**President’s Message**

As we move beyond the 50th anniversary of the Society of Toxicology (SOT), the Risk Assessment Specialty Section (RASS) remains one of the largest specialty sections, with a membership that includes a diverse multidisciplinary group of scientists. We bring together a group that is truly a mix from academia, government and non-governmental organizations including industry and consulting. And what an exciting time to be involved in the field of risk assessment, as we continue to face the challenges of translating our evolving knowledge of science into protection of public health and regulatory action.

As we move into the next year for RASS, the officers and I continue to think that mentoring of the new generation of risk assessors is of utmost importance, and we are working to develop ways to increase students’ involvement. We are currently revising our by-laws to formalize the terms of involvement for graduate and postdoctoral students.

---

**“Beyond Science & Decisions” -- From Problem Formulation to Dose-Response Assessment.** Invited submission by Richard Becker, Ph.D., DABT, on behalf of the Dose Response Advisory Committee of the ARA project.

The Alliance for Risk Assessment (*ARA*), an organization aimed at improving the process and efficiency of risk assessment, sponsored a series of three workshops over the past 2 years focused on extending the work begun by the 2009 NAS report ‘Science and Decisions: Advancing Risk Assessment’, by broadening and deepening scientific discussion on two key recommendations: improving problem formulation and selecting the appropriate dose-response assessment methodology. The *ARA* project -- “‘Beyond Science & Decisions’ from Program Formulation to Dose-Response Assessment” -- was supported by 45 sponsors and collaborators, consisting of 11 government agencies, 11 industry groups, 7 scientific societies, 8 non-profit organizations/consortia, and 8 consulting groups (see Table 1- page 9).

The workshops were led by an Expert Panel of toxicologists and risk assessors (see Table 2-page 10). During the first workshop, thought leaders in the field of risk assessment provided a variety of perspectives on issues raised by the NAS

---

Continued on Page 2

Robinan Gentry, RASS President

---

Continued on Page 3

---

**Table of Contents**

- President’s Message
- Invited Article “Beyond Science & Decision”
- Annual Report Highlights
- Annual Meeting and Reception Highlights
- Awards Announced at Annual Meeting
- RASS Sponsorship Guidelines
- In Memoriam

---

**Officers**

- **President**
  - Robinan Gentry

- **Vice President**
  - John C. Lipscomb

- **Vice President-Elect**
  - Laurie Haws

- **Secretary/Treasurer**
  - Elaina Kenyon

- **Past President**
  - Elaine M. Faustman

- **Councilors**
  - J. Caroline English
  - Robert Budinsky

- **Postdoctoral Representative**
  - Anne Elizabeth Loccisano

- **Student Representative**
  - David Taylor Szabo

**Newsletter Editor**

J.Caroline English
Tel. 585-615-0417
jenglish@nsf.org
President’s Message, continued from Page 1

In addition, we are adding a graduate and a postdoctoral position to the nomination and voting process for our members, so our members can play a larger role in the identification of students interested in playing a more active role in RASS. We also will continue to provide awards for our student members and are extremely grateful to our continued sponsors and endowment funds that allow RASS to sustain these awards.

Another priority for 2011-2012 is to increase RASS’ collaboration with other specialty sections and societies, in turn increasing the interaction among scientists involved in various aspects of risk assessment. For the 2012 annual meeting, a workshop was developed that is a collaborative effort between RASS and the SETAC Human Health Risk Assessment Advisory Group. The goal of this workshop is to highlight challenges currently facing the next generation of risk assessors. With the release of the recent National Academy of Sciences Silver Book, risk assessors are faced with the challenge of integrating innovative data (e.g., genomics) into the current risk assessment paradigms and with the development of new paradigms or methods to address changing issues in risk assessment. In considering all the biological changes and scientific information, many of these new methods attempt to incorporate all of the available scientific information for a compound or even for mixtures. This type of integration can be used to better inform both human health and ecological risk assessments. The goal of this workshop is to provide information on new programs and approaches within regulatory agencies, as well as in the private sector, that rely on the integration of human, animal or ecological data.

I am so honored to serve as your President over the next year and extend my sincerest thanks to the members who are providing support as our team of 2011-2012 officers. I also extend our sincerest thanks to Annie Jarabek as she continues to organize and host our popular tele-seminar series. I welcome any and all input from our members on areas they feel should be addressed by RASS over the coming year, as well as concepts or ideas for our upcoming 2012 annual reception.

Robinan Gentry, Ph.D., DABT

RASS Financial Status in 2010-2011

Dues-paying members: ~500

Financial History:

Net assets as of July 2006: $12,531
Net assets as of July 2007 $18,283
Net assets as of July 2008: $21,621
Net assets as of December 2009: $19,684
Net assets as of December 2010: $20,289
Net assets as of June 2011: $21,835

2011 Projections:

Additional revenue estimate (500 members): $7,980 (dues) + $5,300 (AM revenue) + $1,000 (interest) + $500 (ENVIRON International)

Annual meeting + awards + endorsement expenditures: $12,718.50

Projected net: $8,765

Annual Report, Continued on Page 4
(2009) report and all workshop attendees discussed possible case studies illustrating dose-response methods. The case studies were proposed by members of the risk assessment community in response to broadly distributed general announcements. Such case studies were then developed and considered by the Expert Panel during the second workshop. In the third workshop, additional case studies were presented, particularly focused on previously unaddressed issues raised by the NAS (2009) report, and experts discussed practical considerations for problem formulation, use of mode of action, and addressing background and endogenous exposures.

Recognizing that there are a variety of situations where risk assessment methods are needed, and using the framework of the NAS (2009) report (NAS Figures S-1 and S-5) as a starting point, the Expert Panel adopted a framework applicable to different general problem formulations, including qualitative, screening, and in-depth assessments (Figure 1). The case studies were prepared and presented by workshop participants. For each case study, the Expert Panel provided recommendations and insight on the utility and practicality of the methods appropriate for specific problem formulations. They also considered the methods’ relevance in the context of “fit for purpose” increasingly data-informed approaches, and suggested additional development and improvements for increasing the clarity of the methods being showcased. The purpose of these case studies was to stimulate review and discussion of appropriate dose-response assessment methods, and not to address specific chemical risks. The case studies were linked to the three general problem formulations of Figure 1 to provide examples of the range of methods suitable for each one. Figure 2 (see page 8) depicts the first screen of the ARA Framework for In-Depth Risk Assessment. Applicable case studies are linked to each of the elements in the Framework’s Endpoint Assessment, MOA Assessment, Vulnerable Populations Assessment, Background Exposure Assessment, and Dose-Response Method Selection. This framework approach provides ready access to examples of methods that the risk assessor can consider in addressing the challenges.
**RASS Accomplishments 2010 – 2011**

**Continuing RASS Popular Teleseminar Series**
The RASS Popular Teleseminar Series continued and 10 well-attended teleseminars were presented. Special thanks were given to Annie Jarabek for her continued service.

**Sponsored 2 CE Courses and 26 Sessions**
The RASS was very active in sponsoring sessions at the Annual Meeting. These included Workshops (9), Symposia (7), Informational Sessions (7), Roundtables (2), and Historical Highlights (1). Attendance at all was near capacity.

**White Paper on President’s Cancer Report**
SOT Headquarter asked RASS to work with the Carcinogenesis Specialty Section to develop a white paper on the President’s Cancer Report. This paper was forwarded by SOT after SOT Council review. The paper is attached for reference.

**RASS Program and Activities in 2011-2012**

**Interactions with Program Committee**
RASS continues to request frequent updates throughout the year covering our submitted programs.

**Continuing effort to increase academic membership in RASS**
We need more mentors! Success of interaction with mentor at the annual meeting shows how we can help facilitate mentor interactions in the future. The officers will discuss how to extend these successes throughout the year.

**Coordination of activities with other specialty sections/groups**
Biological Modeling & Mechanisms SS; SRA DRSG; Carcinogenesis

**Teleconference presentations**
Joint telecon with BMSS, DRSG Topics TBD by YOU — please let us know! (jarabek.annie@epa.gov)

**Specialty Section Collaboration and Community group**
Specialty Sections now have increasing presence in a newly formed committee. Although the group is still working on their draft goals their primary purpose is to facilitate 2-way communication with SOT HQ and across specialty sections raising both issues and challenges but also successes and creative ideas. Members from the Specialty Governance Officers form the new committee. Elaine Faustman serves as the elected RASS representative to this group.

**RASS is reviewing a draft document for sponsorship of activities** (see page 7 of Newsletter).
Annual Meeting and Reception Highlights

The reception was held on March 7, 2011 at the Walter E. Washington Convention Center in Washington, D.C. Approximately 450 people were in attendance. Dr. Elaine M. Faustman called the meeting to order at 7PM.

The meeting agenda covered:
- Accomplishments for 2010-2011
- RASS Best Abstract/Student Travel Awards
- RASS Best Manuscript Awards
- Remarks by Incoming President
- Special Feature – Meet the Mentor
- Panel Discussion: “A Journey from the Red to Silver Book: Are we there yet?”

Anniversary Events
For SOT’s 50th Anniversary Celebration, RASS displayed a historical poster and contributed to a time capsule.

RASS poster at graduate student/postdoc mixer
Special thanks to David Szabo and Anne Loccisano, who presented our poster.

Time Capsule
RASS highlighted work that our own scientists have been active in shaping and informing. We included a copy of the 1983 NRC “Red Book”, representing one of the significant “beginnings” for our discipline; a Memory Key (USB Flash drive containing RASS Best Papers and Election photos and Risk Assessment Specialty Pin), representing the excellence and state of the science of our members and our risk community; and a Photo Album, providing a current face of our specialty section and our members.

RASS Meet and Greet at Reception
This year we tried out a new Meet and Greet event during the RASS reception to facilitate networking with and between our student and fellow members and our risk assessment specialty section members. Tables were set aside at our reception where students and fellows could specifically meet our members. Members brought their calling card to exchange for a drink ticket as an incentive to make these new contacts. All reports from the activities said that this was highly successful. We hope this will become a regular part of our reception and provide clear evidence of our commitment to our specialty section future.

RASS Panel Discussion
A Journey from the Red to Silver Book: Are we there yet?
Participants:
- Thomas A. Burke, PhD, MPH
  Johns Hopkins Bloomberg School of Public Health
- Joseph V. Rodricks, PhD, DABT
  ENVIRON International Corporation
- Elizabeth L. Anderson, Ph.D., Fellow
  Exponent
- Moderator: Elaine M. Faustman

We asked the speakers to address the questions “What were/are the impacts from the Red Book? What do we need to do to facilitate our movement to get toward silver? What lessons learned do we need to remember on this path? The recollections were great as we had an ‘insiders’ look at the development of the report by Joe Rodricks (ENVIRON) and a view of its need and utility with the EPA from Betty Anderson (EXPONENT). Its impact was international with significant impacts on international harmonization efforts in Risk Assessment. Over the years there have been many significant reports including “Science and Judgment”, “Improving Risk Communication”, “Scientific Frontiers in Developmental Toxicology and Risk Assessment”, “Toxicology in the 21st Century” to name only a few. Risk assessors in the Society of Toxicology played an important role in each of these reports. Tom Burke (Johns Hopkins University) shared with the group his thoughts about the more recent NRC report “Science and Decisions” referred to as the “Silver Book” which has challenged us to think more about integration and population level impacts. Members really enjoyed the session and provided lively feedback.

Elaine Faustman, Ph.D., DABT
Awards Announced at Annual Meeting

**RASS 2011 Perry J. Gehring Best Postdoctoral Abstract Award**

Abstract #1690
POST-DOC: Ben Moeller
ADVISOR: Jim Swenberg

**Molecular Dosimetry of N2-hydroxymethyl-dG Adducts Following Formaldehyde Exposure to Non-Human Primates**

*Benjamin C. Moeller1, Kun Lu2, Melanie Doyle-Eisele3, Jacob McDonald3, Andrew Gighiotti 3, James A. Swenberg1,2*

1Curriculum in Toxicology, University of North Carolina – Chapel Hill; 2Department of Environmental Sciences and Engineering, University of North Carolina – Chapel Hill; 3Lovelace Respiratory Research Institute, Albuquerque, NM

**Perry J Gehring 2011 Best Graduate Student Abstract**

Abstract # 2106
STUDENT: Corie Ellison
ADVISOR: James R. Olson

**Construction and validation of a human PBPK/PD model for dermal chlorpyrifos exposure utilizing human biomarker data**

*Cortie A. Ellison1, James B. Knaak1, Robin McDougall2, Matthew R. Bonner2, Pamela J. Lein 3,4, Fayssal M. Farahat5, W. Kent Anger3, James R. Olson1*

1University at Buffalo, Buffalo, NY; 2University of Ontario Institute of Technology, Oshawa, Canada; 3Oregon Health & Science University, Portland, OR; 4UC Davis School of Veterinary Medicine, Davis, CA; 5Menoufia University, Shibin el Kom, Egypt

**Overall Best Abstract**

**Case Study on Dose-Responses for Mutagenicity and Clastogenicity Induced by DNA-Reactive Chemicals**

*Lynn H. Pottenger1, Martha M. Moore2, Tong Zhou3, Errol Zeiger4*

1. The Dow Chemical Company, Midland, MI, United States.  
4. Errol Zeiger Consulting, Chapel Hill, NC, United States.

**RASS 2011 John Doull Award**

STUDENT: Mathieu Valcke
ADVISOR: Kannan Krishnan

**Evaluation of the impact of demography on the adequacy of the human kinetic adjustment factor (HKAF)**

*AUTHORS: M. Valcke1,2, K. Krishnan3*

1Santé environnementale et Santé au travail, Université de Montréal, Montréal, QC, Canada; 2Direction de la Santé environnementale et de la Toxicologie, Institut national de santé publique du Québec, Montréal, QC, Canada.

**RASS 2011 Best Publication Advancing the Science of Risk Assessment**

The use of in vitro toxicity data and physiologically based kinetic modeling to predict dose-response curves for in vivo developmental toxicity of glycol ethers in rat and man.

*Toxicological Sciences 118(2):470-484.*

*Jochem Louisse, Esther de Jong, Johannes J. M. van de Sandt, Bas J. Blaauboer, Ruud A. Woutersen, Aldert H. Piersma, Ivonne M. C. M. Rietjens , Miriam Verwei.*

Division of Toxicology, Wageningen University

**RASS 2011 Best Paper Demonstrating the Application of Risk Assessment**

Evaluating variability and uncertainty separately in microbial quantitative risk assessment using two R Packages.


*Régis Pouillot and Marie Laure Delignette-Muller.*

Université de Lyon

Top 10 Abstracts, See Page 11
**RASS Sponsorship Guidelines**

**Member Proposals for Nonannual Meeting Activities**

As you are probably aware, every year we receive a series of great ideas from our members for ways to support activities throughout the year that benefit our members. In order to more fully advertise these opportunities and to develop a fair process we have drafted the following guidelines. Before implementing we would welcome input from our society members. Thanks in advance for your ideas!

**Draft guidelines for submission of proposals for non annual meeting activities**

Two times per year the Risk Assessment Specialty Section will entertain ideas for supporting activities of interest to our members. The following format has been designed to facilitate our review of these ideas:

The review of proposals will be twice yearly, thus proposal ideas should be submitted by Jan. 1 and June 1 for consideration. Based on our budget projections from the past three years we anticipate that we can support one to two activities at approximately $1 to $2000 each. Priority will be assigned based on the following criteria:

- Impact student and fellow participation in RA
- Potential for making a difference in our field
- Potential for benefiting a large sector of our members

All recipients of these awards will be anticipated to submit a report to the RASS that will include the following information.

1. RASS members who attended. Specifically identify student or fellow members who attended.
2. Identify the impact of the conference – list both your methods and enclose any reports generated from the event
3. Identify the RASS members who attended the event by sector i.e., Government, Industry, Consulting or Academic.
4. Attach electronic copy of course/workshop presentation materials
5. Attach the attendance list from the event.

---

**In Memory of Annette M. Shipp**

We are deeply saddened to report the death of Dr. Annette Shipp on August 8, 2011. For the last decade, Annette has been a Principal Scientist for ENVIRO International Corporation, an international consulting firm. Her distinguished career has spanned over twenty-five years in environmental consulting, toxicology and risk assessment. Annette was an innovator and mentor, who strived to bring the best science possible to understanding potential impacts on human health and the environment. She leaves a legacy of excellence in the field of health sciences and her colleagues will greatly miss her.
All of the workshop materials, including the case studies are posted on the ARA website [http://www.allianceforrisk.org/ARA_Dose-Response.htm]. To view the framework, and linked case studies at each level of problem formulation, see http://www.allianceforrisk.org/Workshop/Framework.htm.

The open process of the three ARA workshops encouraged interaction amongst all workshop participants, including Panel members and case study authors, and collective insights were gained. For example, although the NAS (2009) Committee placed mode of action evaluation front and center in its framework, there appeared to be a strong emphasis in its report on default methods. The ARA Expert Panel and meeting participants, while recognizing the value of science-informed defaults, emphasized the
importance of problem formulation in the appropriate consideration of MOA as a basis to be more predictive. Moreover, at the workshop it became clear that additional communication concerning the rigor of available national and international guidance regarding criteria for weight of evidence for mode of action informed approaches would be helpful. The need to specifically articulate relative uncertainties associated with various options for dose-response analysis tailored to problem formulations was also emphasized.

Additional work is underway by ARA, in consultation with the Expert Panel, to upgrade this publically available compendium of dose-response assessment methodologies. Changes are also underway to improve the utility of the appearance of the framework and case studies on the web and to add links to existing guidance (and examples) agreed to by the Expert Panel.

Table 1: Sponsors of the ARA Project: ‘Beyond Science & Decisions’ -- From Problem Formulation to Dose-Response Assessment

<table>
<thead>
<tr>
<th>Academy of Toxicological Sciences</th>
<th>The Mickey Leland National Urban Air Toxics Research Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Chemistry Council Center for Advancing Risk Assessment Science and Policy</td>
<td>Minnesota Pollution Control Agency</td>
</tr>
<tr>
<td>American Petroleum Institute</td>
<td>The Naphthalene Council</td>
</tr>
<tr>
<td>American Water Works Association</td>
<td>National Center for Toxicological Research of the US Food and Drug Administration</td>
</tr>
<tr>
<td>Center for Food Safety and Applied Nutrition of the US Food and Drug Administration</td>
<td>New Zealand Ministry of Health</td>
</tr>
<tr>
<td>Consortium for Environmental Risk Management LLC</td>
<td>Nickel Producers Environmental Research Association</td>
</tr>
<tr>
<td>CropLife America</td>
<td>Noblis</td>
</tr>
<tr>
<td>Dose Response Specialty Group (Society for Risk Analysis)</td>
<td>NSF International</td>
</tr>
<tr>
<td>Environ</td>
<td>Ohio Environmental Protection Agency</td>
</tr>
<tr>
<td>Environmental Protection Agency</td>
<td>Pastor, Behling &amp; Wheeler, LLC</td>
</tr>
<tr>
<td>The Hamner Institute for Health Sciences</td>
<td>Regulatory and Safety Evaluation Specialty Section (Society of Toxicology)</td>
</tr>
<tr>
<td>Georgia Department of Natural Resources</td>
<td>Risk Assessment Specialty Section of (Society of Toxicology)</td>
</tr>
<tr>
<td>Georgia Pacific</td>
<td>The Sapphire Group</td>
</tr>
<tr>
<td>Gradient</td>
<td>SC Johnson &amp; Son</td>
</tr>
<tr>
<td>Hawai'i State Department of Health; Hazard Evaluation and Emergency Response</td>
<td>Society for Risk Analysis</td>
</tr>
<tr>
<td>Human Toxicology Project Consortium</td>
<td>Society of Toxicology</td>
</tr>
<tr>
<td>Illinois Environmental Protection Agency</td>
<td>Summit Toxicology</td>
</tr>
<tr>
<td>Indiana Department of Environmental Management</td>
<td>Ted Simon Toxicology</td>
</tr>
<tr>
<td>International Copper Association</td>
<td>Texas Association of Business</td>
</tr>
<tr>
<td>Industrial Economics, Incorporated</td>
<td>Texas Chemical Council</td>
</tr>
<tr>
<td>International Society of Regulatory Toxicology and Pharmacology</td>
<td>Texas Commission on Environmental Quality</td>
</tr>
<tr>
<td>The LifeLine Group</td>
<td>Texas Industry Project</td>
</tr>
<tr>
<td></td>
<td>Toxicology Excellence for Risk Assessment</td>
</tr>
</tbody>
</table>
**Table 2: Expert Panel Members (Workshops II and III, except where noted)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Bolger</td>
<td>U.S. Food and Drug Administration</td>
</tr>
<tr>
<td>James S. Bus</td>
<td>The Dow Chemical Company</td>
</tr>
<tr>
<td>John Christopher</td>
<td>CH2M/Hill</td>
</tr>
<tr>
<td>Rory Conolly</td>
<td>U.S. EPA National Health and Environmental Effects Research Laboratory</td>
</tr>
<tr>
<td>Mike Dourson</td>
<td>Toxicology Excellence for Risk Assessment</td>
</tr>
<tr>
<td>Adam M. Finkel</td>
<td>University of Pennsylvania Law School</td>
</tr>
<tr>
<td>William Hayes</td>
<td>Indiana Department of Environmental Management (Workshop II only)</td>
</tr>
<tr>
<td>R. Jeffrey Lewis</td>
<td>ExxonMobil Biomedical Sciences, Inc.</td>
</tr>
<tr>
<td>Randall O. Manning</td>
<td>Georgia Department of Natural Resources, Environmental Protection Division (Workshop III only)</td>
</tr>
<tr>
<td>Bette Meek</td>
<td>University of Ottawa</td>
</tr>
<tr>
<td>Paul Moyer</td>
<td>Minnesota Department of Health (Workshop II only)</td>
</tr>
<tr>
<td>Greg Paoli</td>
<td>Risk Sciences International</td>
</tr>
<tr>
<td>Rita Schoeny</td>
<td>U.S. EPA Office of Water</td>
</tr>
</tbody>
</table>
Awards Announced at Annual Meeting, continued from page 6

TOP TEN ABSTRACTS in order of presentation

Mode of Action (MOA) and Dose-Response Approaches for Nuclear Receptors
Dieter Schrenk5, Robert Budinsky1, J. Christopher Corton3, Cliff Elcombe2, James Klaunig4,
Doug Wolf3
1. Dow, Midland, MI, United States.
2. CRX Biosciences, Dundee, Scotland, United Kingdom.
4. Indiana University, Indianapolis, IN, United States.
5. University of Kaiserslautern, Kaiserslautern, Germany.
SESSION: March 7, 2011 9:30 AM to 12:30 PM
LOCATION: Exhibit Hall (Convention Center)
POSTER SESSION TITLE: Receptor and Receptor-Mediated Toxicity
ABSTRACT FINAL ID: 367 Poster Board -724

Case Studies on the Role of DNA Adduct Data in Cancer Risk Assessment: Context Is Key
J. Skare1, L. H. Pottenger2, L. Andrews2, A. Bachman3, P. J. Boogaard4, J. Cadet5, P. Farmer6,
M. Himmelstein7, A. Jarabek8, J. Kim9, E. Martin10, R. Mauthe11, R. Persaud12, J. Preston8,
R. Schoeny8, J. Swenberg13, G. Williams14, F. Zhang2, E. Zeiger15
1. Procter & Gamble, Cincinnati, OH, United States.
2. The Dow Chemical Company, Midland, MI, United States.
3. EMBSI, Annandale, NJ, United States.
5. CEA/Grenoble, Grenoble, France.
6. U. Leicester, Leicester, United Kingdom.
7. DuPont, Newark, DE, United States.
8. USEPA, RTP, NC, United States.
9. HESI, Washington, DC, United States.
10. AstraZeneca, Macclesfield, United Kingdom.
11. Pfizer, Groton, CT, United States.
12. L'Oreal, Clark, NJ, United States.
13. UNC, Chapel Hill, NC, United States.
14. NY Medical College, Valhalla, NY, United States.
15. E. Zeiger Consulting, Chapel Hill, NC, United States.
SESSION: March 7, 2011 1:00 PM to 4:30 PM
LOCATION: Exhibit Hall (Convention Center)
POSTER SESSION TITLE: Risk Assessment: Computational Approaches, Analyses, and Applications
ABSTRACT FINAL ID: 486 Poster Board -229

Use of a PBPK/PD Model to Derive Age-Specific Interspecies (UFA) and Interindividual (UFH)
Uncertainty Factors for Chlorpyrifos
Paul S. Pricel1, Paul M. Hindersilter2, Torka S. Poet2
1. Toxicology & Environmental Research & Consulting, The Dow Chemical Company, Midland, MI,
United States.
2. Battelle Pacific Northwest Division, Richland, WA, United States.
SESSION: March 7, 2011 4:27 PM to 4:45 PM
LOCATION: Room 202B (Convention Center)
SESSION TITLE: Advancing Assessment Approaches: Pesticides and Other Key Contaminants
SESSION TYPE: Platform Session
ABSTRACT FINAL ID: 866

Continued next page
Modeling Vapor Uptake and Tissue Disposition in Human Lungs
Madhuri Singal1, Bahman Asgharian2, Owen T. Price2, Jeffry S. Schroeter3, Julia S. Kimbell4
3. Division of Computational Biology, The Hamner Institutes for Health Sciences, Research Triangle Park, NC, United States.
4. Department of Otolaryngology/Head and Neck Surgery, University of North Carolina, Chapel Hill, NC, United States.
SESSION: March 9, 2011 1:00 PM to 4:30 PM
LOCATION: Exhibit Hall (Convention Center)
SESSION TITLE: Risk Assessment: Models and Approaches for Inhaled Agents
SESSION TYPE: Poster Session
ABSTRACT FINAL ID: 2289 Poster Board -435

Dose-Response of Naphthalene–Induced Genotoxicity and Glutathione Detoxification in Human TK6 Lymphoblasts
Leslie Recio1, Kim Shepard1, Carol Swartz1, Gregory Kedderis2
1. ILS, Research Triangle Park, NC, United States.
2. Consultant, Chapel Hill, NC, United States.
SESSION: March 8, 2011 1:00 PM to 4:30 PM
LOCATION: Exhibit Hall (Convention Center)
SESSION TITLE: Mutagenecity
SESSION TYPE: Poster Session
ABSTRACT FINAL ID: 1421 Poster Board -319

Molecular Dosimetry and Half Life of N2-hydroxymethyl-dG Adduct in Rats Exposed to Formaldehyde
Kun Lu 1, Benjamin Moeller2, Melanie Doyle-Eisele3, Jacob McDonald3, James A. Swenberg1, 2
1. Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, NC, United States.
2. Curriculum in Toxicology, University of North Carolina, Chapel Hill, NC, United States.
SESSION: March 8, 2011 1:00 PM to 4:30 PM
LOCATION: Exhibit Hall (Convention Center)
SESSION TITLE: Biomarkers of Environmental Exposures
SESSION TYPE: Poster Session
ABSTRACT FINAL ID: 1690 Poster Board -934

Corn Oil as a Causative Factor for Proliferative Lesions of the Forestomach in B6C3F1 Mice Exposed by Gavage
Laura M. Plunkett1, Tom Starr2, Judith A. MacGregor3, Ann M. Jonyas4
1. Integrative Biostrategies LLC, Houston, TX, United States.
2. TBS Associates, Raleigh, NC, United States.
3. Toxicology Consulting Services, Arnold, MD, United States.
4. Amvac Chemical Corporation, Newport Beach, CA, United States.
SESSION: March 9, 2011 9:00 AM to 12:30 PM
LOCATION: Exhibit Hall (Convention Center)
SESSION TITLE: Risk Assessment: Conceptual Constructs and Current Controversies
SESSION TYPE: Poster Session
ABSTRACT FINAL ID: 1964 Poster Board -438

Continued next page
Arsenic Risk Assessment Following Removal of Constraining Factors—Reference Population and Median Exposure Metric

Steven H. Lamm1, 2, Shayhan Robbins1, Jun Lu3, Chao Zhou, Rusan Chen4, Manning Feinleib5
1. Epidemiology, Consultants in Epidemiology and Occupational Health (CEOH), Washington, DC, United States.
2. Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States.
3. Mathematics, American University, Washington, DC, United States.
4. Center for New Design in Learning and Scholarship, Georgetown University, Washington, DC, United States.
5. Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States.

SESSION: March 9, 2011 9:00 AM to 12:30 PM
LOCATION: Exhibit Hall (Convention Center)
SESSION TITLE: Risk Assessment: Conceptual Constructs and Current Controversies
SESSION TYPE: Poster Session
ABSTRACT FINAL ID: 1939 Poster Board -413

Estimating Toxicity-Related Biological Pathway Altering Doses for High Throughput Chemical Risk Assessments

Richard Judson1, David J. Dix1, Kavlock J. Robert1, R. Woodrow Setzer1, Elaine A. Cohen Huball, Matthew T. Martin1
SESSION: March 9, 2011 10:24 AM to 10:45 AM
SESSION LOCATION: Room 147 (Convention Center)
SESSION TITLE: QSAR Approaches and Predictive Pathways
SESSION TYPE: Platform Session
ABSTRACT FINAL ID: 1813

Sub-chronic naphthalene inhalation causes a decrease in p53 codon 271 CAT mutant fraction in the nasalrespiratory epithelium of male rats

Fanxue Meng1, Yiyong Wang1, Meagan B. Myers1, Brian A. Wong2, Elizabeth A. Gross2, Harvey J. Clewell3, Darol E. Dodd2, Barbara L. Parsons1
1. Division of Genetic and Molecular Toxicology, National Center for Toxicological Research/US FDA, Jefferson, AR, United States.
2. Division of Toxicology and Preclinical Studies, The Hamner Institutes for Health Sciences, Research Triangle Park, NC, United States.
3. Center for Human Health Assessment, The Hamner Institutes for Health Sciences, Research Triangle Park, NC, United States.
SESSION: March 9, 2011 9:00 AM to 12:30 PM
LOCATION: Exhibit Hall (Convention Center)
SESSION TITLE: Risk Assessment: Conceptual Constructs and Current Controversies
SESSION TYPE: Poster Session
ABSTRACT FINAL ID: 1953 Poster Board -427