sciences Center in Shreveport, Shreveport, LA.

#2213  
**Poster Board Number** ............................................. 354  
**ANTIRETROVIRALS INDUCE ENDOTHELIAL DYSFUNCTION VIA AN OXIDANT-DEPENDENT PATHWAY AND PROMOTE NEONATAL HYPERPLASIA.** B. Jiang, J. H. Zavecz and T. R. Dugas. Pharmacology, Toxicology and Neuroscience, LSU Health Sciences Center in Shreveport, Shreveport, LA.

#2214  
**Poster Board Number** ............................................. 355  
**MANUFACTURED NANOPARTICLES INDUCE ENDOTHELIAL CELL INFLAMMATION.** C. Deering, S. Cutler, J. Veranth and G. Yost. Pharm/Toxicology University of Utah, Salt Lake City, UT.

#2215  
**Poster Board Number** ............................................. 356  
**ENDOTHELIAL CELL CAVÆLÆ ARE INVOLVED IN ACTIVATION OF ARYL HYDROCARBON RECEPTOR PATHWAY BY COPLANAR POLYCHLORINATED BIPHENYLS.** Z. Majkova, L. Agbor, E. Lim, E. Smart, M. T. Tseng, M. Tabor, H. and B. Henning. Toxicology, University of Kentucky, Lexington, KY, ²Animal Sciences, University of Kentucky, Lexington, KY, ³Anatomical Sciences, University of Louisville, Louisville, KY and ⁴Neurosurgery, University of Kentucky, Lexington, KY.

#2216  
**Poster Board Number** ............................................. 357  
**ENVIRONMENTAL PCBs INCREASE BLOOD VESEL FORMATION BY OXIDANT SIGNALING.** Q. Felty. Environmental & Occupational Health, Florida International University, Miami, FL.

#2217  
**Poster Board Number** ............................................. 358  
**ARSENIC SIGNALS THROUGH A GAI-COUPLED PATHWAY TO INDUCE ANGIGENIC SIGNALS IN HUMAN MICROVASCULAR ENDOTHELIAL CELLS.** A. Barchowsky. Environmental and Occupational Health, University of Pittsburgh, Pittsburgh, PA.
# Program Description (Continued)

Abstract #  
#2218  
**Poster Board Number ...............................359**  
**GENOTOXIC EFFECTS OF 1-NITROUREA IN HUMAN ENDOTHELIAL CELLS, H. L. Andersson, E. Piras, B. Hellman and E. Brittebo. Pharmaceutical Biosciences, Uppsala University, Uppsala, Sweden.**  
Sponsor: M. Stigson.

#2219  
**Poster Board Number ...............................360**  
**A NOVEL CXCR4 ANTAGONIST DERIVED FROM HUMAN SDF-1, SDF-1P2G, STIMULATES ANGIogenesis IN A MURINE MODEL OF ACUTE HINDLIMB ISCHEMIA. Y. Tan, X. Li and L. Cui.**  
1Chinese-American Research Institute for Diabetic Complications, Wenzhou Medical College, Wenzhou, Zhejiang, China and 2Departments of Medicine, Radiation Oncology, and Pharmacological and Toxicology, University of Louisville, Louisville, KY.

Thursday Morning, March 20  
8:30 AM to 12:00 NOON  
Ballroom 6C & E  
POSTER SESSION: FOOD SAFETY II

Chairperson(s): Suma Vavilala, University of Maryland Baltimore County, Baltimore, MD.

Displayed: 8:30 AM–12:00 NOON  
Attended: 10:15 AM–12:00 NOON

#2221  
**Poster Board Number ...............................403**  
**THE ROLE OF OXIDATIVE STRESS IN THE DIFFERENTIAL EFFECTS BETWEEN N-3 AND N-6 PUFAs AND THE PROTECTIVE EFFECTS OF ALGAL AND FISH OIL IN COLON CARCINOGENESIS, G. M. Alink1, V. van Beelen1, J. Aarts1, R. Bino1, D. Bosch1, G. Hooiveld1, H. Moosbroek1, M. Muller1, A. Reus1, J. Roeleveld1, L. Sijtsma2, B. Spenkink1 and I. Rietjens1.**  
1Toxicology, Wageningen University, Wageningen, Netherlands, 2Agrotechnology and Food Innovations, Wageningen, Netherlands, 3Plant Research International, Wageningen, Netherlands and 4Human Nutrition, Wageningen University, Wageningen, Netherlands.

#2222  
**Poster Board Number ...............................404**  
**TOXICOLOGICAL EVALUATION OF RESVIDA™, A HIGH PURITY TRANS-RESVERATROL, L. D. Williams1, J. Edwards2 and M. Beck2.**  
1Burdock Group, Vero Beach, FL and 2DSM Nutritional Products, Ltd, Basel, Switzerland.

Abstract #  
#2223  
**Poster Board Number ...............................405**  
Sponsor: J. Ayalos.

#2224  
**Poster Board Number ...............................406**  

#2225  
**Poster Board Number ...............................407**  
**OPTIMIZATION OF AN ADVANCED PROCEDURE FOR THE SIMULTANEOUS DETERMINATION OF LINCOMYCIN AND SPECTINOMYCIN BY LIQUID CROMATOGRAphy-TRIPLE QUADRUPOLE-MASS SPECTROMETRY IN FOOD. G. Font1, E. Ferrer2, M. A. Martinez2, M. R. Martinez-Larralaga3 and A. Anadon4.**  
1Department of Bromatology and Toxicology, Faculty of Pharmacy, Universitat de Valencia, Valencia, Spain and 2Department of Toxicology and Pharmacology, Faculty of Veterinary Medicine, Universidad Complutense, Madrid, Spain.

#2226  
**Poster Board Number ...............................408**  
**EFFECT OF N-3 AND N-6 POLYUNSATURATED FATTY ACID CONSUMPTION ON DEOXYVINALENO-INDUCED TISSUE-SPECIFIC II-6 EXPRESSION IN MICE. L. L. Vines1,2 and J. J. Peska1,2,3.**  
1Food Science and Human Nutrition, Michigan State University, East Lansing, MI and 2Department of Toxicology and Pharmacology, Michigan State University, East Lansing, MI and 3Microbiology and Molecular Genetics, Michigan State University, East Lansing, MI.

#2227  
**Poster Board Number ...............................409**  
**THE FUNGAL METABOLITE, PYRROCIDINE A, INDUCES APOPTOSIS IN HEPG2 HEPATOCYTES AND PK15 RENAL CELLS. W. M. Haschek-Hock1,2, S. Hsiao1 and D. T. Wicklow.**  
1Pathobiology, University of Illinois, Urbana, IL, 2Veterinary Diagnostic Laboratory, University of Illinois, Urbana, IL and 3ARS/USDA, Peoria, IL.

#2228  
**Poster Board Number ...............................410**  
**SAFETY ASSESSMENT OF THE SOYBEAN ACETOLACTATE SYNTHASE PROTEIN (GM-HRA), C. A. Mathesius1, J. F. Barnett2, R. F. Crisman3, J. Davis1, J. Ding1, C. Finlay2, G. Ladics3, H. Sampson1,2, X. Li1 and B. Delaney1.**  
1Pioneer Hi-Bred International, Inc., Johnston, IA, 2Department of Toxicology and Pharmacology, Faculty of Veterinary Medicine, Universidad Complutense, Madrid, Spain and 3Microbiology and Molecular Genetics, Michigan State University, East Lansing, MI.
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<td>SAFETY ASSESSMENT OF GLYPHOSATE ACETYLTRANSFERASE (GAT4601) PROTEIN, B. Delaney1, J. Zhang1, G. Carlson1, T. Davis1, J. Schmidt1, B. Stagg1, B. Comstock1, A. Babbi1, C. Finlay2, R. Cressman2, G. Ladics2, A. Cogburn2, D. Siehl3, L. Bardina3, H. Sampson3 and Y. Han4. 1Pioneer Hi-Bred International, Inc., Johnston, IA, 2Charles River Laboratories, Redfield, AR, 3DuPont Haskell Laboratory, Newark, DE, 4DuPont Agriculture and Nutrition, Wilmington, DE.</td>
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<td>SUBCHRONIC DIETARY TOXICITY OF HIGH OLEIC SOYBEAN EVENT DP-305423-I NUTRITIONALLY-MODIFIED USING GENE SUPPRESSION TECHNOLOGY, C. D. Sanders1, L. M. Appendini2, S. M. Munley1, L. A. Malley2, D. Hoban2, G. P. Sykes2 and B. Delaney2. 1Pioneer Hi-Bred Int’l., Inc., Johnston, IA and 2DuPont Haskell Laboratory, Newark, DE.</td>
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<td>LOW DOSE DIETARY GENISTEIN NEGATES THE THERAPEUTIC EFFECT OF TAMOXIFEN, M. Du1, J. A. Hartman2, H. Song2, V. H. Ju3, C. W. Helferich1. 1Division of Nutritional Sciences, University of Illinois at Urbana-Champaign, Urbana, IL, 2Department of Food and Human Nutrition, University of Illinois at Urbana-Champaign, Urbana, IL and 3Department of Human Nutrition, Foods and Exercise, Virginia Polytechnic Institute and State University, Blacksburg, VA.</td>
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<td>SAFETY AND EFFICACY EVALUATION OF PEDIOCOCUS ACIDILACTICI AS AN ORAL PROBIOTIC, B. Magnusson1, G. Ligi1, J. Rindos1, G. Vo1, J. J. Lin1 and U. Babu1. 1Department of Nutr and Food Sci, University of Maryland, College Park, MD, 2Imagilin Technologies, Potomac, MD and 3CFSAN, Food and Drug Administration, Beltsville, MD.</td>
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<td>SUBCHRONIC DIETARY TOXICITY OF SOYBEAN EVENT DP-356043-5 GENETICALLY-MODIFIED USING A NOVEL GENE SHUFFLING TECHNOLOGY, L. M. Appendini2, R. Esser2, S. M. Munley1, L. A. Malley1, D. Hoban2, G. P. Sykes2 and B. Delaney2. 1Pioneer Hi-Bred Int’l., Inc., Johnston, IA and 2DuPont Haskell Laboratory, Newark, DE.</td>
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<td>NON-CARIogenicity of HYDROGENATED POLYDEXTROSE, A SYNTHETIC LOW-CALORIE POLYSACCHARIDE SUGAR REPLACER IN FOODS, J. C. Griffiths1 and M. H. Auerbach2. 1Burdock Group, Vero Beach, FL and 2Danisco A/S, Elmsford, NY.</td>
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<td>DIETARY FLAVONOIDs SULFATION BY HUMAN SULFOTRANSFERASES, C. Huang and G. Chen. Physiological Sciences, Oklahoma State University, Stillwater, OK.</td>
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<td>RAW264.7 MACROPHAGE CELLS - AN IN VITRO ALTERNATIVE FOOD SAFETY TESTING PLATFORM COMPATIBLE WITH VARIOUS FOOD TYPES AND FOOD-BORNE TOXINS, W. H. Tolleson1 and L. S. Jackson1. 1Division of Biochemical Toxicology, FDA-NCTR, Jefferson, AR and 2National Center for Food Safety and Technology, FDA-CFSAN, Summit-Argo, IL.</td>
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<td>SAFETY ASSESSMENT OF LACTERM®, A WHEY EXTRACT, A. Dyner1, G. Burdock2, I. Carabin1 and L. Read2, 1Burdock Group, Orlando, FL and 2TGR BioSciences Pty. Ltd, Thebarton, SA, Australia.</td>
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<td>AFLATOXIN EXPOSURE DECREASES SERUM LEVELS OF VITAMINS A &amp; E IN GHANAIANS AT HIGH RISK FOR AFLATOXICOsis, L. Tang1, L. Xu1, E. Afriyie-Gyawa1, P. Wang1, Y. Tang1, Z. Wang1, H. J. Huebler1, N. A. Ankhala1, D. Ofori-Adjei1, W. O. Ellis1, P. E. Jolly1, J. H. Williams1, J. S. Wang1 and T. D. Phillips2. 1Texas Tech University, Lubbock, TX, 2Texas A&amp;M University, College Station, TX, 3University of Ghana, Accra, Ghana, 4KNUST, Kumasi, Ghana, 5University of Alabama, Birmingham, AL and 6University of Georgia, Griffin, GA.</td>
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<td>SEX DIFFERENCES IN APPARENT ADAPTATION TO IMMUNOTOXICITY OF DEOXYNIVALENOL, X. Wu1, M. Kohut2, J. Cunnick3 and S. Hendrich4. 1Food Science and Human Nutrition, Iowa State University, Ames, IA, 2Kinesiology, Iowa State University, Ames, IA and 3Animal Science, Iowa State University, Ames, IA.</td>
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<td>FUMONISIN B1 EXPOSURE PHENOCOPIES CHOLESTEROL DEPRIVATION IN C. ELEGANS, M. McElwee1, A. Wise1, W. A. Boyd1 and J. H. Freedman2. 1Laboratory of Molecular Toxicology, NIEHS, Research Triangle Park, NC and 2Nicholas School of the Environment, Duke University, Durham, NC.</td>
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<td>THE PISK/AKT SIGNALING PATHWAY MEDIATES THE INDUCTION OF CHOLESTEROL BIOSYNTHESIS GENES BY α-CHACONINE IN INTESTINAL EPITHELIAL CELLS, A. Peijnenburg1, T. Mandimika2, H. Raykuss1, J. Poortman1, H. Kuiper1 and C. Garza2. 1RIKILT-Institute of Food Safety, Wageningen, Netherlands, 2Division of Nutritional Sciences, Cornell University, Ithaca, NY and 3Office of the Provost, Boston College, Chestnut Hill, MA. Sponsor: M. Heneweer.</td>
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Program Description (Continued)

Abstract #

Thursday Morning, March 20
8:30 AM to 12:00 NOON
Ballroom 6C & E

POSTER SESSION: HIGH-THROUGHPUT, HIGH CONTENT APPROACHES TO ASSESSING GENOTOXICITY

Chairperson(s): Andrew Olaharski, Roche Palo Alto, Palo Alto, CA and Raymond Kemper, Boehringer Ingelheim Pharmaceuticals Inc, Ridgefield, CT.

Displayed: 8:30 AM–12:00 NOON

Attended: 8:30 AM–10:15 AM

#2242

Poster Board Number #2246

#2243

Poster Board Number #2247
TRACING MICRONUCLEI BY FLUORESCENT LIVE CELL IMAGING ANALYSIS. M. Honma, Y. Takashima, M. Yasui, N. Koyama, T. Koizumi, M. Sakuraba, H. Sakamoto, K. Sugimoto and M. Hayashi, Division of Genetics and Mutagenesis, National Institute of Health Sciences, Tokyo, Japan, Research Center for Radiation Emergency Medicine, National Institute of Radiological Sciences, Chiba, Japan and Division of Biosciences and informatics, Osaka Prefecture University, Osaka, Japan. Sponsor: M. Ema.

#2244

Poster Board Number #2248

#2245

Poster Board Number #2249
TIME-RELATED PROFILES OF MICRONUCLEATED PCES AND NCES IN BOTH BLOOD AND BONE MARROW AS MEASURED BY MICROSCOPY AND FLOW CYTOMETRY. F. Xu1, D. Torous1, E. Chacon1, B. Hsu1, K. Butler1, C. Marsh1, A. Soufail1, D. Montague1, S. Dertinger2 and T. E. Lawlor3. 1Genetic & Molecular Toxicology, Covance Laboratories, Vienna, VA and 2Lirtron Laboratories, Rochester, NY.

#2246

Poster Board Number #2250

#2247

Poster Board Number #2251

#2248

Poster Board Number #2252
ANEUGENIC COMPOUNDS INCREASE MICRONUCLEUS FREQUENCIES IN MONONUCLEATED CELLS IN THE CB MICRONUCLEUS TEST. A. Poth and S. Bohnenberger. Genetic Toxicology and Alternative Methods, RCC Ltd, Rossdorf, Germany.

#2249

Poster Board Number #2253
USING KINASE SELECTIVITY PROFILES TO PREDICT IN VITRO MICRONUCLEUS ASSAY RESULTS. A. J. Olaharski1, N. Gonzalez2, H. Bitter3, S. Kirchner4, G. Fischer5, D. Goldstein6 and K. Kohler. 1Investigative Toxicology, Roche, Palo Alto, CA and 2Group research information, Roche, Palo Alto, CA, 3Medicinal Chemistry, Roche, Basel, Switzerland.

#2250

Poster Board Number #2254
**Program Description (Continued)**

**Poster Board Number** .......................... 438

**GENOTOXICITY SCREENING STEPS UP A GEAR: VALIDATION OF HIGHER THROUGHPUT PROTOCOLS FOR THE GADD45A-GFP GENOTOXICITY ASSAY (GREENSCREEN HC), R. Walmsey, A. W. Knight and L. Birrell. 46 Grafton Street, Gentronix Ltd, Manchester, United Kingdom.

**Poster Board Number** .......................... 439


**Poster Board Number** .......................... 440


**Poster Board Number** .......................... 441


**Poster Board Number** .......................... 442


**Poster Board Number** .......................... 443


**Poster Board Number** .......................... 444

**COMPARATIVE IN VITRO INHIBITION OF RAT HIPPOCAMPAL MONOACYLGLYCEROL LIPASE BY CHLORPYRIFOS OXON, PARAOXON AND DISOPROPYLFLUOROSPHosphate, A. M. Likins, A. Nallapaneni and C. N. Pope. Physiological Sciences, Oklahoma State University, Stillwater, OK.

**Poster Board Number** .......................... 445

**ENHANCED STARTLE RESPONSE IN ADULT ZEBRAFISH AFTER EARLY DEVELOPMENTAL CHLORPYRIFOS EXPOSURE: SENSITIVITY OF A RAPID AUTOMATED NEUROBEHAVIORAL TEST, E. D. Levin1, D. Ceruti2, P. Williams2 and E. Linney2. Psychiatry and Behavioral Sciences, Duke University Medical Center, Durham, NC and 2Molecular Genetics and Microbiology, Duke University Medical Center, Durham, NC.

**Poster Board Number** .......................... 446

**PRENATAL CHLORPYRIFOS EXPOSURE IN MICE IMPAIRS WORKING AND REFERENCE MEMORY IN FEMALES AS ASSESS BY A NOVEL FORAGING MAZE**, S. Agoos, D. Butz and W. Porter. 1Duke University, Durham, NC and 2UW Madison, Madison, WI. Sponsor: E. Levin.

**Poster Board Number** .......................... 447

**CHLORPYRIFOS OXON INTERFERES WITH AXON GENESIS IN EMBRYONIC ZEBRAFISH, D. Yang1, J. Ladu2, K. Buels1, H. Lauridsen1, R. Tanguay2 and P. Levin1. 2Croet, Oregon Health & Science University, Portland, OR and 1Environmental & Molecular Toxicology, Oregon State University, Corvallis, OR.

**Poster Board Number** .......................... 448

**CHLORPYRIFOS OXON-INDUCED CHANGES IN THIOFLAVIN T BINDING TO THE PERIPHERAL ANIONIC SITE OF HUMAN ACETYLCHOLINESTERASE, L. Sultatos and R. Kaushik. Pharmacology & Physiology, New Jersey Medical School, Newark, NJ.**
Abstract # | Abstract #
---|---
#2266 | #2273
**EXPOSURE OF ZEBRAFISH (DANIO RERIO) EMBRYOS TO DELTAMETHRIN RESULTS IN ALTERATION OF DOPAMINERGIC GENE EXPRESSION AND INCREASED ACTIVITY.** A. DeMicco1, A. Green1, K. R. Cooper1, J. R. Richardson1 and L. A. White2, 1Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ and 2Toxicology Division, EOHSI, Piscataway, NJ.

**DEVELOPMENTAL DELTAMETHRIN EXPOSURE PRODUCES IMPULSIVE-LIKE BEHAVIOR THAT IS REVERSED BY METHYLPHENIDATE: RELEVANCE TO ADHD.** M. Taylor1, D. Cory-Slechta2 and J. Richardson1. 1Joint Graduate Program in Toxicology, Rutgers University and UMDNJ, Piscataway, NJ and 2Department of Environmental Medicine, University of Rochester, Rochester, NY.

**DELTAMETHRIN AND ESFENVALerate INHIBIT SPONTANEOUS NETWORK ACTIVITY IN RAT CORTICAL NEURONS IN VITRO.** S. M. Losa2, J. E. Baldwin1, A. M. Johnstone1 and T. J. Shafer1. 1Neurotoxicology Division, NHEERL, ORD, U.S. EPA, Research Triangle Park, NC and 2Meredith College, Raleigh, NC.

**MOLECULAR MECHANISMS OF DELTAMETHRIN-INDUCED ALTERATIONS IN DOPAMINE TRANSPORTER EXPRESSION.** J. R. Richardson. Environmental and Occupational Medicine, Robert Wood Johnson Medical School, Piscataway, NJ.

**EFFECT OF ORGANOCHLORINE PESTICIDE DIELDRIN ON THE NEUROENDOCRINE BRAIN OF LARGEMOUTH BASS (Micropterus salmoides),** B. S. Jortner, D. Shabb, S. Hancock, J. Hinckley, L. Williams and M. F. Ehrich. Laboratory for Neurotoxicology Studies, Virginia Tech, Blacksburg, VA.

Program Description (Continued)

Abstract # Poster Board Number ...............................................506 THE RELATION BETWEEN SPONGY CHANGE OF SPINAL CORD AND EXPRESSION OF 2', 3'-CYCLIC NUCLEOTIDE 3'-PHOSPHODIESTERASE (CNP) INDUCED BY ANILINE IN RATS. T. Kanno, T. Kurotaki, Y. Kotani, Y. Wako and M. Tsuchitani. Mitsubishi Chemical Safety Institute LTD., Kamisu-shi, Ibaraki-ken, Japan.

#2281 Poster Board Number ...............................................507 CYP1A2*1F AND PONI Q192R GENETIC POLYMORPHISMS AS SUSCEPTIBILITY DETERMINANTS FOR NEUROLOGICAL EFFECTS IN MEXICAN FARMERS EXPOSED TO ORGANOPHOSPHORUS PESTICIDES. M. Sánchez-Guerrera, N. Pérez-Herrera1, Y. H. Borja-Aburto2, J. Alvarado-Mejía1, G. Elizondo-Azuela1 and B. Quintanilla-Vega1. 'Toxicology Section, CINVESTAV, Mexico City, D.F., Mexico, Coordinación Nacional de Salud en el Trabajo, IMSS, Mexico City, Mexico and Escuela de Medicina, Universidad Autónoma de Yucatán, Mérida, Mexico.

#2282 Poster Board Number ...............................................508 DETERMINATION OF LC50S FOR ROUNDPUP AND MANZATE IN CAENORHABDITIS ELEGANS. D. A. Rudd, N. S. Davis, R. Negga and V. A. Pitsanuk. Biology, King College, Bristol, TN.

#2283 Poster Board Number ...............................................509 EFFECTS OF ATRAZINE AND ITS METABOLITES ON THE UPTAKE OF DOPAMINE INTO RAT STRIATAL SYNAPTIC VESICLES AND SYNAPTOSOMES. M. M. Hossein and N. M. Filipov. CEHS, Basic Sciences, Mississippi State University, Mississippi State, MS.

#2284 Poster Board Number ...............................................510 LIFESPAN ANALYSIS OF DIAMINOCHLOROTRIAZINE (DACT) MODIFIED PROTEINS FOLLOWING ATRAZINE EXPOSURE IN RATS. A. C. Schell1, G. P. Dooley1, W. H. Hanneman1 and C. D. Foradori1. 'Environmental and Radiological Health Sciences, Colorado State University, Fort Collins, CO and 2Biomedical Sciences, Colorado State University, Fort Collins, CO.

#2285 Poster Board Number ...............................................511 PREVENTION BY ANTIOXIDANTS OR NMDA RECEPTOR ANTAGONIST OF CARBOFURAN-INDUCED ALTERATIONS IN BIOMARKERS OF NEURODEGENERATION AND NEUROINFLAMMATION IN RAT BRAIN. R. C. Gupta1, S. Milatovic2, W. Dettbarn2 and D. Milatovic2. 'Toxicology, Murray State University, Hopkinsville, KY and 2Vanderbilt University, Nashville, TN.

Abstract # Poster Board Number ...............................................512 PHYSICO-CHEMICAL CHARACTERIZATION OF STEALTH LIPOSOMES ENCAPSULATING A HYDROLYZING ENZYME EMPLOYED IN ORGANOPHOSPHORUS ANTAGONISM. I. Petrakovs1i, J. R. Wild1, M. Budai2, P. Grof3, P. Chapela1 and M. E. Wales1. 'Chemistry, Sam Houston State University, Huntsville, TX and 'Biochemistry and Biophysics, Texas A&M University, College Station, TX and 'Pharmaceuticals, Semmelweis University, Budapest, Hungary.

#2287 Poster Board Number ...............................................513 DECREASE OF DOPAMINE LEVELS AFTER GLYPHOSATE HERBICIDE TREATMENT IN RATS. A. Anadón, J. Del Pino, M. A. Martínez, V. Caballero, I. Nieto, I. Ares and M. R. Martínez-Larragüea. Department of Toxicology and Pharmacology, Faculty of Veterinary Medicine, Universidad Complutense, Madrid, Spain.

#2288 Poster Board Number ...............................................514 BRAIN CHOLINESTERASE INHIBITION AND DEPRESSION OF THE PHOTIC AFTER DISCHARGE (PHAD) OF FLASH EVOKED POTENTIALS (FEPS) IN LONG EVANS RATS FOLLOWING ACUTE OR REPEATED EXPOSURES TO A MIXTURE OF CARBARYL AND PROPOXUR. J. M. Mancilla1, D. F. Lyke2, J. E. Graff2 and D. W. Herr2. 'NRC, Washington, DC, 'UNC, Chapel Hill, NC and 'U.S. EPA ORD/NHEERL/NTD, RTP, NC.

#2289 Poster Board Number ...............................................515 ALDEHYDE DEHYDROGENASE INHIBITION BY METABOLITES OF MOLINATE, A THIOCARBAMATE HERBICIDE. E. M. Gagan1, D. G. Anderson1, V. R. Florang1, T. D. Hurley2 and J. A. Doorn3. 'Medicinal and Natural Products Chemistry, University of Iowa, Iowa City, IA and 'Biochemistry and Molecular Biology, University of Indiana School of Medicine, Indianapolis, IN.

#2290 Poster Board Number ...............................................516 THE POSSIBLE ROLE OF CHLOROACETALDEHYDE IN 2-CHLOROETHANOL NEUROTOXICITY. Y. Chen1, J. Liao1 and D. Hung1. 'Veterinary Medicine, National Chung Hsing University, Taichung, Taiwan, 'Division of Toxicology, Taichung Veterans General Hospital, Taichung, Taiwan and 'Graduate Institute of Veterinary Pathology, National Chung Hsing University, Taichung, Taiwan.

#2291 Poster Board Number ...............................................517 ESTERASE PROFILES AND QSAR FOR A SERIES OF DIALKYL-O-(2-HYDROPERFLUOROPROP-2-YL) PHOSPHATES (PFPh). G. F. Molkhuova1, O. G. Serebryakova1, N. B. Boltneva1, A. Y. Aksinenko1, V. B. Sokolov1 and R. J. Richardson2. 'Institute of Physiologically Active Compounds RAS, Chernogolovka, Russian Federation and 'Environmental Health Sciences/Toxicology, University of Michigan, Ann Arbor, MI.
Thursday Morning, March 20
8:30 AM to 12:00 NOON
PS

POSTER SESSION: SAFETY ASSESSMENT,
PHARMACEUTICAL—TECHNIQUES, PULMONARY,
CARDIOVASCULAR

Chairperson(s): M. Elizabeth Bell, AstraZeneca Pharmaceutical,
Wilmington, DE and Gary Chmielewski, Pfizer Global Research &
Development, Groton, CT.

Displayed: 8:30 AM–12:00 NOON

Abstract #

#2292  |  Poster Board Number .................................518
STRUCTURAL INSIGHTS INTO THE 
HUMAN NEUROPATHY TARGET 
ESTERASE (NTE) CATALYTIC DOMAIN 
(NEST). S. J. Wijeyesakere1, J. A. Stuckey2 and R. 
J. Richardson3. 1Environmental Health Sciences/ 
Toxicology, University of Michigan, Ann Arbor, MI 
and 2Life Sciences Institute, University of Michigan, 
Ann Arbor, MI.

#2293  |  Poster Board Number .................................520
A REVIEW OF NONCLINICAL 
DEVELOPMENT STRATEGIES USED TO 
support PHASE I CLINICAL TRIALS 
WITH INHALED PHARMACEUTICALS. 
A. Gibbs and P. Smith. Programme Management, 
Covance, Harrogate, United Kingdom. Sponsor: C. 
Springall.

#2294  |  Poster Board Number .................................521
DRUG-INDUCED TOXICITY AND ITS 
REVERSIBILITY IN THE REGULATORY 
NON-CLINICAL STUDIES WITH NEW 
DRUGS IN JAPAN. M. Iijima and T. Eimoto. 
Clinical Pathology, Nagoya City University Graduate 
School of Medical Sciences, Nagoya, Aichi, Japan.

#2295  |  Poster Board Number .................................522
OPTIMISATION OF PLETHYSMOGRAPHY 
CONDITIONS FOR USE IN REPEAT DOSE 
TOXICITY STUDIES. L. C. Ewart, G. Cullen 
and J. Valentin. AstraZeneca, Macclesfield, United 
Kingdom.

#2296  |  Poster Board Number .................................523
DETERMINATION OF TIDAL VOLUME 
AND RESPIRATORY RATE BY 
PNEUMOTACHOGRAPHY IN THE 
MARMOSET. S. Korte1, B. Schmelting1 and B. 
Marshall1. 1Covance Laboratories GmbH, Muenster, 
Germany and 2Covance Laboratories Ltd, Harrogate, 
United Kingdom. Sponsor: G. Weinbauer.

#2297  |  Poster Board Number .................................524
PULMONARY DELIVERY OF MEASLES 
VACCINE: NON-HUMAN PRIMATE SAFETY 
STUDY. R. Forster1, T. Appelqvist1, D. Brown2, 
B. Cohen3, G. Chaloner-Larsson3, R. de Swart4 and 
A. Henao Restrepo5. 1CTF, Evreux, France, 2Health 
Protection Agency, London, United Kingdom, 
3Bioconsil, Ottawa, ON, Canada, 4Erasmus 
University, Rotterdam, Netherlands and 5WHO, 
Geneva, Switzerland.

#2298  |  Poster Board Number .................................525
LONG TERM CONTINUOUS INTRAVENOUS 
INFUSION IN BEAGLE DOG. CYNOMOLGUS MONKEY 
AND GÖTTINGEN MINI-PIG. A. Patel, L. Armer, M. 
Mus and C. Copeman. Toxicology, Charles River 
Labs, Preclinical Services Montreal Inc., Senneville, 
QC, Canada. Sponsor: C. Banks.

#2299  |  Poster Board Number .................................526
A METHOD FOR CONTINUOUS 
INTRAVENOUS INFUSION IN GÖTTINGEN 
MINI-PIGS. G. Washer, R. Kubaszy, C. Petit- 
Turcotte and S. Authier. LAB Research Canada, 
Laval (Montreal), QC, Canada.

#2300  |  Poster Board Number .................................527
NEW INITIATIVES TO ENSURE 
AVOIDANCE OF CROSS-CONTAMINATION 
IN THE VIVARIUM. S. Doughtry. Covance 
Laboratories Ltd, Harrogate, United Kingdom. 
Sponsor: D. Everett.

#2301  |  Poster Board Number .................................528
AMBULATORY CONTINUOUS 
INTRAVENOUS INFUSION MODEL FOR 
PREGNANT DUTCH BELTED RABBITS. E. D. 
Sloter1, M. Nemec2, D. Stump1, S. Rait3, B. 
Gleason1, W. Miller1 and J. Holson1. 1WIL Research 
Laboratories, LLC, Ashland, OH and 2Covance 
Research Products, Inc., Denver, PA.

#2302  |  Poster Board Number .................................529
OPTIMIZING CELL LINES FOR 
DETECTION OF DRUG-INDUCED 
MITOCHONDRIAL IMPAIRMENT. J. 
Jamieson, L. Marroquin, J. Dykens and Y. Will. Drug 
Safety R&D, Pfizer, Inc., San Diego, CA.

#2303  |  Poster Board Number .................................530
A NOVEL 
IMMUNOHISTOCHEMISTRY APPROACH FOR THE IN SITU 
ASSESSMENT OF DRUG-TARGET 
INTERACTIONS. A. Vicart1, B. Greiner1, E. G. 
Funhoff2, S. Pantano1, U. Hassiepen2, B. Burkey3, 
F. Pognon4, S. Busch5, S. Chibouli, P. Moulin6 and 
J. G. Moggs7. Investigative Toxicology, Safety 
Profiling & Assessment, Novartis Pharmacology 
AG, Basel, Switzerland, 1CPC/EPP NIBR, Basel, 
Switzerland and 2Diabetes/Metabolism DA, NIBR 
Inc, Cambridge, MA.

#2304  |  Poster Board Number .................................531
BEAT-TO-BEAT ELECTRICAL ALTERNANS 
IN GUINEA PIG LANGENDORFF HEARTS 
AS A PREDICTOR OF CARDIOTOXICANTS. 
L. Guo and J. Qian. Non-Clinical Safety, Hoffmann- 
La Roche Inc., Nutley, NJ.

#2305  |  Poster Board Number .................................532
THIRTEEN-WEEK VEHICLE FEASIBILITY 
STUDY BY CONTINUOUS INTRAVENOUS 
INFUSION IN THE MONKEY. N. Pickersgill, F. 
Bellebeau, H. Contamin, C. Graham, J. Briffaux 
and E. Drevon-Gaillot. MDS Pharmacology Services, St 
Germain sur l’Arbresle, France.
Program Description (Continued)

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#2306 | #2314
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#2306 | #2314
A CARDIOVASCULAR SAFETY ASSESSMENT PARADIGM FOR THE EARLY IDENTIFICATION OF PROARRHYTHMIC AND TORSADAGENIC COMPOUNDS. C. Franz1, D. Misner1, E. Meierhenry1, M. Fielden1, L. Guo1, J. Ly2, H. Uppal1, D. Rotstein1, P. Senese2, M. Albassam3, M. Gralinski1, S. Chandra1, S. Platt1 and K. Kolaja1. 1Toxicology, Roche Palo Alto, Palo Alto, CA; 2Roche, Nutley, NJ and 3CorDynamics, Chicago, IL.

14-DAY SODIUM 2, 2-DIMETHYLBUTYRATE (ST-20) NEUROGENOTOXICITY STUDY IN RATS. M. Haw1, G. Ritchie1, M. Ryan1, D. Vasconcelos3, V. Yildiz1, D. Contose2, J. D. Johnson2, S. Perrine2, J. Peggins1, J. Tomaszewski1 and P. Terse1. 1Battelle, Columbus, OH; 2Boston University School of Medicine, Boston, MA and 3National Cancer Institute, Bethesda, MD.

#2307 | #2315
Poster Board Number | Poster Board Number
#2307 | #2315


#2308 | #2316
Poster Board Number | Poster Board Number
#2308 | #2316
NILOTINIB PRODUCES NO DETECTABLE CARDIOTOXICITY AFTER 39 WEEKS OF ORAL (GAVAGE) ADMINISTRATION TO CYNOLOGOUS MONKEYS. K. Bowenkamp1, C. Hayden1, G. Argentieri1, M. Osier2, E. Giddens2, P. Savage1, H. Smith1 and P. Sahota1. 1Novartis Pharmaceuticals, East Hanover, NJ and 2SNBL USA, Everett, WA.


#2309 | #2317
Poster Board Number | Poster Board Number
#2309 | #2317
TOXICOLOGICAL EVALUATION OF BMS-747158, A PET MYOCARDIAL PERFUSION IMAGING AGENT. M. Mistry1, D. Outhank1, J. Green1, S. Cicio1, D. Casebeer1, S. Robinson1, R. Kowalski2 and T. Baird2. 1Bristol-Myers Squibb Medical Imaging, North Billerica, MA and 2MPI Research, Inc, Mattawan, MI.

A PERFORMANCE STANDARD FOR DEVELOPMENT OF THE MODIFIED IRWIN TEST AS PART OF A NEUROLOGICAL ASSESSMENT AND A FUNCTIONAL OBSERVATIONAL BATTERY (FOB) IN CD-1 MICE. A. Blackburn, S. Authier, M. Legaspi and G. Washer. LAB Research Canada, Laval (Montreal), QC, Canada.

#2310 | #2318
Poster Board Number | Poster Board Number
#2310 | #2318
TOXICITY OF NORWALK VLP VACCINE FOLLOWING REPEATED INTRANASAL ADMINISTRATION TO NEW ZEALAND WHITE RABBITS. S. Godin1, K. Wheeler1, L. Murphy1 and R. Sublet1. 1Bridge Global Pharmaceutical Services, Inc., Gaithersburg, MD and 2LigoCyte Pharmaceuticals, Inc., Bozeman, MT.


#2311 | #2319
Poster Board Number | Poster Board Number
#2311 | #2319

MOTOR ACTIVITY AND FUNCTIONAL OBSERVATIONAL BATTERY IN RATS TREATED WITH EMD 509847 AND CNS REFERENCES. B. C. Gotschling, P. Tempel and F. von Landenberg. Institute of Toxicology, Merck KGaA, Darmstadt, Germany.

#2312 | #2320
Poster Board Number | Poster Board Number
#2312 | #2320


#2313 | #2321
Poster Board Number | Poster Board Number
#2313 | #2321
TEMPORAL RELATIONSHIP OF PHOSPHOlipidosis AND MITOCHONDRIAL TOXICITY IN PRIMARY RAT CEREBELLAR CULTURES. L. R. Barone and P. J. Ciaccio. Safety Assessment, AstraZeneca, Wilmington, DE.

IN VITRO ASSAYS FOR EVALUATING THE ULTRAVIOLET (UV-A) INDUCED DAMAGE IN CULTURED HUMAN RETINAL PIGMENT EPITHELIAL CELLS. L. Lee, Pfizer Global R&D, San Diego, CA. Sponsor: W. Yoonne.
uptake, intracellular sequestration, and controlled trafficking. Metallothionein (MT), as a redox transducer, plays a critical role in the redox sensing and zinc signaling. Oxidation of the sulfur ligands in MT mobilizes zinc, while reduction of the oxidized ligands enhances zinc binding. This MT redox cycle provides an excellent control mechanism for the availability of intracellular zinc. Many zinc proteins are activated or inactivated after receiving zinc under oxidative stress conditions. These zinc proteins are the effectors of zinc signaling and involved in signal transduction, energy metabolism, mitochondrial function, and gene expression. This symposium will present discussions on (1) cellular redox responses under physiological and stress conditions; (2) zinc transporters and the regulation of zinc intracellular movement in mammalian systems; (3) zinc/cysteine coordination in proteins as a sensor to redox signaling and the converting of redox signaling to zinc signaling through MT redox cycle; and (4) regulation of gene expression by zinc-finger transcription factor.
Program Description (Continued)

Abstract #

. Similar morphological and biochemical evidence of NRTI-induced mitochondrial damage was found both in human infants born to HIV-1-infected mothers and monkey infants born to HIV-1-infected mothers. Transplacental drug treatment alone is able to induce fetal mitochondrial toxicity. Substantial morphological and biochemical mitochondrial cardiac damage was also seen in the NRTI-exposed infant monkeys, consistent with evidence of a deficiency in human cardiac left-ventricular mass reported for HIV-1-infected infants at 1 and 2 years of age after in utero exposure to NRTIs. This symposium will include 4 speakers who will cover topics related to exposures in animal models and parallel events in HIV-1-infected human infants born to HIV-1-infected mothers receiving NRTI therapy during pregnancy.

#2332 9:00 PERINATAL EXPOSURE TO NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS (NRTIS) INDUCES TRANSPLENTAL GENOTOXICITY AND MITOCHONDRIAL TOXICITY. M. C. Poirier. National Cancer Institute, Bethesda, MD.


#2334 9:45 MUTATIONS IN CANCER GENES IN LUNG TUMORS FROM SWISS (CD-1) MICE EXPOSED TRANSPLENTALLY TO AZT AFFECT SIMILAR MOLECULAR PATHWAYS THAT ARE IMPORTANT IN HUMAN LUNG CANCER. R. Sills. NIEHS, Research Triangle Park, NC.

#2335 10:25 PERINATAL NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITOR (NRTI) EXPOSURES CAUSE PERSISTENT MITOCHONDRIAL COMPROMISE IN MOUSE AND MONKEY OFFSPRING AND HUMAN INFANTS. R. L. Division1, M. C. St. Claire2, D. M. Walker2, V. E. Walker3 and M. C. Poirier1,2. NCI, NIH, Bethesda, MD, 1LRR, Albuquerque, NM and 2BioQual, Rockville, MD.

#2336 11:05 THE EFFECT OF ART EXPOSURE DURING CHILDHOOD ON CARDIOVASCULAR STRUCTURE AND FUNCTION IN CHILDREN BORN TO HIV INFECTED MOTHERS. S. E. Lipschultz. Department of Pediatrics, University of Miami, Miami, FL1, Miami, FL. Sponsor: V. Walker.

Abstract #

Thursday Morning, March 20
9:00 AM to 11:45 AM
Room 611

STEM CELL BIOLOGY AND TOXICOLOGY

SYMPOSIUM SESSION: STEM CELLS IN DEVELOPMENTAL AND REPRODUCTIVE BIOLOGY AND TOXICOLOGY

Chairperson(s): Anne Greenlee, Oregon Health & Sciences University, La Grande, OR and Robert Chapin, Pfizer Global Research and Development, Groton, CT.

Endorsed by:

In Vitro and Alternative Methods Specialty Section
Reproductive and Developmental Toxicology Specialty Section
Risk Assessment Specialty Section

There is considerable concern that chemical exposures near the time of conception or during pregnancy may contribute to the increasing incidence of congenital cardiovascular and neurodevelopmental diseases. However, most chemicals have not been well characterized because comprehensive testing may exceed available resources of time, money and animals. While the embryonic stem cell test with morphologic and molecular endpoints offers an alternative strategy for screening pharmaceuticals and novel compounds, it is just one application of stem cells in toxicology. Adapting these cells to high throughput platforms may improve efficiency and offer reductions in animal use and costs. This vision is challenged by the long-term stability of the pluripotent stem cell populations and standardizing conditions for directed differentiation. Resolution of these issues is needed to fully capitalize on stem cells in developmental and reproductive toxicology. The purpose of this symposium is to provide an overview of stem cell biology and convey the current state-of-the-art science of using embryonic stem cells in developmental studies and toxicity testing.

#2337 9:00 STEM CELLS IN DEVELOPMENTAL AND REPRODUCTIVE BIOLOGY AND TOXICOLOGY - SYMPOSIUM OVERVIEW. A. R. Greenlee and R. E. Chapin. 1School of Nursing, Oregon Health & Science University, La Grande, OR and 2Global Research and Development, Pfizer, Groton, CT.

#2338 9:05 STEM CELLS IN REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY. D. P. Wolf. Oregon National Primate Research Center, Oregon Health & Science University, Beaverton, OR. Sponsor: A. Greenlee.


#2341 11:05 EGGS AND SPERM FROM EMBRYONIC STEM CELLS: EMERGING TOOLS TO PREDICT REPRODUCTIVE RISKS? A. R. Greenlee1,2. 1School of Nursing, Oregon Health & Science University, La Grande, OR and 2Center for Research on Occupational and Environmental Toxicology, Oregon Health & Science University, Portland, OR.
Thursday Morning, March 20 9:00 AM to 11:45 AM
Room 618

WORKSHOP SESSION: GENOTOXICITY TESTING FROM EARLY DISCOVERY THROUGH REGULATORY SUBMISSION: A COMPREHENSIVE PRIMER

Chairperson(s): Ronald Snyder, Schering-Plough Research Institute, Summit, NJ and Rob Stachlewitz, Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT.

Endorsed by:
Drug Discovery Toxicology Specialty Section

A review of the Physician’s Desk Reference (PDR) reveals that 25–30% of marketed drugs (excluding those whose mechanism of action is dependent on genotoxicity such as some antineoplastics, antivirals, etc.) exhibited genotoxicity when assessed by the standard battery of bacterial and mammalian assays. The majority of these marketed drugs with positive gene-tox findings were discovered and developed some years ago in a more relaxed climate in which genotoxic liability was balanced against the potential benefit of the indication. While this risk/benefit analysis still comes into play today, increased drug safety accountability has resulted in a “zero tolerance” situation thus mandating better ways to screen for and identify these problematic structures as early as possible. Most large pharmaceutical companies with active chemistry and/or high throughput combinatorial or compound library screening programs have recognized the need for ascertaining the genotoxic potential of novel molecular scaffolds have genotoxic potential and have established biological and in silico strategies to determine this. The goal of this workshop will be to provide an assessment of the state of the art of genotoxicity evaluation in the drug discovery process, the management of genotoxicity including discussion on why these sometimes generate “false positives” and “false negatives” and new ways to look at these findings. Genotoxicity associated with non-covalent drug/DNA interactions. Future trends and regulatory accountability has resulted in a “zero tolerance” situation thus mandating better ways to screen for and identify these problematic structures as early as possible. The biological processes by which environmental pollutants induce adverse health effects is most likely regulated by complex interactions dependent upon the route of exposure, dose, kinetics of distribution, and cellular responses. To further complicate deciphering these interactions, the majority of toxicological data has been developed using in vitro and in vivo models, adding to the complexity of extrapolation issues. Quantitative models are the next logical step to advance the current toxicological understanding of how pollutants induce both cancer and non-cancer health effects. Mechanistically-based quantitative modeling represents an avenue of research to identify and, in some instances, quantify uncertainties in relationship to mode of action (MOA) by which compounds elicit adverse health effects. If the MOA for an environmental pollutant is unknown, a hypothesis-driven approach can be utilized to assemble the model and inform likely key events within the MOA(s) for which further experimentation can be designed to test the MOA hypothesis. An important limitation of biologically-based model development is the availability of empirical data to construct such models. It is conceivable that this type of approach would improve the efficiency of current research strategies by pointing to specific research needs and data gaps. Efforts to define the approach for creating mechanistically-based models will provide unique and useful tools for human health risk assessment. Implementation of such techniques will result in the use of science-based derivation of risk posed by exposure to environmental pollutants. The following presentations will highlight the current state of the science and future directions of biologically-based quantitative modeling. (The views expressed in this abstract are those of the authors and do not represent the policy of the U.S. Environmental Protection Agency.)

#2342 9:00 GENOTOXICITY TESTING FROM EARLY DISCOVERY THROUGH REGULATORY SUBMISSION: A COMPREHENSIVE PRIMER. R. Snyder and R. Stachlewitz, Schering-Plough, Summit, NJ and Boehringer Ingelheim Pharmaceuticals Inc., Ridgefield, CT.

#2343 9:10 GENETIC TOXICOLOGY TESTING: HOW CAN WE IMPROVE ITS UTILITY TO INFORM RISK ASSESSMENT? B. Gopalpudi, The Dow Chemical Company, Midland, MI.

#2344 9:40 USING GENETIC TOXICOLOGY INFORMATION TO EVALUATE SAFETY OF IMPURITIES AND METABOLITES FOR PHARMACEUTICALS. J. P. Bercu and K. L. Dobo, ‘Toxicology and Drug Disposition, Lilly Research Laboratories, a Division of Eli Lilly and Company, Greenfield, IN and 2Drug Safety Research and Development, Genetic Toxicology, Pfizer Global R & D, Groton, CT.


#2346 10:40 IN SILICO APPROACHES FOR ASSESSMENT OF GENOTOXICITY IN DRUG DISCOVERY AND DEVELOPMENT. R. D. Snyder, Schering-Plough, Summit, NJ and R. Stachlewitz, Schering-Plough Research Institute, Summit, NJ.

#2347 11:10 EMERGING SCIENTIFIC APPROACHES IN GENETIC TOXICITY TESTING. J. Aubrecht, Drug Safety R&D, Pfizer, Inc, Groton, CT.

Abstract #

Thursday Morning, March 20 9:00 AM to 11:45 AM
Room 608

WORKSHOP SESSION: INCORPORATION OF MODE-OF-ACTION INTO MECHANISTICALLY-BASED QUANTITATIVE MODELS


Endorsed by:
Biological Modeling Specialty Section
Risk Assessment Specialty Section

The biological processes by which environmental pollutants induce adverse health effects is most likely regulated by complex interactions dependent upon the route of exposure, dose, kinetics of distribution, and cellular responses. To further complicate deciphering these interactions, the majority of toxicological data has been developed using in vitro and in vivo models, adding to the complexity of extrapolation issues. Quantitative models are the next logical step to advance the current toxicological understanding of how pollutants induce both cancer and non-cancer health effects. Mechanistically-based quantitative modeling represents an avenue of research to identify and, in some instances, quantify uncertainties in relationship to mode of action (MOA) by which compounds elicit adverse health effects. If the MOA for an environmental pollutant is known, a model can be constructed utilizing experimentally-derived datasets that quantitatively represent the key events in the MOA. Conversely, if the MOA is unknown, a hypothesis-driven approach can be utilized to assemble the model and inform likely key events within the MOA(s) for which further experimentation can be designed to test the MOA hypothesis. An important limitation of biologically-based model development is the availability of empirical data to construct such models. It is conceivable that this type of approach would improve the efficiency of current research strategies by pointing to specific research needs and data gaps. Efforts to define the approach for creating mechanistically-based models will provide unique and useful tools for human health risk assessment. Implementation of such techniques will result in the use of science-based derivation of risk posed by exposure to environmental pollutants. The following presentations will highlight the current state of the science and future directions of biologically-based quantitative modeling. (The views expressed in this abstract are those of the authors and do not represent the policy of the U.S. Environmental Protection Agency.)

#2348 9:00 INCORPORATION OF MODE OF ACTION INTO MECHANISTICALLY-BASED QUANTITATIVE MODELS. N. Keshava and H. El-Masri, Office of Research and Development, U.S. Environmental Protection Agency, Research Triangle Park, NC.

#2349 9:15 USING GENE/PATHWAY/DISEASE ANALYSIS TO QUANTIFY CRITICAL DISEASE PATHWAYS. C. J. Portier, J. Gohlke and R. Thomas, NIEHS, Research Triangle Park, NC.
to bring together experts to discuss the usefulness of studies with nanomaterials, and alternative exposure methods (e.g., intratracheal instillation and inhalation) for hazard identification. A number of barriers exist for conducting inhalation studies. Whereas inhalation is the preferred method of pulmonary exposure for hazard identification, a number of inherent issues of toxicity of nanomaterials of diverse size and shape. However, there are a number of inherent issues of in vitro test systems resulting in false positives and false negatives and recent studies have shown little correlations between in vitro and in vivo toxicity of some nanomaterials. Because of their small size, aerosolization of respirable nanomaterials is likely, either as singlet or as aggregated particles and exposure by the inhalation route is a major concern. Whereas inhalation is the preferred method of pulmonary exposure for hazard identification, a number of barriers exist for conducting inhalation studies with nanomaterials, and alternative exposure methods (e.g., intratracheal instillation, intratracheal inhalation, pharyngeal/laryngeal aspiration) have been used by various investigators. The purpose of this workshop is to bring together experts to discuss the usefulness of in vitro studies for hazard identification of nanomaterials and if alternative pulmonary exposure methods can be used to substitute for inhalation studies.


**Program Description** (Continued)

Abstract 

Tion session will focus on details of the REACH regulation as well as the REACH Implementation Projects, which will offer guidance to regulatory authorities and to industry.

#2359 9:00  **REACH – IMPLEMENTATION, CHEMICAL SAFETY, AND INFORMATION REQUIREMENTS.** E. S. Williams¹, S. Borghoff² and V. Santa-Cruz³. ¹Houston, ChemRisk, Houston, TX, ²ILS, Inc., Durham, NC and ³Chevron Phillips Chemical, Brussels, Belgium.

#2360 9:10  **REACH IMPLEMENTATION PROJECTS: GUIDANCE FOR INDUSTRY AND REGULATORY AUTHORITIES.** E. S. Williams. Houston, ChemRisk, Houston, TX.

#2361 9:45  **FULFILLING TECHNICAL REQUIREMENTS OF REACH.** S. Borghoff. Investigative Toxicology, ILS, Inc, Research Triangle Park, NC.

#2362 10:20  **REACH’S COMPREHENSIVE APPROACH TO CHEMICAL SAFETY.** V. Santa-Cruz. Chevron-Phillips Chemical, Brussels, Belgium.


11:30  **QUESTIONS FROM THE AUDIENCE.**

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**FRIDAY MORNING**

Friday Morning, March 21
9:00 AM to 3:30 PM
Sheraton Willow Room

SATELLITE MEETING: PERCHLORATE EXPOSURES, IODINE MODULATION OF EFFECT, AND EPIDEMIOLOGIC ASSOCIATIONS: IMPLICATIONS FOR RISK ASSESSMENT

Presented by: The Kleinfelder Group

**Overview:** New epidemiologic analyses and experimental results on the relationship between perchlorate exposures and thyroid function will be presented. Speakers and panelists will consider the role of iodine nutrition in determining perchlorate health risks and to address evidence for and against the attribution of causality to a given epidemiologic association. Ample time for participatory discussion is allotted.

**Program Committee:** Gay Goodman (Chair), Michael Dourson, and Robert Howd.

**Confirmed Speakers:** Yona Amitai, Benjamin Blount, Lewis Braverman, John Gibbs, Gay Goodman, Robert Howd, Steven Lamm, and Elizabeth Pearce.

**More Information:** Telephone Dr. Goodman at (206) 284-4820 or visit www.kleinfelder.com/perchlorate.2008.seattle.

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**Thursday Afternoon, March 20**
1:00 PM to 4:30 PM
Sheraton Willow Room

SATELLITE MEETING: PERCHLORATE EXPOSURES, IODINE MODULATION OF EFFECT, AND EPIDEMIOLOGIC ASSOCIATIONS: IMPLICATIONS FOR RISK ASSESSMENT

Presented by: The Kleinfelder Group

**Overview:** New epidemiologic analyses and experimental results on the relationship between perchlorate exposures and thyroid function will be presented. Speakers and panelists will consider the role of iodine nutrition in determining perchlorate health risks and to address evidence for and against the attribution of causality to a given epidemiologic association. Ample time for participatory discussion is allotted.

**Program Committee:** Gay Goodman (Chair), Michael Dourson, and Robert Howd.

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**More Information:** Telephone Dr. Goodman at (206) 284-4820 or visit www.kleinfelder.com/perchlorate.2008.seattle.
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The asterisk after the abstract number indicates the first presenter.
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Janice E. Chambers

Secretary
(2006–2008)

• Communiquè, Editor
• Council Subcommittee for Non-SOT and Contemporary Concepts in Toxicology Meetings, Chair, Liaison
• Council Subcommittee for Regional Chapter Funding, Chair, Liaison
• Education Committee, Liaison
• Regional Chapters, Liaison

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chambers@cvm.msstate.edu

Martin A. Philbert

Secretary-elect

• 50th Anniversary Year SOT Task Force, Member
• Council Subcommittee for Regional Chapter Funding, Member
• NIH Funding Task Force, Liaison

T: (734) 763-4523 F: (734) 763-8095
philbert@umich.edu
### 2007–2008 Council (Continued)

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>James A. Popp</td>
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</tr>
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<tr>
<td>Kim Boekelheide</td>
<td>Councilor (2007–2009)</td>
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<tr>
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</tr>
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<tr>
<td>Elaine V. Knight</td>
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<tr>
<td>Shawn Douglas Lamb</td>
<td>Executive Director</td>
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</tr>
</tbody>
</table>

- **Awards Committee, Liaison**
- **Endowment Fund Board, Member, Liaison**
- **IUTOX Councilor, Member**
- **Regional Chapter Graduate Student Representatives Committee, Liaison**
- **Specialty Section Student Representatives, Liaison**
- **Student Advisory Committee, Liaison**

- **Committee on K–12 Education, Liaison**
- **Specialty Sections, Liaison**
- **World Wide Web Advisory Committee, Liaison**

- **Continuing Education Committee, Liaison**
- **Historian, Liaison**
- **Membership Committee, Liaison**
- **Postdoctoral Assembly, Liaison**

- **Career Resource and Development Committee, Liaison**
- **Council Subcommittee for Non-SOT and Contemporary Concepts in Toxicology Meetings, Member**
- **Regulatory Affairs and Legislative Assistance Committee, Liaison**

- **Animals in Research Committee, Liaison**
- **Committee on Diversity Initiatives, Liaison**
- **Council Subcommittee for Regional Chapter Funding, Member**

- **Board of Publications, Staff Liaison**
- **Endowment Fund Board, Member, Ex-Officio**
- **Finance Committee, Staff Liaison**
- **IUTOX Councilors, Staff Liaison**
- **Nominating Committee, Staff Liaison**

*up-to-date information at [www.toxicology.org](http://www.toxicology.org)*
Officers and Councilors

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President (2007–2008)  
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Councilor (2007–2009)  
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kim_boekelheide@brown.edu

Past Presidents

1961–1962  Harold C. Hodge*  
1962–1963  C. Boyd Shaffer*  
1963–1964  Paul S. Larson*  
1964–1965  Harry W. Hays*  
1965–1966  Frederick Coulston*  
1966–1967  Verald K. Rowe*  
1968–1969  Carrol S. Weil*  
1970–1971  Robert L. Roudabush*  
1972–1973  Victor A. Drill*  
1974–1975  Sheldon D. Murphy*  
1975–1976  Seymour L. Friess  
1976–1977  Robert A. Scala  
1977–1978  Harold M. Peck  
1978–1979  Leon Golberg*  
1979–1980  Tom S. Miya  
1980–1981  Perry J. Gehring*  
1981–1982  Robert B. Fowrney*  
1982–1983  Robert L. Dixon*  
1983–1984  Gabriel L. Plaa  
1984–1985  Frederick W. Oehme  
1985–1986  Emil A. Pfizer*  
1986–1987  John Doull  
1987–1988  Jerry B. Hook  
1988–1989  James E. Gibson  
1989–1990  Roger O. McClellan  
1990–1991  Curtis D. Klaassen  
1991–1992  Donald J. Reed  
1993–1994  I. Glenn Sipes  
1994–1995  Meryl H. Karol  
1995–1996  Jack H. Dean  
1996–1997  James S. Bus  
1997–1998  R. Michael McClain  
1998–1999  Steven D. Cohen  
1999–2000  Jay L. Goodman  
2001–2002  David L. Eaton  
2002–2003  William F. Greenlee  
2003–2004  Marion F. Ehrich  
2004–2005  Linda S. Birnbaum  
2005–2006  Kendall B. Wallace  
2006–2007  James A. Popp  

*Deceased
Elected Committees

Awards
Michael A. Gallo, Member (2007–2009)
A. Jay Gandolfi, Member (2007–2009)
Carole A. Kimmel, Member (2006–2008)
Kenneth Olden, Member (2006–2008)
Robert A. Roth, Member (2007–2009)
James A. Swenberg, Member (2007–2009)
James A. Popp*
Clarissa Russell Wilson**

Elected Committees

Appointed Committees

A.	Jay	Gandolfi,	Member	(2007–2009)

Carole A. Kimmel, Member (2006–2008)
Kenneth Olden, Member (2006–2008)
Robert A. Roth, Member (2007–2009)
James A. Swenberg, Member (2007–2009)
Fit
* Council Liaison** Staff Liaison
TBD=To be determined
Appointed Committees (Continued)

Committee on Diversity Initiatives (CDI)
Vicente Santa Cruz, Chair (2006–2008), Member (2005–2008)
Abraham Dalu, Member (2007–2010)
Kimberly D. Daniel, Member (2005–2008)
Lin Mantell, Member (2007–2010)
Charles A. Miller, III, Member (2005–2008)
Anthony M. Ndifor, Member (2006–2009)
Vanessa M. Silva, Member (2006–2009)
Mari S. Stavanja, Member (2006–2009)
Jose E. Manautou, ad hoc (2005–2008)
Patrick J. Shaw, Student Representative (2007–2008)
Denise E. Robinson Gravatt*
Betty Eidemiller**

Committee on K–12 Education
Dorothy B. Colagiovanni, Member (2007–2010)
Keith M. Erikson, Member (2007–2009)
Maureen R. Gwinn, Member (2007–2010)
Deepa B. Rao, Member (2006–2009)
Pamela J. Shubat, Member (2005–2008)
Nicole V. Soucy, Member (2005–2008)
Katie Sprugel, Member (2006–2009)
Susanne Brander, Student Representative (2007–2008)
Kim Boekelheide*
Betty Eidemiller**

Continuing Education Committee
Stephen E. Bloom, Member (2007–2010)
David W. Brewster, Member (2006–2009)
Chris Corton, Member (2006–2009)
Y. James Kang, Member (2005–2008)
Thomas A. Lewandowski, Member (2005–2008)
John C. Lipscomb, Member (2007–2010)
Barbara J. Mounho, Member (2006–2009)
Courtney E.W. Sulentic, Member (2007–2010)
Kylee E. Ebli, Student Representative (2007–2008)
Scott W. Burchiel*
Nichelle Sankey**

Council Subcommittee for Non-SOT and Contemporary Concepts in Toxicology (CCT)
Janice E. Chambers, Chair (2007–2008), Member (2005–2008)*
Elaine Valerie Knight, Member (2007–2008)
Shawn Douglas Lamb **

Council Subcommittee for Regional Chapter Funding
Janice E. Chambers, Chair (2007–2008), Member (2005–2008)*
Martin A. Philbert, Member (2007–2008)
Denise E. Robinson Gravatt, Member (2007–2008)
Marcia G. Lawson**

Endowment Fund Board
Jon C. Cook, Member (2007–2010)
Norbert E. Kaminski, Member (2007–2011)
James E. Klaunig, Member (2006–2009)
James A. Popp, Member (2006–2009)*
I. Glenn Sipes, Member (2006–2009)
Kendall B. Wallace, Member (2006–2008)
George B. Corcoran, Ex-Officio (2007–2008)*
Clarissa Russell Wilson**

Finance Committee
George B. Corcoran, Member (2006–2008)
Jeffrey A. Handler, Member (2006–2009)
Robert W. Kapp, Jr., Member (2007–2010)
Kenneth S. Ramos, Member (2007–2009)
Jacqueline H. Smith, Member (2005–2008)
Shawn Douglas Lamb **

Historian
Ernest Hodgson, Chair (2004–2011)
Scott W. Burchiel*
Clarissa Russell Wilson**

IUTOX Councilors
Linda S. Birnbaum, Member (2007–2010)
George B. Corcoran, Member (2007–2010)
Jack H. Dean, Member (2007–2010)
James A. Popp, Member (2007–2010)
Kenneth S. Ramos, Member (2007–2010)*
Shawn Douglas Lamb **

NIH Funding Task Force
David L. Eaton, Member (2004–2008)
Curtis D. Klaassen, Member (2004–2008)
Serrine S. Lau, Member (2004–2008)
Jose E. Manautou, Member (2004–2008)
Alvaro Puga, Member (2004–2008)
Martin A. Philbert*
Betty Eidemiller**

Postdoctoral Assembly Board
Kristen A. Mitchell, Chair (2007–2008)
Heather S. Floyd, Vice Chair (2007–2008)
Scott W. Burchiel*
Betty Eidemiller**
Appointed Committees (Continued)

Program Committee
Cheryl Lyn Walker, Co-Chair (2007–2008)
Michael Aschner, Member (2007–2010)
Matthew S. Bogdanffy, Member (2006–2009)
William J. Brock, Member (2007–2010)
Harvey J. Clewell, Member (2006–2009)
Sally P. Darney, Member (2006–2009)
Ronald J. Gerson, Member (2005–2008)
Lynda L. Lanning, Member (2005–2008)
Charlene A. McQueen, Member (2007–2010)
John B. Morris, Member (2005–2008)
Ivan Rusyn, Member (2005–2008)
Katherine Sarlo, Member (2007–2010)
Hollie I. Swanson, Member (2007–2010)
Nichelle Sankey**

Regional Chapter Graduate Student Representative Committee
Patrick J. Shaw, Chair (2007–2008)
Kristina D. DeSmet, Co-Chair, Midwest, Education (2007–2008)
Patricia Gillespie, Secretary, Mid-Atlantic (2007–2008)
Natalie M. Johnson, Gulf Coast (2007–2008)
James A. Popp*
Betty Eidemiller**

Specialty Section Graduate Student Representative Committee
Alison Hege, Chair (2007–2008)
Thomas J. Kannanayakal, Dermal Toxicology (2007–2008)
Sheung P. Ng, Immunotoxicology (2007–2008)
Wei Zou, Comparative and Veterinary (2007–2008)
James A. Popp*
Betty Eidemiller**

Student Advisory Council
Patrick J. Shaw, President (2007–2008)
Thomas J. Kannanayakal, President-elect (2007–2008)
Alison Hege, Secretary/Treasurer (2007–2008)
Kristina DeSmet, Secretary/Treasurer-elect (2007–2008)
Patricia Gillespie, Member (2007–2008)
Elizabeth M. Vancza, Member (2007–2008)
James A. Popp*
Betty Eidemiller**

World Wide Web Advisory Committee
Phil Wexler, Chair (2006–2008), Member (2005–2008)
Paul Duffy, Member (2007–2010)
Pertti J. Hakkinen, Member (2006–2009)
L. Peyton Myers, Member (2005–2009)
Mark W. Powley, Member (2007–2010)
Tracy M. Williams, Member (2005–2008)
Daniel J. Hochman, Student Representative (2007–2008)
Kim Boekelheide*
Debbie O’Keefe**

Regulatory Affairs and Legislative Assistance Committee
Charles C. Barton, Member (2007–2010)
Lawrence J. Fischer, Member (2005–2008)
Larry R. Johnson, Member (2005–2008)
Joseph R. Landolph, Jr., Member (2007–2010)
Peter Sausen, Member (2006–2009)
Jan Oberdoerster, ad hoc
Jay Vodela, ad hoc
Erica M. Sparkenbaugh, Student Representative (2007–2008)
Elaine Valerie Knight*
Marcia G. Lawson**

* Council Liaison
** Staff Liaison
TBD=To be determined
Regional Chapter—Officers

Allegheny-Erie (83*)
Annabelle F. Javier, President
Jeffrey S. Smith, President-elect
Aaron Barchowsky, Vice President
Robin E. Gandel, Secretary
William James Mackay, Treasurer
Melanie S. Flint, Past President
Lori A. Battelli, Councilor
Jim Scabillon, Councilor
Mark Weisberg, Councilor
Pallavi B. Limaye, Postdoctoral Representative
Adam Straub, Student Representative

Central States (273*)
Gabrielle Ludewig, President
Hartmut Jaeschke, Vice President
Jonathan A. Doorn, Secretary/Treasurer
Yu-Jui Yvonne Wan, Past President
Grace L. Guo, Councilor
Thu Annelise Nguyen, Councilor
Richard C. Pleus, Councilor
Deon Van der Merwe, Councilor
Jennifer N. Rees, Student Representative

Gulf Coast (99*)
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Sharon A. Petronella, Vice President
Shashi K. Ramaiah, Vice President-elect
Mary F. Kanz, Treasurer
Shawn B. Bratton, Secretary
Bryan W. Brooks, Past President
Edward M. Mills, Councilor
Jeffrey K. Wickliffe, Councilor
Georgianna G. Gould, Postdoctoral Representative
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Lake Ontario (18*)
TBD

Mid-Atlantic (466*)
John W. Kille, President
Anthony R. Schatz, Vice President-elect
Conney W. Berger, Secretary/Treasurer
Angelique P. J. M. Braen, Past President
Diann L. Blanset, Councilor
Patricia Gillespie, Student Representative

Midwest (214*)
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Jay C. Albretsen, Secretary
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Jon N. Cammack, Councilor
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Molly S. Weiler, Councilor
Kristina D. DeSmet, Student Representative

Mountain West (116*)
Richard R. Vaillancourt, President
Vasilis Vasilou, Vice President
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Kevin Welch, Councilor
Ebany J. Martinez, Student Representative

National Capital Area (245*)
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Katherine Squibb, Councilor
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Amy Shaw, Vice Student Representative

North Carolina (397*)
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Brenda Faiola, Vice President
David J. Thomas, Vice President-elect
Anthony Bernard DeAngelo, Secretary/Treasurer
Michael P. Waalkes, Past President
Greg Falls, Councilor
Leslie Recio, Councilor
Melanie B. Weed, Student Representative
Regional Chapter—Officers (Continued)

Northeast (248*)
Douglas J. Ball, President
Jessica E. Sutherland, President-elect
Graeme B. J. Smith, Vice President
Laura Andrews, Secretary/Treasurer
Joseph V. Rutkowski, Past President
Phillip M. Bartholomew, Councilor
Robert F. Stachlewitz, Councilor
Aldona Karaczyn, Postdoctoral Representative

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George R. Clemens, Vice President
Stephen M. DiZio, Vice President-elect
Tao Wang, Secretary
Kent E. Pinkerton, Treasurer
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Sheila M. Healy, Councilor
Karen L. Steinmetz, Councilor
Susanne Brander, Student Representative

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Laura E. Solem, President-elect
Catherine F. Jacobson, Secretary/Treasurer
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Nathan R. Pechacek, Councilor
Shalene Thomas, Councilor
Lisa D. Schmidt, Student Representative

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David R. Mattie, President-elect
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Courtney E.W. Sulentic, Secretary
Lynette K. Rogers, Treasurer
Charles Vincent Smith, Past President
Mary Beth Genter, Councilor
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J. Christopher States, Councilor
Frazier B. Taylor, Student Representative

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Linda L. Carlock, Secretary/Treasurer
Andrij Holian, Past President
Evan P. Gallagher, Councilor
Anne R. Greenlee, Councilor
Celine A. Beamer, Postdoctoral Representative
David J. Castro, Student Representative

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Russell L. Carr, Vice President-elect
Kartik Shankar, Secretary
Heather E. Kleiner, Treasurer
Martin J. Ronis, Past President
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Neera V. Gopee, Councilor
Prasad Krishnan, Student Representative

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Gary W. Miller, Past President
P. Markus Dey, Councilor
Julie A. Coffield, Councilor
Melinda Sue Prucha, Student Representative

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Hisham K. Hamadeh, President
Husam S. Younis, Vice President
Anthony M. Ndifor, Secretary
Tina Leakakos, Treasurer
David N. Hovland, Past President
Michelle J. Horner, Councilor
Gregory J. Stevens, Councilor

* Membership Totals
Totals reflect as of July 26, 2007
Special Interest Group—Officers

American Association of Chinese in Toxicology (108*)
Y. James Kang, President
Jia Sheng Wang, Vice President
Diana J. Auveyng-Kim, Secretary
Charles Y. Wang, Treasurer
Jihua (John) Zhang, Past President
Li-Jie Fu, Councilor
Zhijie Yang, Councilor
Li You, Councilor
Yun Zhang, Councilor

Association of Scientists of Indian Origin (59*)
Madhusudan G. Soni, President
Gopala Krishna, Vice President
Chellu S. Chetty, Secretary/Treasurer
Harihara M. Mehendale, Past President
Sanjay Chanda, Councilor
Gunda Reddy, Councilor

Hispanic Organization for Toxicologists (52*)
Javier Avalos, Interim Executive Committee
Braulio D. Jimenez-Velez, Interim Executive Committee
Ofelia A. Olvero, Interim Executive Committee
Mari Stavanja, Interim Executive Committee
Enrique Fuentes, Student Representative
in the Interim Executive Committee

Korean Toxicologists Association in America (23*)
Ji Eun Lee, President
Yong Joo Chung, Vice President
Sookwang Lee, Secretary/Treasurer
Tae-Won Kim, Past President
Il Je Yu, Councilor

Toxicologists of African Origin (20*)
Abraham Dalu, Head of the Organizing Committee
Oluwasanmi O. Areola, Organizing Committee
Bernard K. Gadagbui, Organizing Committee
Anthony M. Ndifor, Organizing Committee

Women in Toxicology (317*)
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Stacie L. Wild, President-elect
Laura Andrews, Vice President
Melissa C. Rhodes, Secretary/Treasurer
Carol S. Auletta, Past President
Kristina Dam Chadwick, Councilor
Katie Sprugel, Councilor
Julie A. Gosse, Postdoctoral Representative
Jennifer D. Cohen, Student Representative

* Membership Totals
Totals reflect as of July 26, 2007
Specialty Section—Officers

Biological Modeling  (108*)
Sean M. Hays, President
Craig M. Zwickl, Vice President
Richard A. Corley, Vice President-elect
Bradford W. Gutting, Secretary/Treasurer
Charles Timchalk, Past President
Cecilia Tan, Councilor
Justin G. Teeguarden, Councilor
Rebecca A. Clewell, Student Representative

Carcinogenesis  (247*)
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Barbara S. Shane, Vice President
Charlene A. McQueen, Vice President-elect
Chris Corton, Secretary/Treasurer
Michael Lee Cunningham, Past President
Michelle J. Hooth, Councilor
Abigail C. Jacobs, Councilor
Ivan Rusyn, Councilor
Yu Janet Zang, Postdoctoral Representative
Dana C. Upton, Student Representative

Comparative and Veterinary  (99*)
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Jim E. Riviere, Vice President
Mike J. Murphy, Vice President-elect
Jay F. Harriman, Secretary/Treasurer
Wilson Kiiza Rumberha, Past President
Kathleen Gabrielson, Councilor
Ramesh Chandra Gupta, Councilor
Sadrh Devi, Postdoctoral Representative
Wei Zou, Student Representative

Dermal  (129*)
David W. Hobson, President
Carol S. Auletta, President-elect
George DeGeorge, Vice President
Anne Marie Api, Secretary/Treasurer
James N. McDougal, Past President
Robert E. Osterberg, Councilor
Jeffrey J. Yourick, Councilor
Adrienne T. Black, Postdoctoral Representative
Thomas J. Kannanayakal, Student Representative

Drug Discovery Toxicology  (305*)
Drew A. Badger, President
Kyle L. Kolaja, Vice President
John W. Davis, Vice President-Elect
Mark R. Fielden, Secretary/Treasurer
James L. Stevens, Councilor
Kimberly A. Henderson, Student Representative

Ethical, Legal, and Social Issues  (75*)
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Mara Seeley, Vice President
Melinda J. Pomeroy-Black, Vice President-elect
Lawrence W. Masten, Secretary/Treasurer
Jacques P. J. Maurissen, Past President
Michelle C. Catlin, Councilor
Thomas A. Lewandowski, Councilor
Daniel J. Hochman, Student Representative

Food Safety  (138*)
Bruce G. Hammond, President
Craig Llewellyn, Vice President
Jia Sheng Wang, Vice President-elect
Wu Li, Secretary/Treasurer
George A. Burdock, Past President
Genevieve S. Bondy, Councilor
Bernadene A. Magnuson, Councilor
Stanley T. Omaye, Councilor
Jay Vodela, Councilor

Immunotoxicology  (344*)
Stephen B. Pruett, President
Jeanine L. Bussiere, Vice President
Jean F. Regal, Vice President-elect
Helen V. Ratajczak Edmond, Secretary/Treasurer
Mitchell D. Cohen, Past President
Rodney R. Dietert, Councilor
Danuta J. Herzyk, Councilor
Stacey E. Anderson, Postdoctoral Representative
Sheung P. Ng, Student Representative

In Vitro and Alternative Methods  (158*)
Daniel C. Kemp, President
Frank A. Barile, Vice President
David G. Allen, Vice President-elect
Sue M. Ford, Secretary/Treasurer
George DeGeorge, Past President
Renee M. Gardner, Councilor
Vincent A. Murphy, Councilor
Sonia R. Miranda, Postdoctoral Representative
Prajakta S. Palkar, Student Representative
Ying Fan, Vice Student Representative

Inhalation and Respiratory  (264*)
Deepak K. Bhalla, President
Lung-Chi Chen, Vice President
JeanClare Seagrave, Vice President-elect
Alison C. P. Elder, Secretary/Treasurer
Michael W. Foster, Past President
Matthew J. Campen, Councilor
Ilona Jaspers, Councilor
Jeffrey S. Tepper, Councilor
James G. Wagner, Councilor
Elizabeth M. Vancza, Student Representative

* Membership Totals
Totals reflect as of July 26, 2007
### Specialty Section—Officers (Continued)

#### Mechanisms (316*)
- Dean P. Jones, President
- Gary O. Rankin, Vice President
- Dennis R. Petersen, Vice President-elect
- Joan B. Tarloff, Secretary/Treasurer
- Kenneth S. Ramos, Past President
- Brian J. Day, Councilor
- Terrance J. Kavanagh, Councilor
- Lauren M. Aleksunes, Postdoctoral Representative
- Lisa D. Beilke, Student Representative

#### Metals (156*)
- Kirk T. Kitchin, President
- Y. James Kang, Vice President
- Wei Zheng, Vice President-elect
- Michael F. Hughes, Secretary/Treasurer
- Michael J. McCabe, Past President
- Barbara D. Beck, Councilor
- Walter C. Pro zaleck, Councilor
- Kylee E. Ebin, Student Representative

#### Mixtures (50*)
- Moiz Mumtaz, President
- Janice E. Chambers, Vice President
- Jane Ellen Simmons, Vice President-elect
- David R. Mattie, Secretary/Treasurer
- Sami Haddad, Councilor
- Cecilia Tan, Councilor

#### Molecular Biology (173*)
- Richard S. Pollenz, President
- Thomas R. Sutter, Vice President
- Michael J. Carvan, Vice President-elect
- Kristine L. Willett, Secretary/Treasurer
- Craig Marcus, Past President
- John D. Robertson, Councilor
- Russell S. Thomas, Councilor
- Edward Dougherty, Student Representative

#### Nanotoxicology (New Section)
- Annette B. Santamaria, Interim President
- David B. Warheit, Interim Vice President
- Paul C. Howard, Interim Secretary/Treasurer

#### Neurotoxicology (344*)
- M. Christopher Newland, President
- Marion F. Ehrich, Vice President
- Susan L. Schantz, Vice President-elect
- Karen L. Steinmetz, Secretary/Treasurer
- Robert C. MacPhail, Past President
- Edward D. Levin, Councilor
- Ronald B. Tjalkens, Councilor
- Derek A. Drechsel, Student Representative

#### Occupational and Public Health (178*)
- Patricia A. Weideman, President
- David G. Dolan, Vice President
- Angela J. Harris, Vice President-elect
- Tracy A. Kimmel, Secretary/Treasurer
- Harold Zenick, Past President
- Daniel J. Caldwell, Councilor
- Sandra Reiss Murphy, Councilor
- Jianyang Wang, Postdoctoral Representative
- Adrienne L. King, Student Representative

#### Regulatory and Safety Evaluation (585*)
- James D. Green, President
- Frank D. Sistare, Vice President
- James C. Lamb, Vice President-elect
- Suzanne Compton Fitzpatrick, Secretary/Treasurer
- James T. MacGregor, Past President
- Vicki L. Dellarco, Councilor
- David Jacobson-Kram, Councilor
- Jaisheer Bankoti, Student Representative

#### Reproductive and Developmental (306*)
- Rochelle W. Tyl, President
- Lori A. Dostal, Vice President
- Mark E. Hurtt, Vice President-elect
- Ann de Peyster, Secretary/Treasurer
- Jerrold J. Heindel, Past President
- Suzanne E. Fenton, Councilor
- Jodi A. Flaws, Councilor
- Miyun M. Tsai Turton, Postdoctoral Representative
- Sheung P. Ng, Student Representative

#### Risk Assessment (523*)
- Jennifer Orme-Zavaleta, President
- Harvey J. Clewell, Vice President
- Edward V. Ohanian, Vice President-elect
- Julie E. Goodman, Secretary/Treasurer
- Michael L. Gargas, Past President
- John C. Lipscomb, Councilor
- Lisa M. Sweeney, Councilor
- Shepard A. Martin, Student Representative

#### Toxicologic and Exploratory Pathology (131*)
- Patrick J. Haley, President
- Karen S. Regan, Vice President
- Charles W. Qualls, Vice President-elect
- Sandra R. Eldridge, Secretary/Treasurer
- Lynda L. Lanning, Past President
- Mark E. Cartwright, Councilor
- Donna M. Dambach, Councilor
- Shashikiran Donthamsetty, Student Representative

* Membership Totals

Totals reflect as of July 26, 2007
Society of Toxicology Awards and Honors

In recognition of distinguished toxicologists and students, SOT presents Honorary Membership and awards each year. In addition to receiving a plaque, recipients are honored at a special Awards Ceremony at the SOT Annual Meeting and their names are listed in SOT publications. The deadline for 2009 Honorary Membership and award nominations is October 9, 2008.

SOT Council reviews nominations for Honorary Membership and the Awards Committee reviews applications for SOT Awards and most Sponsored Awards. The Best Paper Awards are reviewed by the Board of Publications. The Education Committee selects the recipients of the Pfizer Undergraduate Travel Award and the Committee on Diversity Initiative selects the other undergraduate student travel recipients.

Nominations for most awards must be submitted by a sponsor and a seconder who are full members of SOT using the On-Line Award Nomination Form. The supporting documentation must indicate the candidate’s achievements in toxicology and is critical in the review of each application.

See the award description for the additional requirements for some of the awards, including the Sponsored Awards. There are specific applications for Fellowships and Graduate Travel Support.

Other graduate student and postdoctoral fellow awards are available through Regional Chapters, Specialty Sections, and Special Interest Groups. A student or postdoc may apply for any award for which he or she is eligible and may apply for and receive multiple awards, whether SOT, Regional Chapters, Special Interest Groups, or Specialty Sections sponsor the awards. Policies related to travel support are determined by the sponsor (SOT, Regional Chapter, Special Interest Groups, or Specialty Section). Students may only receive one SOT National travel award.

Full descriptions of all awards, awards no longer being offered, application procedures, and names of past recipients may be found on the SOT Web site at www.toxicology.org.

SOT Honor Descriptions

Honorary Membership

The Society of Toxicology recognizes non-members who embody outstanding and sustained achievements in the field of toxicology with Honorary Membership. Candidates are nominated by two full or associate members of the Society. Seconding letters and information regarding career achievements in toxicology should accompany the nomination. A two-thirds vote of Council determines recipients, with not more than two Honorary Members elected during any one term of Council. Nominations should be sent to SOT Headquarters.

Inductees

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
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<tbody>
<tr>
<td>1962</td>
<td>Eugene M.K. Geiling*</td>
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<td>1962</td>
<td>W. F. Von Oettingen*</td>
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<td>1962</td>
<td>Torald H. Sollman*</td>
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<td>1963</td>
<td>Ethel Browning*</td>
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<td>1966</td>
<td>R. Tecwyn Williams*</td>
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<td>1976</td>
<td>Norton Nelson*</td>
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<td>1982</td>
<td>George H. Hitchings*</td>
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<td>1986</td>
<td>Bernard B. Brodie*</td>
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<td>1986</td>
<td>Herbert Remmer*</td>
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<td>1991</td>
<td>Hyman J. Zimmerman*</td>
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<tr>
<td>1994</td>
<td>Ronald W. Estabrook</td>
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<td>1994</td>
<td>Wendell W. Weber</td>
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<td>1995</td>
<td>Gertrude B. Elion*</td>
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<td>1995</td>
<td>Charles S. Lieber</td>
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<td>1996</td>
<td>Sten G. Orrenius</td>
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<td>1996</td>
<td>Dennis Parke</td>
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<td>1997</td>
<td>John E. Casida</td>
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<td>1997</td>
<td>Roger W. Russell*</td>
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<td>1998</td>
<td>Jud Coon</td>
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<td>1998</td>
<td>Michel Mercier</td>
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<td>1999</td>
<td>William O. Robertson</td>
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<td>1999</td>
<td>Takashi Sugimura</td>
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<td>2000</td>
<td>Findlay Russell</td>
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<td>2001</td>
<td>Herbert Needleman</td>
</tr>
<tr>
<td>2007</td>
<td>Mario Molina</td>
</tr>
<tr>
<td>2008</td>
<td>Lee Hartwell, H. Robert Horvitz</td>
</tr>
</tbody>
</table>

*Indicates an SOT Sponsored Award

*Deceased
Society of Toxicology Awards and Honors (Continued)

Awards Descriptions

Achievement Award

The Achievement Award is presented to a member of the Society of Toxicology who has less than 15 years experience since obtaining his/her highest earned degree (in the year of the Annual Meeting of the Society of Toxicology) and who has made significant contributions to toxicology. This award consists of a plaque and a cash stipend.

Award Recipients
1967 ....... Gabriel L. Plaa
1968 ....... Allan H. Conney
1969 ....... Samuel S. Epstein
1970 ....... Sheldon D. Murphy*
1971 ....... Yves Alarie
1972 ....... Robert L. Dixon*
1973 ....... (No Award)
1974 ....... Morris F. Cranmer
1975 ....... Ian C. Munro
1976 ....... Curtis D. Klaassen
1977 ....... James E. Gibson
1978 ....... Raymond D. Harbison
1979 ....... Michael R. Boyd
1980 ....... Philip G. Watanabe*
1981 ....... (No Award)
1982 ....... Frederick P. Guengerich
1983 ....... (No Award)
1984 ....... Melvin E. Andersen
1985 ....... Alan R. Buckpitt
1986 ....... Sam Kacew
1987 ....... James S. Bus
1988 ....... Jeanne M. Manson
1989 ....... James P. Kehrer
1990 ....... Michael P. Waalkes
1991 ....... Debra Lynn Laskin
1992 ....... Michael P. Holsapple
1993 ....... David L. Eaton
1994 ....... James L. Stevens
1995 ....... Lucio G. Costa
1996 ....... Kenneth S. Ramos
1997 ....... Kevin E. Driscoll
1998 ....... Rick G. Schnellmann
1999 ....... Michel Charbonneau
2000 ....... Christopher Bradfield
2001 ....... Martin A. Philbert
2002 ....... Ruth A. Roberts
2003 ....... Lois D. Lehman-McKeeman
2004 ....... David C. Dorman
2005 ...... (No Award)
2006 ...... Jose E. Manautou
2007 ...... Jeffrey M. Peters
2008 ...... Ivan Rusyn

Arnold J. Lehman Award

The Arnold J. Lehman Award is presented to recognize an individual who has made a major contribution to risk assessment and/or the regulation of chemical agents, including pharmaceuticals. The contribution may have resulted from the application of sound scientific principles to regulation and/or from research activities that have significantly influenced the regulatory process. The nominee may be employed in academia, government, or industry and must be a SOT member. This award consists of a plaque and a cash stipend.

Award Recipients
1980 ...... Allan H. Conney
1981 ...... Gabriel L. Plaa
1982 ...... Gary M. Williams
1983 ...... David P. Rall
1984 ...... Tibor Balasz
1985 ...... Frederick Coulston*
1986 ...... Gerrit Johannes Van Esch
1987 ...... John P. Frawley
1988 ...... Kundan S. Khera*
1989 ...... Richard H. Adamson
1990 ...... Harold C. Grice
1991 ...... Bernard A. Schwetz
1992 ...... Roger O. McClellan
1993 ...... Thomas W. Clarkson
1994 ...... Bruce Ames
1995 ...... Emil A. Pfitzer
1996 ...... John F. Rosen
1997 ...... (No Award)
1998 ...... Helmut Alfred Greim
1999 ...... (No Award)
2000 ...... Carole A. Kimmel, Janardan K. Reddy
2001 ...... Samuel M. Cohen
2002 ...... Dennis Paustenbach
2003 ...... Michael L. Dourson
2004 ...... Melvin E. Andersen
2005 ...... Rory B. Conolly
2006 ...... Kathryn R. Mahaffey
2007 ...... Harvey J. Clewell
2008 ...... Vicki Dellarco
Best Postdoctoral Publication Awards

The Best Postdoctoral Publication Awards were created by the Postdoctoral Assembly to recognize talented postdoctoral researchers who have recently published exceptional papers in the field of toxicology. Applications are reviewed by the Postdoctoral Assembly Board and outside reviewers with appropriate scientific expertise. The review process follows NIH conflict of interest, confidentiality, and nondisclosure rules.

Award Recipients
2007 ....... Nadine Dragin
Kristen Mitchell
Drobna Zuzana
2008 ....... Joshua P. Gray
Christie M. Sayes
Khristy J. Thompson

Board of Publications Best Paper in Toxicological Sciences Award

The Board of Publications Award for the Best Paper in Toxicological Sciences is presented to the author(s) of the best paper published in this official SOT publication during a 12-month period, terminating with the June issue of the calendar year preceding the Annual Meeting at which the award is presented. The author(s) need not be a member of the Society of Toxicology. Submissions should include a one-page summary of the paper’s contribution to the science of toxicology and a copy of the article for which the nomination is being made. Any member of the Society may submit one title for consideration. In addition, the titles of no more than six papers to be considered are submitted by the editor of Toxicological Sciences. All papers submitted will be evaluated by the Board of Publications. This award consists of a plaque and a cash stipend. (This award was formerly known as the Frank R. Blood Award.)

Best Paper in Toxicological Sciences (formerly published as Fundamental and Applied Toxicology)

Award Recipients
1995 ....... J. L. Larson, D. C. Wolf, B. E. Butterworth
1995 ....... M. I. Luster, C. Portier, D. G. Pait,
G. J. Rosenthal, D. R. Germolec, E. Corsini,
B. L. Blaylock, P. Pollock, Y. Kouchi, W. Craig,
K. L. White, A. E. Munson, C. E. Comment
1996 ....... B. C. Allen, R. J. Kavlock, C. A. Kimmel,
E. M. Faustman
1997 ....... F. L. Fort, H. Ando, T. Suzuki, M. Yamamoto,
T. Hamashima, S. Sato, T. Kitazaki,
M. C. Matony, G. D. Hodgen
1998 ....... D. D. Parrish, M. J. Schlosser, J. C. Kapeghian,
V. M. Traina
1999 ....... C. A. Franklin, M. J. Inskip, C. L. Baccanale,
C. M. Edwards, W. I. Manton, E. Edwards,
E. J. O’Flaherty
2000 ....... H. A. Boulares, C. Giardina, C. L. Navarro,
E. A. Khairallah, S. D. Cohen
2001 ....... Jinjiang Chen, Yunbo Li, Jackie A. Lavigne,
Michael A. Trush, James D. Yager
2002 ...... M. J. Bajt, J. A. Lawson, S. L. Vonderfecht,
J. S. Gujral, H. Jaeschke
2003 ...... S. Haddad, M. Beliveau, R. Tardif, K. Krishnan
2004 ...... Abraham Nyska, Carolyn Moyer, Allen
Ledbetter, David Christiani, Mette Schlasweiler,
Daniel Costa, Russ Hauser, Urmila Kodavanti,
2005 ...... Nicole V. Soucy, Michael A. Ihnat, Linda Hess,
Chandrashhekhar D. Kamat, Aaron Barchowsky,
Mark J. Post, Linda R. Klei, Callie Clark
2006 ...... Hiroshi Sawada, Kenji Takami, Satoru Ashai
2007 ...... Trevor Green, Robert Lee, Sara Lloyd, James
Noakes, Timothy Pastoor, Richard Peffer,
Mervyn Robinson, Patrick Rose, Alison
Toghill, Felix Waechter, Edgar Weber
2008 ...... Sarah Snykers, Tamara Vanhaecke, Peggy
Papelue, Aernout Luttun, Yuehua Jiang, Yvan
Vander Heyden, Catherine Verfaillie, Vera
Rogiers

Best Paper in Toxicology and Applied Pharmacology

Award Recipients
1995 ...... M. F. Denny, M. F. Ware, W. D. Atchison
1996 ...... T. A. Slotkin, C. Lau, E. C. McCook,
S. E. Lappi, F. J. Seidler
1997 ...... P. R. S. Kodavanti, T. R. Ward, J. D. McKinney,
C. L. Waller, H. A. Tilson
1999 ...... S. K. Ramaiah, M. G. Soni, T. J. Bucci,
H. M. Mehendale,
1999 ...... C. L. Zuch, D. J. O’Mara, D. A. Cory-Slechta
2000 ...... J. E. Staples, N. C. Fiore, D. E. Frazier, Jr.,
T. A. Gasiewicz, A. E. Silverstone

up-to-date information at www.toxicology.org
Society of Toxicology Awards and Honors (Continued)

2001 ...... Barbara J. Mounho, Brian D. Thrall
2002 ...... G.S. Ratra, S.G. Kamita, J.E. Casida
2003 ...... J. Doorn, M. Schall, D. Gage, T. Talley,
          C. Thompson, R. Richardson

Frank R. Blood Award

Award Recipients
1974 ...... Yves Alarie
1975 ...... Donald J. Ecobichon, G. J. Johnstone,
         O. Hutzinger
1976 ...... Richard D. Brown
1977 ...... J. Dedinas, George D. DiVincenzo, C. J. Kaplan
1978 ...... Perry J. Gehring, E. O. Madrid,
         G. R. McGowan, Philip G. Watanabe
1979 ...... R. Fradkin, E. J. Ritter, W. J. Scott,
         James G. Wilson
1980 ...... Jerold A. Last, Peter F. Moore, Otto G. Raabe,
         Brian K. Tarkington
1981 ...... Yves Alarie, Martin Brady, Christine Dixon,
         Meryl Karol
1982 ...... Melvin E. Andersen, Michael L. Gargas,
         Lawrence J. Jenkins, Jr., Robert A. Jones
1983 ...... Henry D. Heck
1984 ...... Erik Dybing, Sidney Nelson, Erik Soderlund,
         Chister Von Bahr
1985 ...... Nobumasa Imura, Masae Inokawa,
         Kyoko Miura
1986 ...... Calvin C. Wilhite, M. I. Dawson,
          K. J. Williams
1987 ...... John Kao, Frances K. Patterson, Jerry Hall
1988 ...... Debra L. Laskin, Sunghelu Ji, Anne M. Pilaro
1989 ...... R. G. Cuddihy, W. C. Griffith,
         Rogene F. Henderson, Joe L. Mauderly,
         Roger O. McClellan, M. D. Snipes,
         Ronald K. Wolff
1990 ...... William P. Beierschmitt, Joseph T. Brady,
         John B. Bartolone, D. Stuart Wyand,
         Edward A. Khairallah, Steven D. Cohen
1991 ...... Jay Babcock Silkowski, Daryl Cutler,
         LuAnn Antrim, Don Houston,
         Casimir Tumasonis, Laurence S. Kaminsky
1992 ...... Donald A. Fox, Steve D. Rubinstein,
          Pauline Hsu
1993 ...... Thomas Mably, Robert W. Moore,
          Robert W. Goy, Richard E. Peterson
1994 ...... Susan J. Borghoff, William H. Lagarde

Contributions to Public Awareness of the Importance of Animals in Toxology Research Award

The Contributions to Public Awareness of the Importance of Animals in Toxicology Research Award is presented annually to an individual (or organization) in recognition of the contributions made to the public understanding of the role and importance of experimental animals in toxicological science. This award may be for either a single seminal piece of work or a longer-term contribution to public understanding of the necessity of the use of animals in toxicological research both to ensure and enhance the quality of human and animal health and the environment. The award consists of a plaque and a cash stipend.

Award Recipients
2000 ...... Allegheny-Erie Chapter
2001 ...... Massachusetts Society for Medical Research
2002 ...... George Nethercutt
2003 ...... Michael Derelanko
2004 ...... North Carolina Association for Biomedical Research (NCABR), Americans for Medical Progress (AMP)
2005 ...... Orrin G. Hatch, Foundation for Biomedical Research (FBR)
2006 ...... Jayne Mackta

Distinguished Toxicology Scholar Award

The Distinguished Toxicology Scholar Award is presented to a member of SOT who has made substantial and seminal scientific contributions to our understanding of the science of toxicology. Nominees should be active scientists involved in toxicological research. The prime consideration for this award is scientific accomplishments. This award consists of a plaque and a cash stipend. (This award was presented in 2001 as the Scientific Achievement Award.)

Award Recipients
2001 ...... James E. Troska
2003 ...... Henry C. Pitot
2004 ...... Gerald N. Wogan
2005 ...... Daniel Nebert
2006 ...... Sten G. Orrenius
2007 ...... Stephen H. Safe
2008 ...... Toshio Narahashi
Society of Toxicology Awards and Honors (Continued)

Education Award

The Education Award is presented to an individual who is distinguished by the teaching and training of toxicologists and who has made significant contributions to education in the broad field of toxicology. This award consists of a plaque and a cash stipend.

Award Recipients

1975 ...... Harold C. Hodge*
1976 ...... Ted A. Loomis
1977 ...... Robert B. Forney*
1979 ...... Sheldon D. Murphy*
1980 ...... Herbert H. Cornish*
1981 ...... Frederick Sperling*
1982 ...... Lloyd W. Hazleton*
1983 ...... Julius M. Coon*
1984 ...... Frank Guthrie, Ernest Hodgson
1985 ...... William B. Buck
1986 ...... Robert I. Krieger
1987 ...... Gabriel L. Plaa
1988 ...... John Autian
1989 ...... Tom S. Miya
1990 ...... Charles H. Hine
1991 ...... Hanspeter R. Witschi
1992 ...... Dean E. Carter
1993 ...... Curtis D. Klaassen
1994 ...... Robert A. Neal
1995 ...... William Carlton
1996 ...... Robert Snyder
1997 ...... Albert E. Munson
1998 ...... David J. Holbrook
1999 ...... Jules Brodeur
2000 ...... Gary Carlson
2001 ...... Harihara Mehendale
2002 ...... Joseph Borzelleca
2003 ...... Frederick W. Oehme
2004 ...... A. Jay Gandolfi
2005 ...... Nobuyuki Ito
2006 ...... Robert A. Schatz
2007 ...... Torbjörn Malmfors
2008 ...... Steven Cohen

Enhancement of Animal Welfare Award

The Enhancement of Animal Welfare Award is presented annually to a member of the Society in recognition of the contribution made to the advancement of toxicological science through the development and application of methods that replace, refine, or reduce the need for experimental animals. This award recognizes outstanding/significant contributions made by members of the Society of Toxicology to the sound and responsible use of animals in scientific research. The achievement recognized may be either a seminal piece of work or a long-term contribution to toxicological science and animal welfare. The award consists of a plaque and a cash stipend.

Award Recipients

2000 ...... Yves Alarie
2001 ...... Alan Goldberg
2002 ...... Gary Williams
2003 ...... G. Frank Gerberick, Ian Kimber
2005 ...... Daniel Acosta
2006 ...... William S. Stokes
2007 ...... Thomas Hartung

Founders Award

The SOT Founders Award is presented to a full or retired full member of the Society of Toxicology who has demonstrated outstanding leadership in fostering the role of toxicological sciences in safety decision-making through the development and/or application of state-of-the-art approaches that elucidate, with a high degree of confidence, the distinctions for humans between safe and unsafe levels of exposures to chemical and physical agents.

Award Recipient

2008 ...... John Doull
Graduate Student Travel Support

Graduate Student Travel Support defrays expenses for students presenting platform talks or posters at the SOT Annual Meeting. To be eligible, the student must be a SOT member (or have submitted a membership application) who has not previously received SOT Graduate Student Travel Support.

Merit Award

The Merit Award is presented to a member of the Society of Toxicology in recognition of distinguished contributions to toxicology throughout an entire career in areas such as research, teaching, regulatory activities, consulting, and service to the Society. This award consists of a plaque and a cash stipend. The recipient delivers the Merit Awardee Lecture at the SOT Annual Meeting.

Award Recipients
1966 ...... Henry F. Smyth, Jr.*
1967 ...... Arnold J. Lehman*
1968 ...... R. T. Williams*
1969 ...... Harold C. Hodge*
1970 ...... Don D. Irish
1971 ...... Kenneth P. DuBois
1972 ...... O. Garth Fitzhugh*
1973 ...... Herbert E. Stokinger*
1974 ...... William B. Deichmann*
1975 ...... Frederick Coulston*
1976 ...... Verald K. Rowe*
1977 ...... Harry W. Hays*
1978 ...... Julius M. Coon*
1979 ...... David W. Fassett*
1980 ...... Bernard L. Oser
1981 ...... John H. Weisburger
1982 ...... Harold M. Peck
1983 ...... Perry J. Gehring*
1984 ...... Tom S. Miya
1985 ...... Carrol S. Weil*
1986 ...... Ted A. Loomis
1987 ...... Bo Holmstedt
1988 ...... Seymour L. Friess
1989 ...... Wayland J. Hayes, Jr.*
1990 ...... Sheldon D. Murphy*
1991 ...... Toshio Narahashi
1992 ...... W. Norman Aldridge
1993 ...... John Doull
1994 ...... Ernest Hodgson
1995 ...... Robert A. Scala
1996 ...... Gabriel L. Plaa
1997 ...... Mary O. Amdur*
1998 ...... John A. Thomas
1999 ...... Thomas Clarkson
2000 ...... Philippe Shubik*
2001 ...... Donald Reed
2002 ...... Bernard Schwetz
2003 ...... M.W. Anders
2004 ...... Robert Goyer
2005 ...... Roger McClellan
2006 ...... A. Wallace Hayes
2007 ...... James A. Swenberg
2008 ...... Hanspeter Witschi

Minority Undergraduate Student and Advisor Awards

The Minority Undergraduate Student and Advisor Awards provide support for awardees to participate in the Undergraduate Education Program at the SOT Annual Meeting. This program is an introduction to the discipline of toxicology for undergraduate science majors and includes an orientation, a special poster session with scientists, and activities with a SOT mentor. The travel awards are for those from races and ethnic groups underrepresented in the sciences (African American, American Indian, or Hispanic American) and for their advisors. The advisors are eligible regardless of racial or ethnic background. Meeting registration and support for travel, lodging, and meals are provided for students and advisors who are not local to the meeting site. Students and advisors from local institutions receive meeting and program registration and meals. In the past, the program has been supported in part by NIH-MARC, Pfizer, Johnson & Johnson, Covance, and other supporters. The recipient list is available on the Web site.
Society of Toxicology Awards and Honors (Continued)

Public Communications Award

The Public Communications Award is presented by the Society of Toxicology to recognize an individual who has made a major contribution to broadening the awareness of the general public on toxicological issues through any aspect of public communications. The award should reflect accomplishments made over a significant period of time. Examples of qualifying media in which the nominated communication may appear are as follows: books, brochures, continuing education courses, data bases, extension bulletins, magazines, newspapers (local or national), outreach, public presentations, public forums, radio and television scripts, and workshops. The award consists of a plaque and a cash stipend.

Awards Recipients
1994 ...... Michael A. Kamrin
1995 ...... Philip Abelson*
1996 ...... Bruce N. Ames
1997 ...... Audrey Gotsch
1999 ...... Ann de Peyster
2001 ...... Anna Shvedova
2002 ...... Sam Kacew
2003 ...... Charlene A. McQueen
2004 ...... Kenneth Olden
2005 ...... Robert Kreiger
2007 ...... Linda S. Birnbaum

SOT/AstraZeneca IUTOX Fellowship

The AstraZeneca, Ltd. and SOT sponsor travel fellowship awards annually, which are administered by IUTOX. Awards are available to senior scientists from a country where toxicology is underrepresented to assist with travel to attend the Society of Toxicology Annual Meeting.

Award Recipients
2002 ...... Christophor Dishovsky (Bulgaria), Zoltan Gregus (Hungary), Maritza Rojas Martini (Venezuela), Choon-Nam Ong (Singapore), W. Wasowicz (Poland), Ping-kun Zhou (China)
2003 ...... Jian-Hui Liang (China), Marjan G. Vracko (Slovenia), Eman A. Seif (Egypt)
2004 ...... Cristina Bolaton (Phillipines), P.K. Gupta (India), Salmaan Inayat-Hussain (Malaysia), Xianping Ying (China)
2005 ...... Diana B. Apostolova (Bulgaria), Marite Arija Bake (Latvia), Teresa I. Fortououl (Mexico), Mary Gulumian (South Africa), He Jiliang (China), Khaledya Khamidulina (Russia), L. Orish Orisakwe (Nigeria), Songsak Srianujata (Thailand), Sinan Suzen (Turkey)
2006 ...... Olanike Adeyemo (Nigeria), Deepak Argwal (India), Carlos Colangelo (Argentina), Sandra Demichelis (Argentina), Mumtaz Iscan (Turkey), Karolina Lyubomirova (Bulgaria), Osman Aly Osman (Egypt), Shuang-Qing Peng (China), Julia Radenkova-Saeva (Bulgaria)
2007 ...... Hatem Ahmed (Egypt), Jiri Bajgar (Czech Republic), Ismet Çök (Turkey), Carlos Garcia (Peru), Wenceslao Kiat (Philippines), Calivarathen Latchoumyandiane (Singapore), Fateheya Metwally (Egypt), Hilmi Orhan (Turkey), Nwoha Umunna (Nigeria)
Society of Toxicology Awards and Honors (Continued)

2008 ....... Jin-Ho Chung (Korea),
Lyndy McGaw (South Africa),
Kemal Buyukguzel (Turkey),
Hande Gurur-Orhan (Turkey),
Phillip Burcham (Australia),
Sayed Bakry (Egypt),
Zdravko Paskalev (Bulgaria),
Gafer Rageh Ahmed (Egypt)

Undergraduate Toxicology Education Award

The Undergraduate Toxicology Education Awards provide support for awardees to participate in the Undergraduate Education Program at the SOT Annual Meeting. This program is an introduction to the discipline of toxicology for undergraduate science majors and includes an orientation, a special poster session with scientists, and activities with a SOT mentor. The travel awards are for those from institutions that receive a limited amount of Federal funding in science and technology (list is available on the Web site). Preference in selection will be students who are first generation college attendees (that is, neither parent graduated from a four-year academic institution).

Meeting registration and support for travel, lodging, and meals are provided for students who are not local to the meeting site. Students from local institutions receive registration, meeting materials, and an expense stipend. The recipient list is available on the Web site.

SOT Regional Chapter Awards

Most SOT Regional Chapters provide awards to recognize outstanding students, postdoctoral fellows, or scientists throughout their career. Application requirements and deadlines vary. For more details refer to the Award descriptions on the SOT Web site at www.toxicology.org, under Regional Chapters or the Awards and Fellowships section.

SOT Special Interest Group Awards

SOT Special Interest Groups provide awards to recognize outstanding students, postdoctoral fellows, or scientists throughout their career. Application requirements and deadlines vary. For more details refer to the Award descriptions on the SOT Web site at www.toxicology.org, under Special Interest Groups or the Awards and Fellowships section.

SOT Specialty Section Student Awards

Most SOT Specialty Sections provide awards to recognize outstanding students, postdoctoral fellows, or scientists throughout their career at the SOT Annual Meeting. Application requirements and deadlines vary. For more details refer to the Award descriptions on the SOT Web site at www.toxicology.org, under Specialty Sections or the Awards and Fellowships section.
Sponsored Award Descriptions

AstraZeneca Traveling Lectureship Awards

The AstraZeneca Traveling Lectureship Awards are presented through the Society of Toxicology to recognize excellence in research and service in toxicology. AstraZeneca, Ltd., provides one or two awards annually to promote greater collaboration between European and North American toxicologists and to enable North American toxicologists to undertake a three-four week lecture tour of Europe. The awards are intended to familiarize recipients with research and regulatory issues in Europe as well as bring a North American perspective to these issues. Candidates for these awards should be established, mid-career North American scientists who are members of the Society and who demonstrate the ability to develop collaborative relationships with European colleagues. The awards are given each year in the amount of $6,000 each.

Award Recipients

1990 ...... Robert I. Krieger, Joseph R. Landolph
1991 ...... Sam Kacew
1992 ...... Charles V. Smith, Jerold A. Last
1993 ...... Terrence James Monks, Harihara H. Mehendale
1995 ...... David L. Eaton, Hanspeter R. Witschi
1996 ...... Rick G. Schnellmann, James P. Kehrer
1997 ...... Lucio G. Costa, Durisala Desaiiah
1998 ...... Syed F. Ali, Curtis J. Omiecinski
1999 ...... Alvaro Pugo
2000 ...... Kenneth Ramos, Garold Yost
2001 ...... Ronald Hines, Richard Seegal
2003 ...... William D. Atchison
2004 ...... Charlene A. McQueen
2005 ...... Kevin M. Crofton
2006 ...... Robert A. Roth
2007 ...... Michael S. Denison
2008 ...... José E. Manautou

Colgate-Palmolive Grants for Alternative Research

The Colgate-Palmolive Grants for Alternative Research will identify and support efforts that promote, develop, refine, or validate scientifically acceptable animal alternative methods to facilitate the safety assessment of new chemicals and formulations. Scientists at any stage of career progression may submit a proposal.

High priority will be given to projects that use in vitro or non-animal models, reproductive and developmental toxicology, neurotoxicology, systemic toxicology, sensitization, and acute toxicity.

The maximum award is $40,000. Awards are made as a single lump payment. An expert panel from the SOT In Vitro and Alternative Methods Specialty Section will recommend a prioritized list of applicants for funding, with the final awards designated by the SOT Awards Committee. Awardees can apply again for funding.

Award Recipients

2006 ...... Rola Barhoumi, Abby Benninghoff, Jodie Flaws, Courtney Sulentic, Xiaouzhong Yu
2007 ...... Rita L. Caruso, Daniel R. Cerven, Anne R. Greenlee, Glenn M. Walker
2008 ...... Daniel R. Cerven, Duncan C. Ferguson, Shashi K. Ramaiah
Colgate-Palmolive Postdoctoral Fellowship Award in In Vitro Toxicology

The Colgate-Palmolive Company sponsors the Colgate-Palmolive Postdoctoral Fellowship Award in In Vitro Toxicology through the Society of Toxicology to advance the development of alternatives to animal testing in toxicological research. The award is given in alternate years and includes stipend and research-related costs (up to $38,500) for one year. The award may be extended for an additional year upon agreement between Colgate-Palmolive and the postdoctoral fellow. The award is available to postdoctoral trainees employed by academic institutions, federal/national laboratories, or research institutes worldwide. Preference will be given to applicants in their first year of postdoctoral study. Applications are due in even calendar years and the fellowship is awarded for the following year. The next application deadline: October 9, 2008.

Award Recipients
1988 ...... Ernest Bloom
1989 ...... Gin Hsieh
1990 ...... Dennis E. Chapman
1991 ...... Anne Walsh
1992 ...... Qin Chen
1993 ...... Erika Cretton
1994 ...... William Chan
1995 ...... Bob Van de Water
1997 ...... Alan Parrish
1999 ...... Russell Thomas
2001 ...... Kevin Kerzee, Christopher Reilly
2002 ...... Kevin Kerzee
2003 ...... Kimberly Miller
2004 ...... Kimberly Miller
2005 ...... Francis Tukov
2007 ...... Aaron Rowland

Colgate-Palmolive Awards for Student Research Training in Alternative Methods

The purpose of the Colgate-Palmolive Awards for Student Research Training in Alternative Methods is to enhance student research training using in vitro methods or alternative techniques to reduce, replace or refine use of animals in toxicological research. The Awards Committee will present the awards to graduate students. Up to five awards, at $3,500 each, are available. Deadlines for applications are February 15, June 15, and October 9.

Graduate Students: The award is for expenses for training consistent with the goal of this award program. The training may include, but is not limited to, use of in vitro and ex vivo procedures, non-mammalian animal models, computer modeling, and structure-activity relationships. Graduate students may propose to develop expertise in relevant methodologies at 1) a laboratory away from their home institution; 2) a laboratory at their home institution that would not be available to them otherwise; or 3) approved workshops, symposia, or continuing education programs where hands-on training will be received. The training should help toxicology graduate students enhance their thesis or dissertation research. The overall goal is to support the replacement, reduction, or refinement of currently used animal models in toxicology research and testing. Awards of up to $3,500 per student will defray travel, per diem, and training expenses.

Award Recipients
2000 ...... Jason Gross
2001 ...... Jason Biggs, Victoria Richards
2002 ...... Kartik Shankar, Chad M. Vezina, Ryan L. Williams
2003 ...... Sachin Devi, Midhun Korrapati, Pallavi Limaye
2004 ...... Jaya Chilakapati
2005 ...... Vishaka Bhave, Ankur Dnyanmote, Johnathan Maher
2006 ...... Mary Hassanii, Prajakta Palkar
2007 ...... Renee Gardner, Prajakta Palkar, Rohit Singhal, René Vinas
2008 ...... Kimberly A. Hays, Haitian Lu
Sponsored Award Descriptions (Continued)

Colgate-Palmolive Traveling Lectureship in Alternative Methods in Toxicology Award

The Colgate-Palmolive Company sponsors the Colgate-Palmolive Traveling Lectureship in Alternative Methods in Toxicology Award annually through the Society of Toxicology. This award covers expenses for an individual scholar to visit institution(s) for the dissemination of knowledge and for stimulating research that takes advantage of modern in vitro toxicology approaches. The overall goal of this program is to make scientists aware of the benefits of modern in vitro toxicology approaches and to stimulate research for the replacement, reduction, or refinement of currently used animal models.

Lecturing scholars should be established, mid-career through late-career scientists who are members of SOT and who are developing collaborative relationships with scientists at other institutions.

Requests for funds can be made by the individual scholar or by a host from an academic institution, SOT Regional Chapter, SOT Special Interest Group, SOT Specialty Section, or another toxicology organization. Up to $15,000 is available for all the awards. The Awards Committee reviews the applications, which must be accompanied by a statement detailing the applicants expertise in alternative methods, a brief overview of the techniques to be discussed in the lecture, the budget request, and a letter from the host indicating interest in serving as host and the potential benefits to the institution.

Award Recipients

1996 ...... University of Mississippi Medical Center  
Visiting Professor: Tetsuo Satoh  
1996 ...... University of Illinois at Urbana  
Visiting Professor: Julio Davila  
1996 ...... Mississippi State University  
Visiting Professor: Michael Holsapple  
1996 ...... Washington State University  
Visiting Professor: Daniel Acosta  
1997 ...... Indiana University School of Medicine  
Visiting Professor: A. Jay Gandolfi  
1997 ...... University of Arizona Health Science Center  
Visiting Professor: Kevin E. Driscoll  
1997 ...... University of New Mexico Health Sciences Center  
Visiting Professor: Sam Kacew  
1997 ...... University of Illinois  
Visiting Professor: Michael Denison  
1998 ...... University of Washington  
Visiting Professor: Bruce Fowler  
1998 ...... San Diego State University  
Visiting Professor: Leigh Ann Burns-Naas  
1999 ...... San Diego State University  
Visiting Professor: Robert Chapin  
2000 ...... Yale University, School of Medicine  
Visiting Professor: Narendre Singh  
2001 ...... Medical College of Wisconsin  
Visiting Professor: Garold Yost  
2003 ...... Washington State University  
Visiting Professor: Marc W. Fariss  
2004 ...... Snorri S. Thorgeirsson  
Institution to be Visited: University of Louisiana at Monroe  
2008 ...... George Michalopoulos  
Institution to be Visited: University of Louisiana at Monroe


Sponsored Award Descriptions (Continued)

**Graduate Student Fellowship Award—Novartis Award**

The Graduate Student Fellowship—Novartis Award is available for student members of the SOT engaged in full-time graduate study towards a Ph.D. degree in toxicology. The major professor must be a SOT member. The evaluation is based primarily on originality of the dissertation research, research productivity, relevance to toxicology, scholastic achievement, and letters of recommendation. Finalists are interviewed at the Annual Meeting and receive travel support.

**Award Recipients**

1989 ...... Timothy Zacharewski
1990 ...... Mary Suzanne Stefaniak
1991 ...... Donald Bjerke
1992 ...... Lhanoo Gunawardhana
1993 ...... Christopher Martenson
1994 ...... Nyla Harper
1995 ...... Heather E. Kleiner
1996 ...... Russell Thomas
1997 ...... Melva Rios-Blancos
1998 ...... Kent Carlson
1999 ...... Mark Hickman
2000 ...... Jeffrey Moran
2001 ...... Vishal Vaidya
2002 ...... Kartik Shankar
2003 ...... Sachin Devi
2004 ...... James Luyendyk
2005 ...... Andrea W. Wong
2006 ...... Sheung P. Ng
2007 ...... Atrayee Banerjee

*Recipient of Graduate Fellowship Awards no longer offered may be found on the SOT Web site at [www.toxicology.org](http://www.toxicology.org).*

**Pfizer Undergraduate Student Travel Award**

Pfizer Undergraduate Student Travel Awards are presented through the Society of Toxicology to foster an interest in graduate studies in the field of toxicology by bringing promising undergraduate students to the SOT Annual Meetings. Pfizer, Inc. will provide up to five awards per year to undergraduate students presenting research at the Annual Meeting. Awardees will be selected by the Education Committee based on the quality of the submitted abstract and the advisor’s supporting recommendation. Those selected will receive travel assistance for the Meeting, a plaque presented at the annual Awards Ceremony, and recognition at a special Pfizer function. Awardees will be matched with a graduate student and a Pfizer scientist to mentor them during the Annual Meeting, and will have the opportunity to attend the Society of Toxicology Undergraduate Education Program on the Sunday of the SOT Annual Meeting.

**Awards Recipients**

2006 ...... Shawntay Chaney, Theresa M. Eagle, Natalie Malek, Adeliada Segarra, Ryan Vaughan
2007 ...... Kay Gonsalves, Lisa Koselke, Basharat Sanni, Sonia Talathi, Anna Zimmerman
2008 ...... Amy DeMicco, Tharu Fernando, Yamel Perdomo, Amy Yi Hsan Saik, and Kelly Sullivan
The Society of Toxicology has established a Toxicology Specialists Program to assist journalists and members of the public in identifying or locating expert toxicologists who can provide factual information on issues of public concern. These Toxicology Specialists provide information based on their own credentials and do not represent the views of the Society of Toxicology. For further information, please contact SOT Headquarters at (703) 438-3115 or e-mail: sothq@toxicology.org.

<table>
<thead>
<tr>
<th>Specialties</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carcinogenesis</strong></td>
<td>Scott B. Burchiel, Jack H. Dean, A. Jay Gandolfi, Norbert E. Kaminski, Nancy I. Kerkvliet, Kathleen E. Rodgers, Mary Jane Selgrade</td>
</tr>
<tr>
<td><strong>Immunotoxicology</strong></td>
<td>Daniel Acosta, Jr., Yvonne P. Dragan, A. Jay Gandolfi, Kenneth S. Ramos, Rick G. Schnellmann, Jacqueline H. Smith</td>
</tr>
<tr>
<td><strong>In Vitro</strong></td>
<td>William O. Berndt, Steven D. Cohen, Mary E. Davis, Ernest C. Foulkes, A. Jay Gandolfi, Robin S. Goldstein, Lois D. Lehman-McKeeman, Rick G. Schnellmann</td>
</tr>
<tr>
<td><strong>Liver Toxicity</strong></td>
<td>Steven D. Cohen, George B. Corcoran, Mary E. Davis, Yvonne P. Dragan, A. Jay Gandolfi, Robin S. Goldstein, James E. Klaunig, Jose E. Manautou, Hari M. Mehendale, James A. Popp</td>
</tr>
<tr>
<td><strong>Molecular</strong></td>
<td>Elaine M. Faustman, William F. Greenlee, Norbert E. Kaminski, Raymond Novak</td>
</tr>
<tr>
<td><strong>Neurotoxicity</strong></td>
<td>Marion F. Ehrich, Robert I. Krieger, Joel L. Mattsson, Ellen K. Silbergeld, William Slikker, Jr.</td>
</tr>
<tr>
<td><strong>Regulatory Toxicology/Regulatory Affairs/Safety Evaluation</strong></td>
<td>Daniel Acosta, Jr. (drugs/addictive agents), Jane A. S. Allen, Gregory Allgood, Richard J. Bull, Jack H. Dean (drugs), Michael L. Dourson, Robin S. Goldstein (drugs), Robert A. Kuna, James C. Lamb (pesticides and industrial chemicals), Michael McClain (drugs)</td>
</tr>
<tr>
<td><strong>Toxicology Specialists</strong></td>
<td>Daniel Acosta, Jr. (drugs/addictive agents), Jane A. S. Allen, Gregory Allgood, Richard J. Bull, Jack H. Dean (drugs), Michael L. Dourson, Robin S. Goldstein (drugs), Robert A. Kuna, James C. Lamb (pesticides and industrial chemicals), Michael McClain (drugs)</td>
</tr>
</tbody>
</table>
Reproductive/Developmental
Robert E. Chapin
George P. Daston
Ann de Peyster
Elaine M. Faustman
Carole A. Kimmel
James C. Lamb
Hugh A. Tilson
(devvelopmental neurotoxicology)

Biotechnology/Biopharmaceutical Toxicology
Scott W. Burchiel

Chemical-Chemical Interactions
Steven D. Cohen
A. Jay Gandolfi

Chlorine-Based Compounds
Richard J. Bull
Rory B. Conolly
A. Jay Gandolfi (also fluorine compounds)
James E. Kraunig
H. B. Matthews
Hugh A. Tilson (PCBs)

Dioxins/PCBs
Linda S. Birnbaum
Michael Bolger
Rory B. Conolly
David L. Eaton
William F. Greenlee
Norbert E. Kaminski
Nancy I. Kerkvliet
Kenneth S. Ramos
Ellen K. Silbergeld
Hugh A. Tilson

Endocrine Disrupters
Linda S. Birnbaum
Michael Bolger
James S. Bus
Robert E. Chapin
Rory B. Conolly
Michael A. Gallo
Nancy I. Kerkvliet
James C. Lamb
Cheryl L. Walker

Food Additives/Food Safety/Food Toxins
Gregory Allgood
Michael L. Dourson
David L. Eaton (especially aflatoxins)
Robert A. Kuna
Robert Rubin

Free Radicals/Oxidative Stress/Antioxidants
Gregory Allgood
James P. Kehrer
James E. Kraunig
Kendall B. Wallace

Industrial Chemical Toxicology
James S. Bus
Michael P. Holsapple
Robert A. Kuna
Kendall B. Wallace

Medical Devices
Scott W. Burchiel
Kathleen E. Rodgers
Stephen H. Safe

Metals
Barbara D. Beck
William O. Berndt
Michael Bolger
Ernest C. Foulkes
A. Jay Gandolfi
Hugh A. Tilson (lead, methyl mercury)

Natural Toxins
Michael Bolger
Joel L. Mattsson

Pesticides
James S. Bus
Marion F. Ehrich
Robert I. Krieger
James C. Lamb
H. B. Matthews
Kathleen E. Rodgers
Stephen H. Safe

Radiation
Gary A. Boorman (EMF exposure)
Mary Jane Selgrade

Solvents
Mary E. Davis
Kendall B. Wallace

Validation of Alternative Methods
Sidney Green

Water Pollution
Richard J. Bull

Regional Distribution:

Allegheny-Erie
Mary E. Davis (WV)

Central States
William O. Berndt (NE)

Gulf Coast (Texas)
Kenneth S. Ramos
Stephen H. Safe
William Slikker, Jr.
Cheryl L. Walker

Michigan
James S. Bus
George B. Corcoran
Jay I. Goodman
Norbert E. Kaminski
Joel Mattsson
Raymond F. Novak

Animal Studies/Animals in Research
Gary A. Boorman
Stephen M. DiZio
Robert F. Phalen

Air Pollution
James A. Bond
Roger O. McClellan
(ai quality standards-environmental and occupational)
John B. Morris
Robert F. Phalen
Mary Jane Selgrade

Animal Studies/Animals in Research
Gary A. Boorman
Stephen M. DiZio
Robert F. Phalen
Toxicology Specialists (Continued)

Mid-Atlantic
Michael A. Gallo (NJ)
Robin S. Goldstein (NJ)
Robert A. Kuna (NJ)
Michael McClain (NJ)
James A. Popp (PA)
Jacqueline H. Smith (MD)

Midwest
Yvonne Dragan (DE)
James E. Klaunig (IN)
Henry C. Pitot (WI)
Kendall B. Wallace (MN)

Mountain West
Scott W. Burchiel (NM)
Jack H. Dean (AZ)
A. Jay Gandolfi (AZ)
Roger O. McClellan (NM)
Charlene A. McQueen (AZ)
Gary S. Yost (UT)

National Capital
Michael Bolger (DC)
Marion F. Ehrich (VA)
Sidney Green (DC)
Michael P. Holsapple (DC)
Carole A. Kimmel (MD)
James C. Lamb (DC)
Robert Rubin (MD)
Ellen K. Silbergeld (MD)

North Carolina
Linda S. Birnbaum
James A. Bond
Gary A. Boorman
Rory B. Conolly
William F. Greenlee
H. B. Matthews
Roger McClellan
Mary Jane Selgrade
Hugh A. Tilson

Northeast
Barbara D. Beck (MA)
Robert E. Chapin (CT)
Steven D. Cohen (MA)
Lois D. Lehman-McKeeman (NJ)
Jose E. Manautou (CT)
John B. Morris (CT)
James A. Popp (CT)

Northern California
John P. Christopher
Stephen M. DiZio

Ohio Valley
Daniel Acosta, Jr. (OH)
George P. Daston (OH)
Michael L. Dourson (OH)
Ernest C. Foulkes (OH)

Pacific Northwest
Richard J. Bull (WA)
David L. Eaton (WA)
Elaine M. Faustman (WA)
Nancy I. Kerkvliet (OR)

South Central
Janice E. Chambers (MS)
Yvonne P. Dragan (AR)
Hari M. Mehendale (LA)

Southeastern
Bruce A. Fowler (GA)
Rick G. Schnellmann (SC)

Southern California
Ann de Peyster
Robert I. Krieger
Robert F. Phalen
Kathleen E. Rodgers
SOT Affiliates

Abbott Laboratories
Abbott Park, Illinois

The AEgis Technologies Group
Orlando, Florida

Agilent Technologies, Inc.
Wilmington, Delaware

Alcon Research LTD
Fort Worth, Texas

American Chemistry Council
Arlington, Virginia

American Petroleum Institute
Washington, D.C.

Ani Lytics, Inc.
Gaithersburg, Maryland

AstraZeneca R&D
Södertälje, Sweden

B.I.K. Industries
Mumbai, India

BASi Evansville
Mount Vernon, Indiana

Bayer
Stilwell, Kansas

Bayer HealthCare Pharmaceuticals
Montville, New Jersey

Biogen Idec, Inc.
Cambridge, Massachusetts

Boehringer Ingelheim Pharmaceuticals, Inc.
Ridgefield, Connecticut

Bristol-Myers Squibb Company
Princeton, New Jersey

CANTOX
Mississauga, Ontario, Canada

Charles River Laboratories
Wilmington, Massachusetts

Chevron Energy Technology Company
Richmond, California

Chevron Phillips Chemical Company, LP
The Woodlands, Texas

Chlorine Chemistry Division
Arlington, Virginia

Colgate-Palmolive Company
Piscataway, New Jersey

Covance Laboratories, Inc.
Madison, Wisconsin

Daichi Sankyo Company Limited
Shizuoka, Japan

The Dial Corporation
A Henkel Company
Scottsdale, Arizona

The Dow Chemical Company,
Midland, Michigan

Dow Corning Corporation
Midland, Michigan

The DuPont Company
Newark, Delaware

Eastman Chemical Company
Kingsport, Tennessee

ExxonMobil Biomedical Sciences, Inc.
Annandale, New Jersey

Genentech, Inc.
South San Francisco, California

GlaxoSmithKline
King of Prussia, Pennsylvania

The Hamner Institutes for Health Sciences
Research Triangle Park, North Carolina

Harlan/RCC
Indianapolis, Indiana

Hoffmann-La Roche, Inc.
Nutley, New Jersey

Honeywell International, Inc.
Morristown, New Jersey

J&J Pharma R&D Companies
(Centocor, J&JPRD, Tibotec)
Raritan, New Jersey

Lilly Research Laboratories
Indianapolis, Indiana

Merck & Co., Inc.
West Point, Pennsylvania

Millennium Pharmaceuticals, Inc.
Cambridge, Massachusetts

MPI Research
Mattawan, Michigan

Novartis Pharmaceuticals Corporation
East Hanover, New Jersey

Pfizer, Inc.
Groton, Connecticut

Procter & Gamble Company
Cincinnati, Ohio

RTC Research Toxicology Centre
S.P.A.
Pomezia, Italy

sanofi-aventis
Bridgewater, New Jersey

Schering-Plough Research Institute
Kenilworth, New Jersey

Sequani, Ltd.
Ledbury, Herefordshire, United Kingdom

Southern Research Institute
Birmingham, Alabama

WIL Research Laboratories, LLC.
Ashland, Ohio

Wyeth Research
Collegeville, Pennsylvania
# Headquarters Staff

**Society of Toxicology Headquarters**  
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Tel: (703) 438-3115 • Fax: (703) 438-3113 • E-mail: sothq@toxicology.org; • Web site: [www.toxicology.org](http://www.toxicology.org)

<table>
<thead>
<tr>
<th>Staff Contact</th>
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<th>Activity</th>
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<tbody>
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<td>Publications/World Wide Web</td>
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<tr>
<td>Phillip Larson</td>
<td>1438</td>
<td><a href="mailto:phil@toxicology.org">phil@toxicology.org</a></td>
<td>Awards/Education Coordinator</td>
</tr>
<tr>
<td>Marcia Lawson</td>
<td>1446</td>
<td><a href="mailto:marcia@toxicology.org">marcia@toxicology.org</a></td>
<td>Career Resource and Development Member Services Regulatory Affairs and Legislative Assistance Regional Chapters, Specialty Sections Special Interest Groups</td>
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<tr>
<td>Tonia Masson</td>
<td>1433</td>
<td><a href="mailto:tonia@toxicology.org">tonia@toxicology.org</a></td>
<td>Administration</td>
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<tr>
<td>Mia McDaniel</td>
<td>1423</td>
<td><a href="mailto:sothq@toxicology.org">sothq@toxicology.org</a></td>
<td>Administration</td>
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<tr>
<td>Tim McKinney</td>
<td>1439</td>
<td><a href="mailto:tim@toxicology.org">tim@toxicology.org</a></td>
<td>Administration</td>
</tr>
<tr>
<td>Catherine Michaels</td>
<td>1443</td>
<td><a href="mailto:catherine@toxicology.org">catherine@toxicology.org</a></td>
<td>Meetings/Administration</td>
</tr>
<tr>
<td>Tierre Miller</td>
<td>1451</td>
<td><a href="mailto:tierre@toxicology.org">tierre@toxicology.org</a></td>
<td>Administration</td>
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