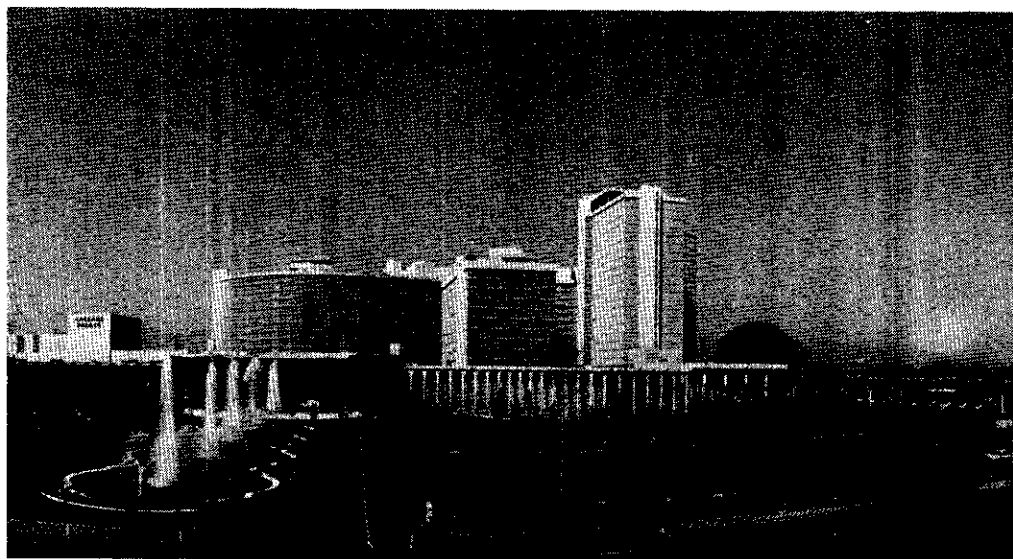


**SOCIETY OF TOXICOLOGY**

**22nd ANNUAL  
MEETING**



**March 7-11, 1983  
Caesars Palace  
Las Vegas, Nevada**

**PROGRAM**

**MIXER AND RECEPTION**

Monday Evening, March 7, 1983

6:00 - 7:30 P.M.

Colosseum II & III

Cash Bar

Open to all attendees and guests

**ISSUES SESSION**

Tuesday Afternoon, March 8, 1983

12 Noon - 1:15 P.M.

Julius Room

*Chaired by President Robert L. Dixon*

Bring a sandwich, etc. and participate in an open  
forum discussion of SOT affairs

**ANNUAL BUSINESS MEETING**

Wednesday Afternoon, March 9, 1983

3:30 P.M.

Julius Room

*President Robert L. Dixon, Presiding*

SOT Members Only

**ANNUAL BANQUET**

Thursday Evening, March 10, 1983

7:00 P.M.

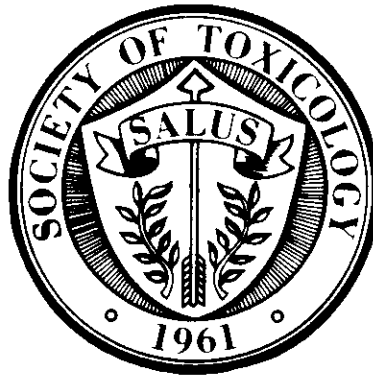
Julius Room

Open to all attendees and guests

Complimentary Wine

Courtesy, Charles River Breeding Laboratories, Inc.

**22nd ANNUAL  
MEETING**  
sponsored by



**Caesars Palace - Las Vegas, Nevada**  
**March 7-11, 1983**

**REGISTRATION FEES**

	<b>Member or Post- doctoral In Training</b>	<b>Non- Member</b>	<b>Student, Full-time, Predoctoral</b>
<b>Pre-registration</b>	<b>\$50.00</b>	<b>\$75.00</b>	<b>\$ 5.00</b>
<b>At Conference</b>	<b>60.00</b>	<b>85.00</b>	<b>10.00</b>
<b>Banquet</b>	<b>25.00</b>	<b>25.00</b>	<b>25.00</b>

# PROGRAM SUMMARY

## Platform

<u>Day/Time</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Tuesday 8:30 A.M.	General I	Colosseum II	11
Tuesday 8:30 A.M.	Metabolism I	Colosseum III	12
Tuesday 1:30 P.M.	Inhalation II	Colosseum II	20
Tuesday 1:30 P.M.	Metals I	Colosseum III	23
Tuesday 1:30 P.M.	Reproduction/Teratology II	Neros Room	24
Wednesday 8:30 A.M.	General II	Colosseum II	31
Wednesday 8:30 A.M.	Metabolism II	Colosseum III	33
Wednesday 8:30 A.M.	Neurological II	Neros Room	34
Wednesday 1:30 P.M.	Cardiovascular/Renal	Colosseum II	42
Wednesday 1:30 P.M.	Inhalation IV	Colosseum III	43
Wednesday 1:30 A.M.	Metals II	Neros Room	44
Thursday 8:30 A.M.	General III	Colosseum II	50
Thursday 8:30 A.M.	Metabolism IV - Industrial	Colosseum III	52
Thursday 1:30 P.M.	Biochemical II	Colosseum II	61
Thursday 1:30 P.M.	Halogenated Hydrocarbons II	Colosseum III	62

<u>Day/Time</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Thursday 1:30 P.M.	Inhalation VI	Neros Room	64
Friday 8:30 A.M.	Biochemical III	Colosseum II	72
Friday 8:30 A.M.	Oncogenesis/Mutagenesis II	Colosseum III	73

## Symposia

<u>Day/Time</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Tuesday 8:30 A.M.	Future of Animals in Research and Testing	Julius Room	17
Tuesday 1:30 P.M.	Alcohol Metabolism and Hepatotoxicity	Julius Room	28
Wednesday 8:30 A.M.	Selenium — Toxin or Panacea	Julius Room	39
Thursday 8:30 A.M.	Food Toxicology	Julius Room	58
Thursday 1:30 P.M.	Application of Neurophysiological Tech- niques to Toxicological Problems	Augustus Room	69
Friday 8:30 A.M.	Biological Effects of Chemical Interactions	Julius Room	84

## Poster

<u>Day/Time</u>	<u>Topic</u>	<u>See Page</u>
<i>(All in rear of Colosseum Exhibit Area)</i>		
Tuesday 8:30 A.M.	Inhalation I	13
Tuesday 8:30 A.M.	Neurological I	15
Tuesday 8:30 A.M.	Reproduction/Teratology I	18
Tuesday 1:30 P.M.	Oncogenesis/Mutagenesis I	25
Tuesday 1:30 P.M.	Organ Specific	29
Wednesday 8:30 A.M.	Immunological	35
Wednesday 8:30 A.M.	Inhalation III	37
Wednesday 8:30 A.M.	Reproduction/Teratology III	39
Wednesday 1:30 P.M.	Metabolism III - Agricultural	45
Wednesday 1:30 P.M.	Metabolism III - Disposition	49
Thursday 8:30 A.M.	Biochemical I	53
Thursday 8:30 A.M.	Halogenated Hydrocarbons I	55
Thursday 8:30 A.M.	Inhalation V	59
Thursday 1:30 P.M.	General IV	65
Thursday 1:30 P.M.	Metals III	70
Friday 8:30 A.M.	Environmental	75

<u>Day/Time</u>	<u>Topic</u>	<u>See Page</u>
Friday 8:30 A.M.	General V	77
Friday 8:30 A.M.	Metabolism V	79
Friday 8:30 A.M.	Metals IV	82

## Student/Postdoctoral Colloquium

<u>Day/Time</u>	<u>Room</u>	<u>See Page</u>
Wednesday 3:00 P.M.	Tiberius Room	48

## Refresher Courses

<u>Day/Time</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Monday 8:00 A.M.	#1. Dermatotoxicology	Colosseum II, III	8
Monday 8:00 A.M.	#2. Practical Statistics for the Toxicologist	Julius Room	8
Monday 1:00 P.M.	#3. Complications of Infectious Agents in Toxicological Research	Colosseum II, III	9
Monday 1:00 P.M.	#4. Male Reproductive Tract Toxicology	Julius Room	10

## **GENERAL INFORMATION**

### **REGISTRATION — CAESARS PALACE — COLLOSSEUM FOYER**

Sunday, Mar. 6 — 3:00 P.M. - 9:00 P.M.  
Monday, Mar. 7 — 7:00 A.M. - 5:00 P.M.  
Tuesday, Mar. 8 — 7:00 A.M. - 4:00 P.M.  
Wednesday, Mar. 9 — 7:00 A.M. - 4:00 P.M.  
Thursday, Mar. 10 — 7:30 A.M. - 4:00 P.M.

### **HOTEL ACCOMMODATIONS**

Caesars Palace is Conference headquarters. The guest room rates are guaranteed when reservations are made on the hotel form enclosed with the program packet.

The hotel accepts major credit cards.

Caesars Palace will act as Housing Bureau and once capacity is reached, they will process overflow reservations in nearby hotels as needed.

All sessions will be held in Caesars Palace.

### **AIRPORT LIMOUSINE SERVICE**

Direct limousine service is available from the Las Vegas Airport to Caesars Palace.

### **CONFERENCE HEADQUARTERS — SENATE I, II, III**

Sunday, Mar. 6 — 3:00 P.M. - 9:00 P.M.  
Monday thru Thursday — 7:00 A.M. - 5:00 P.M.  
Friday — 7:00 A.M. - Noon

### **PLACEMENT SERVICE — CALIGULA & VITTELIUS**

Monday, Mar. 6 — 1:00 P.M. - 5:00 P.M.  
Tuesday & Wednesday — 8:30 A.M. - 5:00 P.M.  
Thursday — 8:30 A.M. - Noon  
Co-Chairmen: R.F. Johannsen, R.A. Parent

### **PRESS ROOM — VESPASIAN**

Monday, Tuesday, Wednesday — 8:00 A.M. - 5:00 P.M.

Thursday — 8:00 A.M. - Noon

### **SPOUSE HOSPITALITY — REGALIUM**

Monday, Tuesday, Wednesday — 9:00 A.M. - 4:00 P.M.

Thursday, Friday — 9:00 A.M. - Noon

### **EXHIBIT INFORMATION**

All commercial exhibits will be in Colosseum IV, V and VI.

Exhibit Hours and Dates:

Tuesday, March 8 — 8:30 A.M. - 5:00 P.M.

Wednesday, March 9 — 8:30 A.M. - 5:00 P.M.

Thursday, March 10 — 8:30 A.M. - 5:00 P.M.

### **ABSTRACTS OF PAPERS (THE TOXICOLOGIST)**

Distributed without charge to all members of the Society of Toxicology in advance of the meeting. Non-members will be given the abstracts with their registration at the meeting. Additional copies available at the Conference Registration Desk at \$5 each.

## REFRESHER COURSES

### Society of Toxicology Continuing Education Courses

*(Pre-Registration necessary — See Conference  
Pre-Registration form enclosed in conference packet)*

#### 1. Dermatotoxicology

Monday Morning, March 7, 1983

8:00 A.M. - Noon

Colosseum II & III

\$50.00\* (including textbook)

This course will provide a survey of the science that deals with adverse skin effects and the substances that produce them. The second edition of the well-known text "Dermatotoxicology" will be used and copies will be provided to each attendee. The editors, Dr. Francis N. Marzulli (National Academy of Sciences) and Dr. Howard I. Maibach (University of California - San Francisco Medical Center), with assistance from contributing authors, will cover selected portions of the text. This is an excellent opportunity for individuals to learn from experts in the field and obtain a copy of the book for future reference for a registration fee that is less than the list price of the text.

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*\*Special discount: \$35 for full-time, predoctoral students.*

#### 2. Practical Statistics for the Toxicologist

Monday Morning, March 7, 1983

8:00 A.M. - Noon

Julius Room

\$30.00\*

This course will provide a survey on basic statistical considerations used to design, analyze and interpret toxicological experiments. Emphasis will be given to presenting basic concepts and information that can be used by toxicologists to improve the quality of their work. The faculty members are experts who understand statistics and, equally important, know how to apply statistical methods to toxicological problems. All participants will receive a syllabus covering the material that is presented.

**Philosophy of Statistics as Applied to Toxicology.** Dr. Jerry B. Hook, *Michigan State University.*

**Statistical Design of Toxicological Experiments.** Dr. Daniel Krewski, *Environmental Health Center, Health and Welfare of Canada.*

**Risk Estimation: Biological and Mathematical Modeling Issues.** Dr. Thomas B. Starr, *Chemical Industry Institute of Toxicology.*

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*\*Special discount: \$15 for full-time, predoctoral students.*

### **3. Complications of Infectious Agents in Toxicological Research**

Monday Afternoon, March 7, 1983

1:00 P.M. - 5:00 P.M.

Colosseum II and III

\$30.00\*

It is increasingly apparent that infectious agents pose a serious complicating factor in the conduct and interpretation of toxicological studies. This course will include state-of-the-art information on the effects of infectious agents on toxicological studies. The material presented will aid participants in planning and conducting studies to minimize the complications of infectious agents. Moreover, the knowledge gained will assist in critically evaluating the results of studies that may have been complicated by the presence of infectious agents. The faculty for the course are scientists who are internationally recognized for their work in this important area.

Dr. Stephen W. Barthold, *Section of Comparative Medicine, Yale University School of Medicine.*

Dr. Gary A. Boorman, *National Toxicology Program.*

Dr. William C. Hall, *Microbiological Associates, Bethesda, MD.*

Dr. Thomas E. Hamm, Jr., *Chemical Ind. Inst. of Toxicology.*

Dr. J. Russell Lindsey, *Department of Comparative Medicine, University of Alabama Medical Center.*

All attendees will receive a syllabus covering the material that is presented.

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*\*Special discount: \$15 for full-time, predoctoral students.*

#### **4. Male Reproductive Tract Toxicology**

Monday Afternoon, March 7, 1983

1:00 P.M. - 5:00 P.M.

Julius Room

\$30.00\*

This course will present information on the physiology and biochemistry of the male reproductive tract and how normal function may be altered by toxic agents. The faculty are recognized experts in this highly specialized field. They will present background material and important concepts to familiarize non-experts with the field and enhance the knowledge of those who are working in this area. All participants will receive a syllabus covering the material presented by the speakers.

**Introductory Remarks.** Dr. Thomas H.F. Smith, *IBM Corp.*

**Physiology and Biochemistry of the Male Reproductive Tract and the Process of Spermatogenesis.** Dr. Larry Zaneveld, *University of Illinois.*

**An overview of Agents Toxic to the Male Reproductive Tract.** Dr. John A. Thomas, *Travenol Laboratories.*

**Indicators for Male Reproductive Toxicity.** Dr. Andrew Wyrobek, *Lawrence Livermore National Laboratory.*

**Factors Affecting Human Infertility.** Dr. James Overstreet, *Univ. of California - Davis.*

**Concluding Remarks.** Dr. Robert L. Dixon, *National Institute for Environmental Health Sciences.*

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\*Special discount: \$15 for full-time, predoctoral students.

**Tuesday Morning, March 8, 1983**  
**PLATFORM SESSION 1: General I**

Colosseum II

**Co-Chairs: E.J. Youkilis, Baxter-Travenol Labs., Morton Grove, IL**  
**J.L. Way, Washington State Univ., Pullman, WA**

Paper No.	Time (A.M.)	
1	8:30	<b>Preclinical Intravenous Toxicity of Sarenin.</b> R.A. Levin, E.F. Christensen, R.E. Johnson, F.W. Sigler and M.L. Sutton, <i>Path. &amp; Tox. Sec., Drug Safety Div., Norwich Eaton Pharmaceuticals, Inc., Norwich, NY.</i> Sponsor: L.E. Van Petten.
2	8:45	<b>Intramuscular Toxicity Studies of Vidarabine Phosphate in Rats and Dogs.</b> S.N. Kim, U. Jayasekara, C.E. Moyer, J.A. Anderson, J.E. Fitzgerald and F.A. de la Iglesia, <i>Path. Exper. Tox., Warner-Lambert/Parke-Davis Pharm. Res. Div., Ann Arbor, and Env. Ind. Health, Univ. of Michigan, Ann Arbor, MI.</i>
3	9:00	<b>Physical Dependence Liability of Drugs of Abuse as Indicated by Dose-effect Studies of Deprivation-induced Fluid Consumption in Rats.</b> R.P. Maickel, J.D. Roache, W. Johnson, J.F. Nash, Jr. and J.E. Zabik, <i>Dept. Pharmacol. &amp; Toxicol., Sch. of Pharmacy and Pharmacal Sci., Purdue Univ., W. Lafayette, IN, and BetaMED Pharmaceuticals, Inc., Indianapolis, IN.</i>
4	9:15	<b>Observations on the Subchronic Toxicity of (-)-Threo-chlorocitric Acid in the Dog.</b> T.J. Hayes, S.E. Sadek and R.M. McClain, <i>Dept. of Tox. &amp; Path., Hoffmann-La Roche Inc., Nutley, NJ.</i>
5	9:30	<b>Toxicity Evaluation of a Beta-Adrenergic Blocker and a Diuretic in Fixed Combination.</b> C.E. Moyer, C.J. DiFonzo, S.N. Kim, J.E. Fitzgerald, J.M. Sturgess and F.A. de la Iglesia, <i>Path. Exper. Tox., Warner-Lambert/Parke-Davis Pharm. Res., Ann Arbor, MI and Mississauga, Ont.</i>
6	9:45	<b>Genetic and Systemic Toxicology Evaluation of an Antihypertensive Agent.</b> M.U. Jayasekara, S.N. Kim, J.R. Watkins, J.A. Anderson, E.J. McGuire, J.E. Fitzgerald and F.A. de la Iglesia, <i>Path. Exper. Tox., Warner-Lambert/Parke-Davis Pharm. Res. Div., Ann Arbor, MI.</i>
7	10:00	<b>Methemoglobin Production of Primaquine Diphosphate and Three Other 8-Aminoquinoline Candidate Antimalarial Drugs.</b> J.C. Anders, J.R. Baker and H. Chung, <i>Dept. of Pharm., Walter Reed Army Inst. of Res., Washington, DC.</i>
8	10:15	<b>Ulceration of Mucous Membranes of the Lip, Penis and Vagina of Beagle Dogs Treated with Single Oral Doses of an Experimental Antibiotic.</b> P.T. La Rocca, J.D. Frantz, R.J. Szot, H.E. Black and E. Schwartz, <i>Dept. of Path./Tox., Schering Corp., Lafayette, NJ.</i>
9	10:30	<b>The Rat and Dog in Toxicity Testing: A Comparative Evaluation.</b> K.J. Falahee, C.S. Rose, W.G. Palmer and H.E. Seifried, <i>Tracor Jitco, Inc., Rockville, MD; D. Sawhney, U.S. EPA, Washington, DC.</i>

10	10:45	<b>Parenteral Toxicity of Buprenorphine (Buprenex) in Beagle Dogs and Sprague-Dawley Rats.</b> L.E. Van Petten, R.A. Levin, T.C. Graham and M.L. Sutton, <i>Path. &amp; Tox. Sec., Drug Safety Div., Norwich Eaton Pharmaceuticals, Inc., Norwich, NY.</i>
11	11:00	<b>Classical Parametric (P) vs. Non-parametric (NP) Significance Testing in Toxicity Studies.</b> A. Thakur and J. Trutter, <i>Hazleton Lab. America, Vienna, VA</i> ; D. Korte, Jr., <i>Walter Reed Army Inst. Res., Washington, DC.</i> Sponsor: M. Steinberg.
12	11:15	<b>Toxicological Evaluation of Tallysomylin S<sub>10</sub>b.</b> R.A. Buroker, C.R. Comerkeski, D. Barnett, R.S. Hirth, H. Madissoo and G.H. Hottendorf, <i>Dept. of Path. &amp; Tox., Bristol-Myers Co., Syracuse, NY.</i>
13	11:30	<b>Study on Carcinogenesis Potential in Mice and Rats with Ripazepam, an Anxiolytic Agent.</b> J.E. Fitzgerald and F.A. de la Iglesia, <i>Path. Exp. Tox., Warner-Lambert/Parke-Davis Pharm. Res. Div., Ann Arbor; Env. &amp; Ind. Health, Univ. of Michigan, Ann Arbor, MI.</i>
14	11:45	<b>Subchronic and Oral Toxicity Evaluation of Cocoa Powder and Theobromine in Sprague-Dawley Rats.</b> S.M. Tarka, Jr. and B.L. Zoumas, <i>Hershey Foods Corp. - Tech. Ctr., Hershey, PA.</i>

**Tuesday Morning, March 8, 1983**  
**PLATFORM SESSION 2: Metabolism I**

Colosseum III

**Co-Chairs: J.A. Last, Univ. of California, Davis, CA**  
**G. Witz, Rutgers Univ., Piscataway, NJ**

Paper No.	Time (A.M.)	
15	8:30	<b>Metabolism of 7-Bromobenz(a)anthracene.</b> P.P. Fu and S.K. Yang, <i>Nat'l Ctr. for Tox. Res., Jefferson, AR and Dept. of Pharm., Uniformed Services Univ. of the Health Sciences, Bethesda, MD.</i> Sponsor: J.A. Hinson.
16	8:45	<b>Isolation of the Dehalogenating Enzyme Which Catalyzes the Defluorination of Fluoracetate.</b> A.I. Soiefer and P.J. Kostyniak, <i>Dept. of Pharm. and Therapeutics, SUNY at Buffalo, School of Med., Buffalo, NY.</i> Sponsor: M.G. Cherian.
17	9:00	<b>The Enzymatic Reaction of Chlorotrifluoroethylene with Glutathione.</b> D.R. Dohn and M.W. Anders, <i>Dept. of Pharm., Univ. of Minnesota, Minneapolis, MN, and Dept. of Pharm., Univ. of Rochester, Rochester, NY.</i>
18	9:15	<b>In Vitro Metabolism of 14-C-Epichlorohydrin in Hepatic and Extrahepatic Microsomes from F-344 Rats.</b> P.W. Beatty, R.L. Mueller and A.C. Page, <i>Shell Development Co., P.O. Box 822, Houston, TX.</i> Sponsor: R. Gingell.
19	9:30	<b>Disposition and Metabolism of 14-C-Epichlorohydrin in Rats.</b> R. Gingell, H. Mitschke, P.W. Beatty and A.C. Page, <i>Shell Development Co., Tox. Res., Box 822, Houston, TX.</i>
20	9:45	<b>Antagonism of Chlorobenzene-induced Hepatotoxicity by <math>\gamma</math>-Hexachlorocyclohexane.</b> M.F. Copeland, R.W. Chadwick, T.M. Scotti, M.L. Mole, R. Froehlich, N. Cooke and W.K. McElroy, <i>U.S. Env. Protection Agency, Research Triangle Park, NC.</i>

- 21 10:00 **Tissue Distribution and Hepatic Monooxygenase Activity of Selected Chlorinated Diphenyl Ethers.** F. Iverson, H. Newsome, B. Shields and S.L. Hierlihy, *Tox. & Food Res. Divs., Foods Directorate, Health Protection Branch, Ottawa, Ont., Canada.*
- 22 10:15 **Perturbed Calcium Homeostasis — A Possible Mechanism for Potentiation of CCl<sub>4</sub> Hepatotoxicity by Chlordecone.** A.K. Agarwal and H.M. Mehendale, *Dept. Pharmacol. & Toxicol. Univ. of Mississippi Med. Ctr., Jackson, MS.*
- 23 10:30 **Transplacental and Milk Transfer of Polybrominated Biphenyls to Perinatal Guinea Pigs.** D.J. Ecobichon, *Dept. Pharm. and Therapeutics, McGill Univ., Montreal, Que., Canada.*
- 24 10:45 **Polyhalogenated Biphenyls Enhance Formation and Secretion of Aflatoxin M<sub>1</sub> in Milk.** E.C. Shepherd, L.W. Robertson, N.D. Heidelbaugh, S.H. Safe and T.D. Phillips, *Dept. of Veterinary Public Health, College of Veterinary Med., Texas A&M Univ., College Station, TX.*
- 25 11:00 **A Purified Form of Cytochrome P-450 from Rainbow Trout Liver with High Activity for Activation of Aflatoxin B<sub>1</sub> (B<sub>1</sub>).** D.E. Williams and D.R. Buhler, *Dept. of Agric. Chem. & Env. Health Sci. Ctr., Oregon State Univ., Corvallis, OR.*
- 26 11:15 **The Relationship Between Aflatoxin B<sub>1</sub>-DNA Adduct Formation, DNA Repair, and Species Carcinogen Sensitivity in Salmonid Fish.** G.S. Bailey, J.E. Nixon, J.D. Hendricks, P.M. Loveland, J.S. Wilcox and K.D. Bailey, *Dept. of Food Sci. & Tech., Oregon State Univ., Corvallis, OR.*
- 27 11:30 **Metabolism of Aflatoxin B<sub>1</sub> in Rat Microsomes: The Effects of Polyhalogenated Biphenyl Congeners.** M.R. Halvorson, L. Robertson, S. Safe and T.D. Phillips, *Dept. of Veterinary Public Health, College of Veterinary Med., Texas A&M Univ., College Station, TX.*

**Tuesday Morning, March 8, 1983**

**POSTER SESSION 1A: Inhalation I**

Rear of Colosseum Exhibit Area

**Organizer: C.H. Hobbs, Lovelace ITRI, Albuquerque, NM**

Displayed: 8:30 A.M. — 11:30 A.M.

Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)

10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)

Paper No.

- 28 **Metabolism and Release of Diesel Particle Hydrocarbons by Alveolar Macrophages *In Vitro*.** C.S. Wheeler and J.J. Vostal, *Biomedical Sci. Dept., General Motors Res. Labs., Warren, MI.*
- 29 **The Effects of Diesel Exhaust and/or Coal Dust on Alveolar Macrophages.** L. Bowman, P.R. Miles, M.J. Reasor, T. Lewis and V. Castranova, *NIOSH and West Virginia Univ., Morgantown, WV.*

- 30 **Changes in Lung Cell Population and Phospholipid (PL) Metabolism During Inhalation Exposure of Rats to Diesel Exhaust.** E.S. Wright and J.J. Vostal, *Biomedical Sci. Dept., General Motors Res. Labs., Warren, MI.*
- 31 **Increase in Lipid Contents of Alveolar Macrophages from Diesel Particulates Exposed Rats.** K.A. Strom, *Biomedical Sci. Dept., General Motors Res. Labs., Warren, MI.* Sponsor: J.J. Vostal.
- 32 **Functional Response of Lymphocytes After Exposure to Diesel Exhaust.** D. Dziedzic, *Biomedical Sci. Dept., General Motors Res. Labs., Warren, MI.* Sponsor: J.J. Vostal.
- 33 **Proliferation of Pulmonary Alveolar Type II Cells in Rats Exposed to High Concentration of Diesel Exhaust (DE).** K.C. Chen, *Biomedical Sci. Dept., General Motors Res. Labs., Warren, MI.* Sponsor: J.J. Vostal.
- 34 **A Chronic Inhalation Exposure Study of Diesel Exhaust in Rodents.** H.L. Kaplan, *Dept. of Fire Tech., Southwest Res. Inst., San Antonio, TX;* W.F. MacKenzie, *Dept. of Comp. Med., Univ. of Texas Med. Sch., Houston, TX;* R.M. Schreck and J.J. Vostal, *Biomed. Sci. Dept., Gen. Motors Res. Lab., Warren, MI.*
- 35 **The Accumulation of Diesel Soot in Lungs of Rodents Exposed in Life Span Studies to Diluted Diesel Exhaust.** R.F. Henderson, W.M. Hadley, J.L. Mauderly and R.O. McClellan, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.*
- 36 **Lung Retention and Metabolic Rate of Benzo(a)pyrene Associated with Diesel Exhaust Particles.** J.D. Sun, R.K. Wolff, G.M. Kanapilly and R.O. McClellan, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.*
- 37 **Comparison of Deposition of 0.1  $\mu\text{m}$  Aggregate and Spherical  $^{67}\text{Ga}_2\text{O}_3$  Particles Inhaled by Beagle Dogs.** R.K. Wolff, G.M. Kanapilly, Y.S. Cheng and R.O. McClellan, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.*
- 38 **Comparative Genotoxicity of Particles from a Diesel or Spark Ignition Car and From an Automotive Tunnel.** R.O. McClellan, A.L. Brooks, A.P. Li, C.R. Clark, J.S. Dutcher and W.E. Bechtold, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM;* R. Kiyoura, *Res. Inst. of Env. Sci., Tokyo Inst. of Tech., Tokyo, Japan.*
- 39 **Biological Effects of Chronic Inhalation of Coal Dust Aerosol (CDA) and/or Diesel Exhaust (DE).** V. Castranova, A. Azzaro, W. Brogan, B. Colasanti, C. Craig, K. Curto, M. Davis, M. Donovan, J. Fedan, F. Green, R. Head, T. Lewis, M. Mawhinney, M. Reasor, R. Stitzel, K. Van Dyke, K. Weber and D. Wierda, *NIOSH, and Dept. of Pharmacol. and Toxicol., West Virginia Univ., Morgantown, WV.*
- 40 **Effects of Chronic Inhalation of Coal Dust and/or Diesel Exhaust on Responses of Rat Airway Smooth Muscle to Agonists.** J.S. Fedan, M.S. Franczak, C. Kosten, J.F. Cahill, D.G. Frazer, T. Lewis and V. Castranova, *NIOSH, Morgantown, WV and Cincinnati, OH.*

- 41 **Volatile Solvents and Anesthetics Resemble Minor Tranquilizers.** R.W. Wood, J.B. Coleman, R. Schuler and C. Cox, *Div. Tox. & Biostat., Univ. of Rochester Med. Ctr., Rochester, NY.*
- 42 **Toxicokinetics of Toluene in the Rat.** D.C. Rees, R.W. Wood and J.P. McCormick, *Env. Health Sci. Ctr., Div. of Tox., Dept. Rad. Biol. & Biophys., Univ. of Rochester Med. Ctr., Rochester, NY.*
- 43 **Determinants of Behavioral Toxicity Following Acute and Repeated Toluene Exposure in the Rat: The Role of Stimulus Control.** D.C. Rees, R.W. Wood and V.G. Laties, *Env. Health Sci. Ctr., Div. of Tox., Dept. of Rad. Biol. and Biophys., Univ. of Rochester Med. Ctr., Rochester, NY.*
- 44 **Two Stages of Toluene-induced Ototoxicity in Rats Evidenced by Changes in the Brainstem Auditory Evoked Response.** C.S. Rebert, E. Feeney, J. Dickinson and G.T. Pryor, *Psychobiol. Physiol. Dept., SRI Int'l, Menlo Park, CA.* Sponsor: D.C.L. Jones.
- 45 **Toluene-induced Hearing Loss in Rats First Exposed as Weanlings or as Young Adults.** G.T. Pryor, J. Dickinson and C.S. Rebert, *Psychobiol. Physiol. Dept., SRI Int'l, Menlo Park, CA.* Sponsor: D.C.L. Jones.
- 46 **Detectability of Gasoline by Its Odor.** J.E. Amooore, R. Von Burg and I.M. Whittemore, *Olfacto-Labs, El Cerrito, CA, Chevron Env. Health Ctr., Richmond, CA, Chevron Res. Co., Richmond, CA.*
- 47 **Doxorubicin (DOX) Uptake and Toxicity in Dog Lungs *In Vivo*.** R. Minchin, M. Johnston, J. Thenot, M. Aiken, M. McMenamin, B. McManus and M. Boyd, *NCI, Bethesda, MD.*

**Tuesday Morning, March 8, 1983**

**POSTER SESSION 1B: Neurological I**

Rear of Colosseum Exhibit Area

**Organizer: J.E. Manno, Louisiana State Univ. Med. School,  
Shreveport, LA**

Displayed: 8:30 A.M. — 11:30 A.M.

Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)

10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)

Paper No.

48

49

**PAPER REMOVED**

**Chlordimeform Differentially Affects Pattern Reversal-evoked and Flash-evoked Potentials in Rats.** R.S. Dyer and W.K. Boyes, *Neurophysiol. Branch, Neurotoxicol. Div., U.S. EPA Research Triangle Park, NC.* Sponsor: L.W. Reiter.

- 50 **Neurobehavioral Toxicity of 2,4-Dichlorophenoxyacetic Acid (2,4-D) in Rats.** C.L. Mitchell, H.A. Tilson and R.E. Squibb, Jr., *Lab. Behav. Neurol. Toxicol., NIEHS, Research Triangle Park, NC.*
- 51 **Effects of Vincristine, Maytansine and cis-Platinum on Behavioral and Electrophysiological Indices of Neurotoxicity.** C. Rebert, G. Pryor, M. Evans, A. Cheung and S. Frick, *SRI Int'l, Menlo Park, CA and Battelle Tox. Program Office, Vienna, VA.* Sponsor: D.C.L. Jones.
- 52 **Possible Involvement of Brain Serotonin in Chlorodecone-elicited Tremor.** J.S. Hong, H.A. Tilson, L.L. Uphouse, J.M. Gerhart, W.E. Wilson and V. Hunter, *Lab. Behav. Neurol. Toxicol., NIEHS, Research Triangle Park, NC.* Sponsor: R.L. Dixon.
- 53 **Separation of Mipafox Sensitive from Paraoxon Sensitive Esterases by Sucrose Density Gradient Sedimentation.** Y. Ishikawa, E. Chow, M.G. McNamee and B.W. Wilson, *Avian Sciences, Univ. of California, Davis, CA.*
- 54 **Further Evidence for a Pre-synaptic Action of Acrylamide (ACR) on the Spinal Monosynaptic Reflex (MSR) in Cats.** B.D. Goldstein, *Dept. of Pharmacol., Med. College of Georgia, Augusta, GA.* Sponsor: W.F. Geber.
- 55 **Time Course of the Effect of Tri-o-cresyl Phosphate (TOCP) Administration on Endogenous Phosphorylation of Hen Brain and Spinal Cord Proteins.** S.E. Patton, D.M. Lapadula, J.P. O'Callaghan, D.B. Miller and M.B. Abou-Donia, *Dept. Pharmacol., Duke Univ. Med. Ctr., Durham, NC, and Neurotoxicol. Div., U.S. EPA, Research Triangle Park, NC.*
- 56 **Diisopropyl Fluorophosphate (DFP) and Physostigmine (PHY)-induced Antinociception in Mice.** S.H. Zorn, L.G. Costa and S.D. Murphy, *Div. Toxicol., Dept. Pharmacol., Univ. Texas Med. School, Houston, TX.*
- 57 **Decreased Binding of <sup>3</sup>H-Nicotine in Brain from Rats Tolerant to the Organophosphate Disulfoton.** L.G. Costa and S.D. Murphy, *Div. Toxicol., Univ. Texas Med. School, Houston, TX.*
- 58 **Proconvulsant Effect of Lindane Compared at Two Different Kindling Sites in the Rat — Amygdala and Ventral Hippocampus.** R.M. Joy, L.G. Stark and T.E. Albertson, *Health Sci. Neurotoxicol. Unit, Schools of Med. & Vet. Med., Univ. of California, Davis, CA.*
- 59 **TOCP Lethality and Delayed Neurotoxicity in Rats Pretreated with SKF-525A.** G.L. Sprague, P.A. Holmes and T.R. Castles, *Stauffer Chemical Co., Toxicol. Dept., Richmond, CA.*
- 60 **Effects of Subchronic 2,5-Hexanedione (2,5-HD) Administration on Endogenous Phosphorylation of Rat Brain and Spinal Cord Proteins.** S.E. Patton, D.M. Lapadula, J.P. O'Callaghan, D.B. Miller and M.B. Abou-Donia, *Dept. of Pharmacol., Duke Univ. Med. Ctr., Durham, NC, and Neurotoxicol. Div., U.S. EPA, Research Triangle Park, NC.*

- 61 **Acrylamide: Effects on Amphetamine-induced Locomotion and Monoamine Systems.** S. Lasley, R. Bornschein and L. Rafeles, *Dept. of Env. Health, Univ. of Cincinnati, Cincinnati, OH.* Sponsor: P.B. Hammond.
- 62 **Glyceraldehyde-3-phosphate Dehydrogenase in Degenerated Cat Peripheral Nerve During Acrylamide Intoxication.** S.M. Ross, M.I. Sabri and P.S. Spencer, *Inst. of Neurotoxicol., Albert Einstein College of Med., Bronx, NY.*
- 63 **Acrylamide Inhibition of Nerve Glycolytic Enzymes *In Vivo* and *In Vitro*.** S.M. Ross, M.I. Sabri and P.S. Spencer, *Inst. of Neurotoxicol., Albert Einstein College of Medicine, Bronx, NY.*
- 64 **Influence of Afterhyperpolarization (AHP) on the Repetitive Firing of Motoneurons (MN) in IDPN Neuropathy.** D.A. Delio and H.E. Lowndes, *Dept. of Pharm., UMDNJ, Newark, NJ.*
- 65 **Extrapolations of Sensitivity of Brain Acetylcholinesterase from Several Species to Organophosphate Inhibition Based on Sensitivity of Rat Brain Acetylcholinesterase.** C. Wang & S.D. Murphy, *Div. of Toxicol., Univ. of Texas Med. School at Houston, Houston, TX.*
- 66 **Functional and Histological Evidence of a Peripheral Neuropathy in Chicks Treated with TOCP as Embryos.** L. Sheets and S. Norton, *Dept. of Pharmacol., Toxicol. & Therapeut., Univ. of Kansas Med. Ctr., Kansas City, KS.*

**Tuesday Morning, March 8, 1983**

**SYMPOSIUM 1:**

**The Future of Animals in Research and Teaching**

Julius Room

**Chairman: G.W. Newell, Electric Power Research Inst., Palo Alto, CA**

**Time (A.M.)**

- 8:30 **Introduction.** G.W. Newell.
- 8:35 **Current Legislation for Development of Substitutes for Animals in Research.** T.R. Kramer, *Chief Staff Director, House Subcommittee on Science, Research & Technology, Washington, DC.*
- 8:55 **The Search for Alternatives.** A. Rowan, *Associate Director, Inst. for the Study of Animal Problems, Washington, DC.*
- 9:15 **Research Approaches in Developing Alternative Test Procedures.** A. Goldberg, *Johns Hopkins Univ., Baltimore, MD.*
- 9:35 **AAALAC Animal Care and the New Legislation.** P. Manning, *Univ. of Minnesota, Minneapolis, MN.*
- 9:55 **The European Scene.** I. Purchase, *Director Central Toxicol. Lab., Imperial Chemical Industries, Alderley Park/Macclesfield, Cheshire, U.K.*
- 10:15-  
Noon **Roundtable Discussion & Questions** — Symposium Participants & Audience.

Tuesday Morning, March 8, 1983

**POSTER SESSION 1C: Reproduction/Teratology I**

Rear of Colosseum Exhibit Area

**Organizer: N.J. Galihier, Zoecon Corp., Palo Alto, CA**

**Displayed: 8:30 A.M. — 11:30 A.M.**

**Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)**

**10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)**

**Paper No.**

- 67                    **Effects of Decamethrin on Electrocardiograms of Developing Rats.** K.S. Robinson, W.P. Watkinson and E.H. Hoke, *U.S. EPA, HERL, DBD, Research Triangle Park, NC*. Sponsor: N. Chernoff.
- 68                    **The Effects of Gestational Exposure of Rats and Rabbits to Kathon® Biocide.** R.D. Costlow, A.W. Hayes, J.N. Moss and J.M. Smith, *Rohm & Haas Co., Spring House, PA*; D. Rodwell, *Wil Labs., Ashland, OH*; W. Weatherholtz, Hazleton Labs., Vienna, VA.
- 69                    **Antiabortifacient Action of Dibenzoyloxyindanpropionic Acid (DIPA) in Mice.** F.R. Del Vecchio and R.G. Rahwan, *Div. of Pharmacol., Ohio State Univ., Columbus, OH.*
- 70                    **Teratology and Multigeneration Reproduction Studies with Maleic Anhydride in Rats.** R.D. Short, F.R. Johannsen and G.J. Levinskas, *Monsanto Co., St. Louis, MO*; D.E. Rodwell and J.L. Schardein, *IRDC, Mattawan, MI.*
- 71                    **Effect of Dog Food Containing 460 ppm Fluoride on Rat Reproduction.** T.A. Marks, D. Schellenberg and C.M. Metzler, *Upjohn Co., Kalamazoo, MI*; J. Oostveen, *Western Michigan Univ., Kalamazoo, MI*; M.J. Morey, *Allegan Study Group, Kalamazoo, MI.*
- 72                    **Sister Chromatid Exchange in Preimplantation Embryos: A New System for Assessing Reproductive Hazard and Potential for Heritable Change.** S.M. DiZio and G.C. Boxill, *Wyeth Labs., Inc., Paoli, PA.*
- 73                    **Evaluation of Effects on Reproduction in Fischer 344 Rats Exposed to Dietary Ethylenediamine for Two Generations.** R.S.H. Yang, R.H. Garman and M.D. Woodside, *Bushy Run Res. Ctr., Mellon Inst.-Union Carbide Corp., Export, PA.*
- 74                    **Estrogenic Activity of Zearalenone and Zearalanol in the Neonatal Rat Uterus.** D.M. Sheehan, E.R.B. Shanmugasundaram, K.L. Medlock and W.S. Branham, *Div. of Teratogenesis Res., Nat'l Ctr. for Toxicol. Res., Jefferson, AR.*
- 75                    **Fertility and General Reproduction in Rats with the New Antiarrhythmic Agent Pirmenol.** J.A. Anderson, J.A. Petrere, J.E. Fitzgerald and F.A. de la Iglesia, *Pathol. & Exp. Toxicol., Warner-Lambert/Parke-Davis Pharmaceutical Res. Div. and Env. and Ind. Health, Univ. of Michigan, Ann Arbor, MI.*

- 76 **Reproductive Toxicity of Dimethyl Methyl Phosphonate (DMMP) in the Male Fischer 344 Rat.** J.K. Dunnick, M.W. Harris, B.N. Gupta, R.E. Chapin and J.C. Lamb, IV, *Nat'l Toxicol. Program, NIEHS, Research Triangle Park, NC.*
- 77 <sup>65</sup>**Zn Uptake Following Exposure to Known Reproductive Toxins in the Male Long-Evans.** G.L. Rehnberg, J.F. Hein, R.R. Barbee and J.W. Laskey, *Reproductive Toxicol. Branch, Dev. Biol. Div., U.S. EPA, Research Triangle Park, NC.* Sponsor: R.L. Dixon.
- 78 **Body Weight Loss Induced by Food Restriction Causes Testicular Atrophy and Aspermatogenesis in Rabbits.** C.A. Keller and R.W. Kapp, *Exxon Corp. and Bio/dynamics Inc., East Millstone, NJ.* Sponsor: G.F. Egan.
- 79 **Reversibility of Nitrobenzene-induced Testicular Degeneration: Application of a Novel Technique.** A.A. Levin, L.L. Earle and B.E. Butterworth, *Chemical Industry Inst. of Toxicol., Research Triangle Park, NC.* Sponsor: J.E. Gibson.
- 80 **Male Reproductive Insult and Recovery Associated with Ethoxyethanol Exposure.** H. Zenick and D.P. Oudiz, *Dept. Env. Health, Univ. of Cincinnati, Cincinnati, OH.* Sponsor: P.B. Hammond.
- 81 **Differential Testicular Toxicity Associated with Anticancer Drugs Administered During Critical Periods of Postnatal Development.** R.H. Matter, R. Bechter, H. Weber, R. Ettlin and R. Dixon, *Dept. of Pathol., Michigan State Univ., East Lansing, MI, and NIEHS/NIH, Research Triangle Park, NC.*
- 82 **Biochemical and Functional Assessment of Testicular Toxicity During Postnatal Development Associated with Antineoplastic Agents.** R. Bechter, H. Weber, R.H. Matter, R.A. Ettlin and R.L. Dixon, *NIH/NIEHS, Research Triangle Park, NC.*
- 83 **Histological Assessment of Testicular Toxicity During Postnatal Development Associated with Antineoplastic Agents.** H. Weber, R.H. Matter, R. Bechter, R.A. Ettlin and R.L. Dixon, *NIH/NIEHS, Research Triangle Park, NC.*
- 84 **Effects of  $\alpha$ -Chlorohydrin on Rat Epididymal Protein Patterns Studied by 2-D Gels.** I.P. Lee, R. Bechter, M. Matsuda and R.L. Dixon, *Lab. of Reproductive and Dev. Toxicol., NIEHS, Research Triangle Park, NC.*
- 85 **Chlorine Induced Spermhead Abnormalities Associated with Production of Halogenated Reaction Products *In Vivo*.** F.L. Mink, W.E. Coleman, J.W. Munch, W.H. Kaylor and R.J. Bull, *Toxicol. & Microbiol. Div., HERL, U.S. EPA, Cincinnati, OH.*
- 86 **Fyrol® FR-2 Fertility Study in Male Rabbits.** S.L. Wilczynski, J.M. Killinger, G.M. Zwicker and R.I. Freudenthal, *Stauffer Chemical Co., Env. Health Ctr., Farmington, CT.*
- 87 **The Effects of Dibutyl Phthalate on the Reproductive Tract of the Male and Female Rat and Hamster.** L.E. Gray, Jr., J.W. Laskey, J. Ostby and J. Ferrell, *U.S. EPA, HERL, DBD, Reproductive Toxicol. Branch, Research Triangle Park, NC.* Sponsor: N. Chernoff.

Tuesday Afternoon, March 8, 1983

**PLATFORM SESSION 3: Inhalation II**

Colosseum II

**Co-Chairs: J.A. Graham, U.S. EPA, Research Triangle Park, NC**

**M.H. Karol, Univ. of Pittsburgh, Pittsburgh, PA**

Paper No.	Time (P.M.)	
88	1:30	<b>Inhalation Toxicology of Ammonium Perfluorooctanoate.</b> G.L. Kennedy, Jr., G.T. Hall, M.R. Brittelli and L.W. Smith, <i>E.I. du Pont de Nemours &amp; Co., Inc., Haskell Lab. for Toxicol. &amp; Ind. Med., Newark, DE.</i>
89	1:45	<b>Comparative Toxicity of Environmental Particulate Matter to Pulmonary Macrophages.</b> G.L. Fisher, K. McNeill, C. Democko and R. Valentine, <i>Battelle Columbus Labs., Columbus, OH.</i>
90	2:00	<b>Respiratory Tract Clearance of Intratracheally Instilled Nickel Subsulfide in Normal and Emphysematous Mice.</b> R. Valentine and G.L. Fisher, <i>Battelle Columbus Labs., Columbus, OH.</i>
91	2:15	<b>Immobilized Cholinesterase to Detect Airborne Concentrations of Hexamethylene Diisocyanate (HDI).</b> W. Brown, A. Shamoo, B. Hill and M. Karol, <i>Dept. Biol. Sci., Carnegie-Mellon Univ., Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.</i>
92	2:30	<b>Blood-bound CS<sub>2</sub>: A Potential Indicator of the Body Burden of CS<sub>2</sub> After Exposure.</b> C.W. Lam and V. DiStefano, <i>Div. of Toxicol., Univ. of Rochester, Rochester, NY.</i> Sponsor: T.W. Clarkson.
93	2:45	<b>An Evaluation of the Acute Inhalation Toxicity of Trimethylarsine.</b> C. Breckenridge, C. Collins, B. Hollomby and G. Lulham, <i>Dept. of Inhal. Toxicol., Bio-Research Labs. Ltd.</i> Sponsor: D.J. Ecobichon.
94	3:00	<b>Subchronic Inhalation Toxicity Studies of Butyl Benzyl Phthalate in Sprague-Dawley Rats.</b> M.V. Roloff, E.C. Robinson, R.M. Folk and W.E. Ribelin, <i>Monsanto Co., Env. Health Lab., St. Louis, MO.</i>
95	3:15	<b>LC50 Values for Rats Acutely Exposed to Vapors of Acrylic and Methacrylic Acid Esters.</b> R. Oberly and M.F. Tansy, <i>Temple Univ., Philadelphia, PA.</i>
96	3:30	<b>Inhalation Toxicity of Dimethylamine in F-344 Rats and B6C3F1 Mice.</b> L.A. Buckley, K.T. Morgan, J.A. Swenberg, R.A. James, T.E. Hamm, Jr. and C.S. Barrow, <i>Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.</i>
97	3:45	<b>Effect of C<sub>10</sub>-C<sub>11</sub> Isoparaffinic Solvent on Rat Kidney Function During 8 Weeks of Inhalation.</b> R.D. Phillips and G.F. Egan, <i>Exxon Corp., Dept. of Med. &amp; Env. Health, Res. &amp; Env. Health Div., East Millstone, NJ.</i>

- 98 4:00 **Anatomical Kidney Changes in Rats Following Inhalation Exposure to C<sub>10</sub>-C<sub>11</sub> Isoparaffinic Solvent.** B.Y. Cockrell and W.O. Iverson, *Exp. Pathol. Labs., Herndon, VA*; R.D. Phillips, *Exxon Corp., East Millstone, NJ.*
- 99 4:15 **Dibromoisoprene (DBI) Vapor Acute and 9-day Inhalation Studies in F-344 Rats and B6C3F1 Mice.** D.E. Dodd and W.M. Snellings, *Bushy Run Res. Ctr., Export, PA*; R.D. Phillips, *Exxon Corp., Res. Env. Health Div., East Millstone, NJ.* Sponsor: H.C. Grice, *Polysar, Ltd.*
- 100 4:30 **The Neuropathic Activity of Commercial Hexane Mixtures in the Male Rat: Part I.** A.W. Lington, S.C. Lewis, F.B. Thomas, G.C. Granville, S.T. Cragg and P.S. Spencer, *Exxon Corp., East Millstone, NJ; Shell Development Co., Houston, TX; Shell Canada Ltd., Toronto, Ont., Canada; American Petroleum Inst., Washington, DC, Albert Einstein Univ., Bronx, NY.* Sponsor: G.F. Egan.
- 101 4:45 **Inhalation of Dicyclohexylmethane 4,4'-Diisocyanate (HMDI) Produces Dermal Sensitivity in Guinea Pigs.** J.C. Stadler and M.H. Karol, *Dept. of Ind. Env. Health Sci., Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.*
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Tuesday Afternoon, March 8, 1983

**ISSUES SESSION**

12 Noon - 1:15 P.M.

Colosseum I

***Chaired by President Robert L. Dixon***

Bring a sandwich, etc. and participate in an open discussion of SOT affairs

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Tuesday Afternoon, March 8, 1983

**REGIONAL CHAPTER MEETINGS**

5:00 P.M.

**Intermountain**

**Claudius Room**

This chapter is in the initial formative stage

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Tuesday Afternoon, March 8, 1983  
**REGIONAL CHAPTER MEETINGS (Cont'd.)**

**Michigan**

Colosseum II

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**Mid-Atlantic**

Colosseum III

Cash Bar

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**Mid-West**

Augustus Room

Kenneth P. Dubois Award will be presented

Cash Bar

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**National Capitol Area**

Neros Room

Cash Bar

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**South Central**

Regalium

Cash Bar

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Current or prospective members of any of the  
above chapters are invited to attend

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Tuesday Afternoon, March 8, 1983  
**SPECIALTY SECTION MEETING**

**Mechanisms**

6:00 P.M.

Julius Room

***Robert Snyder, Presiding***

Open to all current and prospective  
members of the section

**Tuesday Afternoon, March 8, 1983**  
**PLATFORM SESSION 4: Metals I**

Colosseum III

**Co-Chairs: M. Costa, Univ. of Texas, Houston, TX**  
**M. Ehrich, Virginia Polytechnic Inst., Blackburg, VA**

Paper No.	Time (P.M.)	
102	1:30	<b>Stimulation of DNA Repair Synthesis in Cultured Mammalian Cells by Various Metal Compounds.</b> S.H. Robison, O. Cantoni and M. Costa, <i>Div. of Toxicol., Dept. of Pharmacol., Univ. of Texas Med. School, Houston, TX.</i>
103	1:45	<b>Genotoxic Effects of Hg(II) and Cr(VI) on Repair Deficient Mutants of CHO Cells.</b> N.T. Christie and M. Costa, <i>Div. of Toxicol., Dept. of Pharmacol., Univ. of Texas Med. School, Houston, TX.</i>
104	2:00	<b>DMSA Reversal of Methylmercury Effects in Cultured Cells.</b> P.R. Sager, <i>Div. of Toxicol., Univ. of Rochester Med. Ctr., Rochester, NY;</i> T.L.M. Syversen, <i>Dept. of Pharmacol. &amp; Toxicol., School of Med., Univ. of Trondheim, Trondheim, Norway.</i> Sponsor: T.W. Clarkson.
105	2:15	<b>Hepatocellular Lead-Zinc Interactions.</b> D.R. Morrison, R.A. Mittelstaedt and J.G. Pounds, <i>Nat'l Ctr. for Toxicol. Res., Jefferson, AR, and Div. of Interdisciplinary Toxicol., Univ. Arkansas Med. Sci., Little Rock, AR.</i> Sponsor: L. Fishbein.
106	2:30	<b>Tolerance to Cd-induced Hepatotoxicity Following Cd Pre-treatment.</b> P. Goering and C.D. Klaassen, <i>Dept. of Pharmacol., Toxicol. &amp; Therap., Univ. of Kansas Med. Ctr., Kansas City, KS.</i>
107	2:45	<b>Mechanism of Zinc-induced Tolerance to Cd Toxicity.</b> P.L. Goering and C.D. Klaassen, <i>Dept. of Pharmacol., Toxicol. &amp; Therap., Univ. of Kansas Med. Ctr., Kansas City, KS.</i>
108	3:00	<b>Effect of Physiological Stimuli on the Efflux of <sup>45</sup>Ca and <sup>210</sup>Pb from the Isolated Rat Hepatocyte.</b> J.G. Pounds, <i>Nat'l Ctr. for Toxicol. Res., Jefferson, AR;</i> R.A. Mittelstaedt, <i>Div. of Interdisciplinary Toxicol., UAMS, Little Rock, AR.</i> Sponsor: L. Fishbein.
109	3:15	<b>Cytotoxicity and Induction of Metallothionein in Cadmium Resistant Cells Following Treatment with Divalent Metals.</b> R.M. Evans, S.R. Patierno, D.S. Wang, O. Cantoni and M. Costa, <i>Div. Toxicol., Dept. Pharmacol., Univ. Texas Med. School Houston, Houston, TX.</i>
110	3:30	<b>In Vivo and In Vitro Hepatotoxicity of Trimethyltin.</b> K.R. Reuhl and B.A. Mackenzie, <i>Ecotox. Group, Div. Biol. Sci., Nat'l Res. Council, Ottawa, Ont., Canada;</i> R.A. Mittelstaedt and J.G. Pounds, <i>Nat'l Ctr. for Toxicol. Res., Jefferson, AR.</i> Sponsor: L. Fishbein.
111	3:45	<b>Dichotomous Effects of Cadmium on the Cone Photoreceptors.</b> D.A. Bolnick, J.B. Bosetti, L.W. Haynes, A.E. Walter and A.J. Sillman, <i>Dept. of Animal Physiol., Univ. of California, Davis, CA.</i> Sponsor: D.E. Woolfey.

- 112 4:00 **Postnatal Ontogeny of Metallothionein (MT) in Various Organs of Rats.** M.P. Waalkes and C.D. Klaassen, *Dept. of Pharmacol., Toxicol. & Therap., Univ. of Kansas Med. Ctr., Kansas City, KS.*
- 113 4:15 **Measurement of Aluminum Concentration in Plasma: Sources of Contamination.** P.J. Kostyniak, *Dept. of Pharmacol. and Therap., SUNY at Buffalo, School of Med., Buffalo, NY.* Sponsor: M.G. Cherian.
- 114 4:30 **Effect of Alcohol Ingestion on Esophageal Mucosa in Rats Fed a Zinc Deficient Diet.** S. Mobarhan, R.M. Russell, P.M. Newberne and S.B. Ahmed, *Dept. of Med., Univ. of Illinois, Chicago, IL, Human Nutrition Res. Ctr. on Aging at Tufts Univ., Boston, MA, and M.I.T., Cambridge, MA.*
- 115 4:45 **Effect of Cadmium Chloride on the Uptake of Catecholamines by Rat Brain Synaptosomes.** M. Hobson, B. Rajanna and D. Desai, *Div. Nat'l Appl. Sci., Selma Univ., Selma, AL, and Dept. Neurol., Univ. Mississippi Med. Ctr., Jackson, MS.*

**Tuesday Afternoon, March 8, 1983**

**PLATFORM SESSION 5: Reproduction/Teratology II**

**Neros Room**

**Co-Chairs: F.J. Murray, Syntex, Inc., Palo Alto, CA  
S.M. Tarka, Hershey Foods Corp., Hershey, PA**

- | <b>Paper No.</b> | <b>Time (P.M.)</b> |   |
|------------------|--------------------|---|
| 116              | 1:30               | <b>Identification of a Potent Acridine-related Insect Teratogen.</b> C.-h. Ho, C.Y. Ma, B.T. Walton and M.R. Guerin, <i>Oak Ridge Nat'l Lab., Oak Ridge, TN.</i>  |
| 117              | 1:45               | <b>The Toxicity of Three Trichlorobenzene Isomers in Pregnant Rats.</b> W.D. Black, V.E.O. Valli, J.A. Ruddick and D.C. Villeneuve, <i>Ontario Vet. College, Univ. of Guelph and Env. &amp; Occup. Toxicol. Div., Env. Health Directorate, Ottawa, Ont., Canada.</i>              |
| 118              | 2:00               | <b>Teratology Studies of Alkylaryl Phosphates.</b> E.C. Robinson, B.G. Hammond, F.R. Johannsen and G.J. Levinskas, <i>Dept. of Med. &amp; Env. Health, Monsanto Co., St. Louis, MO; D.E. Rodwell, Int'l Res. &amp; Dev. Corp., Mattawan, MI.</i>                                  |
| 119              | 2:15               | <b>Comparison of the Teratogenic Effects of Succinonitrile (SN) and Tetramethylsuccinonitrile (TMSN) in the Syrian Golden Hamster (SGH).</b> P.A. Doherty, R.P. Smith and V.H. Ferm, <i>Dept. of Pharmacol./Toxicol. and of Anat./Cytol., Dartmouth Med. School, Hanover, NH.</i> |
| 120              | 2:30               | <b>Semen Evaluation of Workers at a Steroid Hormone Manufacturing Facility.</b> F.J. Murray, M.D. Whorton, E.F. Brennan, L. Pennelly, J.C. Goodpasture and B.L. Reeve, <i>Syntex(U.S.A.) Inc., Palo Alto, CA; Env. Health Associates, Berkeley, CA.</i>                           |

- 121 2:45 **Effects on Reproduction in Fischer-344 Rats Exposed to Methyl Chloride by Inhalation.** T.E. Hamm, Jr., T. Raynor, D. Auman and T. Adams, *Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC*; S.J. Proctor, *Exp. Pathol. Labs., Raleigh, NC*; R. Wolkowski-Tyl, *Res. Triangle Inst., Research Triangle Park, NC*. Sponsor: J.E. Gibson.
- 122 3:00 **The Effect of Ordram®, a Selective Herbicide, on Nonhuman Primate Sperm Production.** J.M. Killinger, S.L. Wilczynski, R.A. Williams and G.L. Ruch, *Stauffer Chem. Co., Env. Health Ctr., Farmington, CT*. Sponsor: R.I. Freudenthal.
- 123 3:15 **Evaluation of Theobromine in Dominant Lethal Testing in Rats.** C.A. Shively, D.M. White, J.L. Blauch and S.M. Tarka, Jr., *Hershey Foods Corp. - Tech. Ctr., Hershey, PA*.
- 124 3:30 **Disposition and Metabolism of <sup>14</sup>C-Citrinin in Pregnant Rats.** R.V. Reddy, A.W. Hayes and W.O. Berndt, *Dept. of Pharmacol. & Toxicol., Univ. Mississippi Med. Ctr., Jackson, MS*.
- 125 3:45 **Transplacental Carcinogenesis Associated with Genetic Susceptibility to 3-Methylcholanthrene (3-MC) at the Murine Ah Locus.** R.G. York and J.M. Manson, *Kettering Lab., Univ. of Cincinnati, Cincinnati, OH*.
- 126 4:00 **Postnatal Development and Neurobehavioral Profiles of Progeny of Hamsters Exposed to Daily Nitrous Oxide.** L.R. Weiss, F.R. Alleva, S. Joynes, C.G. Oberlander, V.M. Seabaugh and T. Balazs, *Nat'l Ctr. for Drugs & Biologics, U.S. FDA, Washington, DC*.
- 127 4:15 **The Effect of Dimethylbenzanthracene (DMBA) Administered During Gestation on Hormone Levels Essential for Lactation in Postpartum Rats.** H.S. Pitkow, M. Goldman, W. Urbas and L. Hill, *Pennsylvania College of Podiatric Med. and Hahnemann Med. College, Philadelphia, PA*. Sponsor: B. Calesnick.

**Tuesday Afternoon, March 8, 1983**

**POSTER SESSION 2A: Oncogenesis/Mutagenesis I**

Rear of Colosseum Exhibit Area

**Organizer: L.W. Reiter, U.S. EPA, Research Triangle Park, NC**

Displayed: 1:30 P.M. — 4:30 P.M.

Attended: 1:30 P.M. — 3:00 P.M. (Even Paper Numbers)

3:00 P.M. — 4:30 P.M. (Odd Paper Numbers)

**Paper No.**

- 128 **Lifetime Skin Painting Study with Glyoxal.** F.J. Koschier, L.R. DePass, C.S. Weil, D.R. Brown and M.A. Friedman, *American Cyanamid Co., Wayne, NJ*; *Bushy Run Res. Ctr., Export, PA*.
- 129 **Carcinogenic and Mutagenic Properties of Chlorinated and Brominated Acetonitriles.** M.R. Robinson, R.J. Bull, D. Laurie and J.R. Meier, *Toxicol. and Microbiol. Div., Health Effects Res. Lab., U.S. EPA, Cincinnati, OH*.

- 130 **Two-year Drinking Water Study of Methylene Chloride in Fischer 344 Rats.** D.G. Serota, W.L. Fezio and B.M. Ulland, *Hazleton Labs. America, Vienna, VA.*
- 131 **Toxic and Nontoxic Doses of 3,4,5,3',4',5'-Hexabromobiphenyl as Promoters of Hepatocarcinogenesis.** R.K. Jensen, S.D. Sleight, J.I. Goodman, C.D. Millis, S.D. Aust and J.E. Trosko, *Depts. of Pathol., Pharmacol. & Toxicol., Biochem., and Ped. & Hum. Dev., Michigan State Univ., East Lansing, MI.*
- 132 **Hepatic Tumor Promotion by Congeners of Polybrominated Biphenyls.** R.K. Jensen, S.D. Sleight and S.D. Aust, *Depts. of Pathol. & Biochem., Michigan State Univ., East Lansing, MI.*
- 133 **Influence of Strain, Age, Exposure Time, and Environment on Responses of C3H Mice to Diethylstilbestrol (DES).** B. Highman, D.L. Greenman and G.J. Schieferstein, *Nat'l Ctr. for Toxicol. Res., Jefferson, AR.*
- 134 **Effects of bis-Chloronitrosourea (BCNU) on Pulmonary and Serum Angiotensin Converting Enzyme (ACE) Activity in Rats.** A.C. Smith and M.R. Boyd, *NCI, Bethesda, MD.*
- 135 **Dermal Oncogenicity Studies on Ethylenediamine (EDA) in Male C3H/HeJ Mice.** L.R. DePass, E.H. Fowler and R.S.H. Yang, *Bushy Run Res. Ctr., Export, PA.*
- 136 **Prenatal Exposure to Ethylnitrosourea (ENU) and Its Effect on Four Successive Generations.** J.R.P. Cabral, L. Tomatis, A.J. Likhachev, V. Ponomarev and B. Euzéby, *Int'l Agency for Res. on Cancer, Lyon, France.*
- 137 **Distribution and Binding of Urethane in Sencar and Balb/C Mice.** A.A. Fossa and G.P. Carlson, *Dept. Pharmacol. & Toxicol., School of Pharmacy & Pharm. Sci., Purdue Univ., West Lafayette, IN.*
- 138 **Histochemical and Histopathological Evaluation of the Initiating and Promoting Effects of Trichloroethylene in Rat Liver.** M.M. Milks, I.I. Ali and D. Couri, *Div. of Toxicol., Dept. of Pharmacol., Ohio State Univ., Columbus, OH.*
- 139 **Genetic Variation in Susceptibility to Bladder Hyperplasia in Mice Induced by N-2-Fluorenylacetylamide.** G.L. Wolff, D.W. Gaylor and C.H. Frith, *Nat'l Ctr. for Toxicol. Res., Jefferson, AR, and INTOX Labs., Inc., Little Rock, AR.*
- 140 **Evaluation of the Chronic Toxicity of Melamine in a 30 Month Fischer 344 Rat Feeding Study.** R.W. Mast, B.G. Boysen, P.J. Giesler, F.E. Reno and M.A. Friedman, *American Cyanamid Co., Chemicals Group, Wayne, NJ; Hazleton Raltech, Inc., Madison, WI.*
- 141 **A Two-year Dermal Bioassay for Carcinogenicity of 1,12-Diperoxydodecane-1,2-Dioic Acid (DPDA).** J.L. Seymour, *Procter & Gamble Co., Cincinnati, OH;* J.L. Gargus and R.W. Voelker, *Hazleton Labs. of America, Vienna, VA.*

- 142 **Analysis of Limited Bioassays as Potential Carcinogenicity Screening Tests (I).** M. Palese-Lund, J. Connery, A. Sayigh and A. Trontell, *Energy Resources Co. Inc., Cambridge, MA*; P. Hurley, *U.S. EPA, Washington, DC*. Sponsor: D. Sawhney.
- 143 **Analysis of Limited Bioassays as Potential Carcinogenicity Screening Tests (II).** P. Hurley, *U.S. EPA, Washington, DC*; M. Palese-Lund, J. Connery, A. Sayigh and A. Trontell, *Energy Resources Co. Inc., Cambridge, MA*. Sponsor: D. Sawhney.
- 144 ***In Vitro* Mutagenicity and Genotoxicity of Fuels and Paraffinic Hydrocarbons in the Ames, Sister Chromatid Exchange, and Mouse Lymphoma Assays.** M.G. Farrow, N. McCarrroll, T. Cortina, M. Draus, A. Munson, M. Steinberg, C. Kirwin and W. Thomas, *Hazleton Labs. America, Inc., Vienna, VA, and Phillips Petroleum, Bartlesville, OK*.
- 145 **Comparative Metabolism and Activation to Bacterial Mutagens by Isolated Hepatocytes from Rainbow Trout (*Salmo Gairdneri*) and Coho Salmon (*Onchorynchus Kisutch*).** R.A. Coulombe, G.S. Bailey and J.E. Nixon, *Dept. of Food Sci., Oregon State Univ., Corvallis, OR*.
- 146 **Technical Pentachlorophenol: Effects on Mitogen, Mixed Lymphocyte and Cell-mediated Cytotoxic Reactivity.** N.I. Kerkvliet, *School Vet. Med., Oregon State Univ., Corvallis, OR*.
- 147 **Evaluation of Monosodium Cyanurate for Potential Mutagenic Activity.** B.G. Hammond, *Monsanto Co., St. Louis, MO*; S.J. Barbee, *Olin Corp., New Haven, CT*; T. Cascieri, *FMC Corp., Princeton, NJ*; A.G. Wheeler, *ICI Americas Inc., Wilmington, DE*; N. Ishida, *Shikoku Chem. Corp., Los Angeles, CA*; T. Inoue, *Nissan Chemical Indus., New York, NY*.
- 148 **Genotoxicity of Haloacetonitriles.** F.B. Daniel, M.A. Pereira, E.H.C. Lin, D.L. Haas and J.K. Mattox, *Health Effects Research Lab., U.S. EPA, Cincinnati, OH*.
- 149 **A Rapid and Sensitive Technique for Measuring Unscheduled DNA Synthesis in Primary Hepatocyte Cultures.** D.J. Loury and J.L. Byard, *Dept. of Env. Toxicol., Univ. of California, Davis, CA*.
- 150 **Mutagenicity Studies on Acrylamide.** R.W. Mast, R.W. Naismith, R.M. Sorg, E.G. Godek, D.L. Putnam and M.A. Friedman, *American Cyanamid Co., Chemicals Group, Wayne, NJ*; *Pharmakon Res. Int'l, Inc., Waverly, PA*; *Microbiological Associates, Bethesda, MD*.
- 151 **Reactivity of Mutagenic Propylene Oxides Towards Deoxycytidine.** Z. Djuric and J.E. Sinsheimer, *College of Pharmacy, Univ. of Michigan, Ann Arbor, MI*. Sponsor: A. Kulkarni.
- 152 **Identification and Characterization of Mutagenic Activity Resulting from the Chlorination of Humic Substances.** H.P. Ringhand, J.R. Meier, W.E. Coleman, J. Munch, W.H. Kaylor and R.J. Bull, *TMD, HERL, U.S. EPA, Cincinnati, OH*.

- 153 **The Mutagenic Potential of 1,12-Diperoxydodecane-1,12-Dioic Acid (DPDA).** J.L. Seymour, D.W. Bierer, W.J. Coppinger and E.D. Thompson, *Procter & Gamble Co., Cincinnati, OH*; S.R. Haworth and P.E. Kirby, *Microbiological Associates, Rockville, MD*; H.J. Esber, *EG&G/MRI, Worcester, MA.*
- 154 **Measurement of DNA Repair in Isolated Hepatocyte Suspensions — A Novel Membrane Filter Assay Suitable for Quantitation of DNA Repair and Damage.** M.T.S. Hsia, W.L. Kreamer and P. Dolara, *Env. Toxicol. Ctr. and Dept. of Entomol., Univ. of Wisconsin, Madison, WI.*
- 155 **Genotoxicity Studies with the Non Steroidal Anti-inflammatory Agents, Meclomen and Isoxicam.** J.E. Fitzgerald, M. Kropko and F.A. de la Iglesia, *Pathol. Exp. Toxicol., Warner-Lambert/Parke-Davis Pharmacol. Res., Ann Arbor, MI, and Env. Ind. Health, Univ. of Michigan, Ann Arbor, MI.*
- 156 **Mutagenic Properties of Thiones and Thionophosphorus Compounds. Structural Factors Affecting the Mutagenicity of Thiones and Thionophosphorus Compounds.** A. Breau, J. Swinson, D.K. Kharakanis, L. Field and W.M. Mitchell, *Depts. of Pharmacol., Chem., and Pathol., Vanderbilt Univ., Nashville, TN.* Sponsor: R.A. Neal.
- 157 **Preclinical Toxicity Study of Echinomycin (NSC526-417) in CDF<sub>1</sub> Mice and Beagle Dogs.** G.W. Thompson, B.G. Boysen, G.N. Rao, B.C. Dickie, S.M. Glaza and T.E. Palmer, *Hazleton Raltech, Inc., Madison, WI*; K.S. Greenspun, *Battelle Toxicol. Program Office, Vienna, VA.* Sponsor: F.E. Reno.

**Tuesday Afternoon, March 8, 1983**

**SYMPOSIUM 2: (SOT Mechanisms Section)  
Alcohol Metabolism and Hepatotoxicity**

Julius Room

**Chairman: R.G. Thurman, Univ. of North Carolina, Chapel Hill, NC**

**Time (P.M.)**

- 1:30 **Introduction.** R.G. Thurman.
- 1:35 **Pathways of Alcohol Metabolism: Facts and Problems.** M. Schulman, *Univ. of Illinois, Chicago, IL.*
- 2:20 **Alcohol Oxidation by Highly Purified Liver Microsomal Cytochrome P-450.** M.J. Coon, *Univ. of Michigan, Ann Arbor, MI.*
- 3:05 **Break.**
- 3:15 **The Relation of Differential Metabolism in Periportal and Pericentral Hepatocytes to Alcohol-induced Hepatotoxicity.** R.G. Thurman.
- 4:05 **Alcohol Potentiation of Liver Injury.** O. Strubelt, *Inst. fur Toxikologie der Medizinischen Hochschule Lubeck, West Germany.*

**Tuesday Afternoon, March 8, 1983**  
**POSTER SESSION 2B: Organ-specific**

Rear of Colosseum Exhibit Area

**Organizer: G.L. Fisher, Battelle Columbus Labs., Columbus, OH**

**Displayed: 1:30 P.M. — 4:30 P.M.**

**Attended: 1:30 P.M. — 3:00 P.M. (Even Paper Numbers)**

**3:00 P.M. — 4:30 P.M. (Odd Paper Numbers)**

**Paper No.**

- 158                    **Histochemical Changes in the Soleus Muscle of Rats Treated Neonatally with 6-Mercaptopurine.** M.M. Jaweed, F.R. Alleva, G.J. Herbison and T. Balazs, *Thomas Jefferson Univ., Philadelphia, PA; U.S. FDA, Washington, DC.*
- 159                    **Effects of the Mycotoxin Penicillic Acid on Electrogenic Sodium Transport.** T.A. Wilczynski, N.D. Heidelbaugh, A.W. Hayes and T.D. Phillips, *Dept. of Vet. Pub. Health, College of Vet. Med., Texas A&M Univ., College Station, TX.*
- 160                    **Antagonism by d-Penicillamine of Dithiobiuret-induced Neuromuscular Toxicity.** K.D. Williams, R.M. LoPachin and R.E. Peterson, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.*
- 161                    **Biochemical Studies of Leg Muscle from Rats Treated Neonatally with 6-Mercaptopurine.** F.R. Alleva, T. Balazs, L. Friedman and D.W. Gaines, *U.S. FDA, Washington, DC; F.J. Seidler and T.A. Slotkin, Duke Univ. Med. Ctr., Durham, NC.*
- 162                    **Cadmium-Copper Interaction in Intestinal Mucosal Cell Cytosol of Mice.** D.R. Bourcier, R.P. Sharma, W.M. Bracken and M.J. Taylor, *Toxicol. Program, Utah State Univ., Logan, UT.*
- 163                    **Isolated Intestinal Cells as a Model System for the Study of Glutamate and Aspartate Transport.** T.G. Wingrove and G.A. Kimmich, *Toxicol. Program, Dept. of Rad. Biol. and Biophys., Univ. of Rochester, Rochester, NY.* Sponsor: T.W. Clarkson.
- 164                    **Gastric Glutathione Depletion Mediates Acrylonitrile-induced Gastric Ulceration.** B.I. Ghanayem, P.J. Boor and A.E. Ahmed, *Univ. Texas Med. Branch, Galveston, TX.*
- 165                    **Selective Inhibition of Rat Pulmonary Monooxygenase by O,O,S-Trimethyl Phosphorothioate (OOS) Treatment.** T. Imamura, J. Gandy and T.R. Fukuto, *Div. of Toxicol. & Physiol., Univ. of California, Riverside, CA.*
- 166                    **Hexamethylphosphoramide (HMPA) Nasal Carcinogenesis: Covalent Binding of <sup>14</sup>C-HMPA Radioactivity in the Nasal Turbinates of Rats.** R.W. Rickard, P. Ashley and P.J. Gillies, *E.I. Du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.*

- 167                    **Specific Inhibition of Pulmonary Monoamine Oxidase Form A by Chlorphentermine.** L. Zychlinski and M.R. Montgomery, *Dept. of Pharmacol., Univ. of South Florida and VA Hosp., Tampa, FL.*
- 168                    **Studies of the Effect of Exposure to Nitrogen Dioxide on the Surfactant System of the Lung.** R.C. Cottrell, I.A. Herod, J.R. Foster and K. Miller, *British Ind. Biol. Res. Assoc., Charshalton, Surrey, U.K.* Sponsor: D.M. Conning.
- 169                    **Protein and Phospholipid Analysis of the Pulmonary Surfactant System.** R.C. Cottrell, I.A. Herod, R. Purchase and K. Miller, *British Ind. Biol. Res. Assoc., Carshalton, Surrey, U.K.* Sponsor: D.M. Conning.
- 170                    **The Effects of 3-Hydroxymethylfuran-N-ethylcarbamate (HFC) on the Lung Surfactant System.** R.C. Cottrell, I.A. Herod, J.R. Foster, D. Pelling and K. Miller, *British Ind. Biol. Res. Assoc., Carshalton, Surrey, U.K.* Sponsor: D.M. Conning.
- 171                    **Sequential and Dose-Dependent Morphological Alterations in Rat Bronchiolar Epithelium During O,O,S-Trimethyl Phosphorothioate (OOS) Induced Delayed Toxicity.** J. Gandy, T.R. Fukuto and T. Imamura, *Div. of Toxicol. & Physiol., Univ. of California, Riverside, CA.*
- 172                    **Lung Tissue and Lavage Fluid Collagenolytic Activity in Rats Dosed Intratracheally with Quartz.** S.J. Williams and K.P. Lee, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. and Ind. Med., Newark, DE.*
- 173                    **Impairment in Pulmonary Bioenergetics Following Chlorphentermine Administration to Rats.** M.R. Montgomery, L. Zychlinski, M.J. Reasor and P.B. Shamblin, *Dept. of Pharmacol., Univ. of South Florida and VA Hosp., Tampa, FL.*
- 174                    **Pneumotoxic Effects of Thiobenzamide Derivatives.** D.A. Penney, J.R. Cashman, G.J. Traiger and R.P. Hanzlik, *Depts. of Pharmacol. & Toxicol. and Med. Chem., School of Pharm., Univ. of Kansas, Lawrence, KS.*
- 175                    **The Effects of Diethylstilbestrol (DES) and Cyclophosphamide (CPA) on Organ Distribution of and Host Resistance to *Cryptococcus Neoformans*.** S.S. Duke, R.A. Fromtling, S.G. Bradley and A.E. Munson, *Dept. of Pharmacol. & Toxicol. and Dept. of Microbiol. & Immunol., Med. College of Virginia, Richmond, VA.*
- 176                    **Effect of Chemical Irritants on Mouse Skin Epithelial Cell Protein Production.** C.J. Molloy, M.A. Gallo and J.D. Laskin, *Dept. of Env. and Community Med., Rutgers Med. School/Rutgers Program in Toxicol., Piscataway, NJ.*

- 177 **Comparison of Oral and Dermal Toxicity of the Flame Retardant 2,2-bis(Bromomethyl)-1,3-propanediol (BMP) in the Fischer 344 Rat and B6C3F1 Mouse.** J.K. Dunnick, D. Goldman, T. Taylor and F.G. Bock, *Nat'l Toxicol. Program, NIEHS, Research Triangle Park, NC, NTP, Bethesda, MD, Tracor-Jitco, Inc., Research Triangle Park, NC, and Papanicolaou Cancer Research Inst., Miami, FL.* Sponsor: R.S. Chhabra.
- 178 **Dermal Toxicity of 2,3-Dibromo-1-propanol in Rats and Mice.** R.L. Melnick, N.H. Altman, J. Sagartz and R.M. Kovatch, *Nat'l Toxicol. Program, Research Triangle Park, NC, Papanicolaou Cancer Res. Inst., Miami, FL, and Tracor-Jitco, Inc., Rockville, MD.* Sponsor: J.H. Mennear.
- 179 **Acute Dermal Toxicity of Diallyl Carbonate in Rabbits.** A.F. Kingery, D.A. Mayhew and C.B. Briggs, *WIL Res. Labs., Inc., Cincinnati, OH.* Sponsor: F.J. Koschier.
- 180 **Kathon® Biocide: Delayed Contact Dermatitis is Dependent on Both Induction and Challenge Concentration.** P.K. Chan, R.C. Baldwin, R.D. Parson, J.N. Moss, J.M. Smith and A.W. Hayes, *Rohm & Haas Co., Spring House, PA.*
- 181 **The Nephrotoxicity of Styrene in Male Sprague-Dawley Rats.** S. Chakrabarti and J. Brodeur, *Dép. Méd. du Trav. et Hyg. du Milieu, Fac. Méd., Univ. Montreal, Montreal, Que., Canada.*
- 182 **Effects of Phenol on Isolated Rat Renal Proximal Tubules.** M.L. Coan, H.B. Bosmann and R.B. Baggs, *Pharmacol. & Toxicol., Univ. of Rochester School of Med. and Dentistry, Rochester, NY.* Sponsor: T.W. Clarkson.
- 183 **Acetaminophen-induced Hepatic Congestion in Mice.** R.M. Walker, W.J. Racz and T.F. McElligott, *Depts. of Pathol. and Pharmacol. & Toxicol., Hotel Dieu Hospital and Queen's Univ., Kingston, Ont., Canada.* Sponsor: G.C. Becking.

**Wednesday Morning, March 9, 1983**  
**PLATFORM SESSION 6: General II**

Colosseum II

**Co-Chairs: W.M. Dairman, Hoffmann-La Roche, Inc., Nutley, NJ**  
**D.D. Mahlum, Battelle Memorial Inst., Richland, WA**

Paper No.	Time (A.M.)	
184	8:30	<b>A Carcinogenicity Study of Styrene Oxide in Rats.</b> V. Ponomarev, J.R.P. Cabral, J. Wahrendorf and D. Galendo, <i>Int'l Agency for Res. on Cancer, Lyon, France.</i>
185	8:45	<b>Epidermal Ornithine Decarboxylase (ODC) Activity Following n-Hexadecane Application to Rat Skin.</b> G.J.A. Oliver and M.A. Pemberton, <i>ICI PLC, Central Toxicol. Lab., Alderley Park, Macclesfield Cheshire, U.K.</i> Sponsor: I.F.H. Purchase.
186	9:00	<b>Toxicity of Alkyldihydrofurans to Metabolically Active Organs in the Mouse.</b> R. Wiley, P. Zenk, R. Brinkman, D. Hale and G.J. Traiger, <i>Depts. of Medicinal Chem. and Pharmacol. &amp; Toxicol., Univ. of Kansas, Lawrence, KS.</i>

- 187 9:15 **13-Week Toxicity Study of 2,2'-Oxamide-bis-ethyl-3-(3,5-di-tert-butyl-4 hydroxyphenyl)propionate, Naugard XL-1, in Beagle Dogs.** P.W. Jonmaire, L.A. Gephart, P.J. Becci and E.J. Sowinski, *Uniroyal Chemical, Naugatuck, CT*; L.A. Gephart and P.J. Becci, *Food & Drug Res. Labs., Waverly, NY.*
- 188 9:30 **Rodent Bioassay for Chloracne.** V.G. Horton and R.A. Yeary, *Dept. Vet. Phys./Pharm., College Vet. Med., Ohio State Univ., Columbus, OH.*
- 189 9:45 **Chronic and Three Generation Toxicity Study of Styrene Monomer in the Drinking Water of Rats.** R.P. Beliles, J.H. Butala, C.R. Stack and S. Makris, *U.S. Dept. of Labor, Washington, DC, Gulf Oil Corp., Pittsburgh, PA, Chemical Manufacturers Assoc., Washington, DC, and Litton Bionetics, Inc., Kensington, MD.*
- 190 10:00 **Neuropharmacologic and Neuropathologic Effect of Fenvalerate in Mice and Rats.** C.M. Parker, J.R. Albert and G.A. Van Gelder, *Toxicol. Res., Shell Dev. Co., Houston, TX*; J.L. Taylor, *Intermountain Labs., Salt Lake City, UT.*
- 191 10:15 **The Efficacy of Therapeutic Steroid Treatment on the Primary Eye Irritation of a Triforine Formulation.** M.B. Aufrere, C.M. Cisson, J.A. MacGregor and Z.A. Wong, *Chevron Env. Health Ctr., Inc., Richmond, CA.*
- 192 10:30 **Acute Cholestatic Jaundice in Rats Treated with 4,4'-Diaminodiphenylmethane and its Congeners.** D.A. Morgott, G.D. Abrams, H.H. Cornish and W.W. Weber, *Depts. of Env. & Ind. Health, Pathol. and Pharmacol., Univ. of Michigan, Ann Arbor, MI.*
- 193 10:45 **A Direct Arterial Blood Pressure Measurement Technique for Canine Toxicity Studies.** S.A. Kutz, D.K. Detweiler, R.E. Cimprich, S.G. Smith, D.P. Shaffer, J.R. Tuckosh, J.L. Robertson and P.J. DeBaecke, *Stuart Pharmaceuticals, Div. of ICI Americas Inc., Wilmington, DE, and School of Vet. Med., Univ. of Pennsylvania, Philadelphia, PA.* Sponsor: L.E. Gongwer.
- 194 11:00 **A Non-cyclo-oxygenase Mechanism for Arachidonate Induced Death in Mice.** W. Dairman, C. Eliahou and W. Wooding, *Depts. of Toxicol. & Pathol., and Lab. Animal Res., Hoffmann-La Roche Inc., Nutley, NJ.*
- 195 11:15 **Enhancement of Arachidonic Acid Induced Lethality and Platelet Aggregation by the  $\beta$ -Blocker Propranolol in Mice.** W. Dairman, C. Eliahou and W. Wooding, *Depts. of Toxicol. & Pathol., and Lab. Animal Resources, Hoffmann-La Roche Inc., Nutley, NJ.*
- 196 11:30 **Components Responsible for Skin Tumor Initiating Activity in Coal Liquids.** D.D. Mahlum and B.W. Wilson, *Biol. & Chem. Dept., Pacific Northwest Lab., Richland, WA.*
- 197 11:45 **Evaluation of an *In Vitro* Cell Toxicity Test Using Rabbit Corneal Cells to Predict the Eye Irritation Potential of Surfactants and Surfactant-based Finished Products.** H.M. North-Root, F. Yackovich, J.L. Demetrulias, M.C. Gacula, Jr. and J.E. Heinze, *Armour-Dial Co., Armour Res. Ctr., Scottsdale, AZ.* Sponsor: I.G. Sipes.

Wednesday Morning, March 9, 1983

PLATFORM SESSION 7: Metabolism II

Colosseum III

**Co-Chairs: I.A. Bernstein, Univ. of Michigan, Ann Arbor, MI**  
**P.W. Ferguson, Northeast Louisiana Univ., Monroe, LA**

Paper No.	Time (A.M.)	
198	8:30	<b>Covalent Binding and Paraquat Toxicity.</b> T.M. Sullivan and M.R. Montgomery, VA Hosp. and Dept. of Pharmacol., Univ. of South Florida, Tampa, FL.
199	8:45	<b>Paraquat (PQ) Pharmacokinetics in the Rat Following Subcutaneous Injection.</b> M.S. Dey, R.G. Breeze, A. Karera, R.I. Krieger, J.J. Naser and B.E. Renzi, Vet. Med., Univ. of Idaho, Moscow, ID; College of Vet. Med., Washington State Univ., Pullman, WA; College of Pharmacy, Washington State Univ., Pullman, WA.
200	9:00	<b>Effect of Dose on Di-isodecyl Phthalate Disposition in Rats.</b> D.G. Pegg, Biomed. Sci. Dept., General Motors Res. Labs., Warren, MI. Sponsor: J.J. Vostal.
201	9:15	<b>Urinary Metabolites of JP-4 Jet Fuel.</b> E.H. Vernot and D.L. Pollard, Univ. of California, Toxic Hazards Res. Unit, Dayton, OH.
202	9:30	<b>Sucrose Polyester (SPE) Stimulates Fecal Excretion of DDT in Gerbils.</b> L.C. Mutter, H. Terry, R. Jandacek, R.V. Blanke and P.S. Guzelian, Depts. of Med. and Pathol., Med. College of Virginia, Richmond, VA.
203	9:45	<b>The Effects of <math>\gamma</math>-Hexachlorocyclohexane Pretreatment on the Absorption and Biotransformation of Parathion.</b> R.W. Chadwick, M.F. Copeland, R. Froehlich, N. Cooke, D.A. Whitehouse and D.J. Svendsgaard, U.S. EPA, Research Triangle Park, NC.
204	10:00	<b>Effects of Siberian Ginseng Extract on Parathion Toxicity in Mice.</b> P.W. Ferguson, P.J. Medon, T.C. Briley and C.F. Watson, School of Pharmacy, Northeast Louisiana Univ., Monroe, LA.
205	10:15	<b>Stereospecific Bioactivation of Profenofos Insecticide Isomers and Activation of Other S-Alkyl Phosphorothiolate Pesticides.</b> A.H. Glickman, K.D. Wing and J.E. Casida, Pesticide Chem. and Toxicol. Lab., Univ. of California, Berkeley, CA. Sponsor: J.J. Lech.
206	10:30	<b>Enhanced Fecal Excretion of p,p'-DDE in Contaminated Dairy Cattle Fed 3% Mineral Oil with the Diet.</b> K.K. Rozman, G.S. Smith, P.N. Rozman, R.A. Johnson and H.A. Greim, Abteilung fur Toxikologie der Gesellschaft fur Strahlen-und Umweltforschung mbH Munchen, Neuherberg, FRG, and Dept. Animal and Range Sci., New Mexico State Univ., Las Cruces, NM.

- 207 10:45 **Fractionation of Urinary and Fecal Metabolites of the Antimalarial Drug, WR-158,122 Following Oral Doses in Rat and Rhesus Monkey.** C.C. Smith, A. Khalil and M.W. Tabor, *College of Pharmacy and Dept. Env. Health, Univ. of Cincinnati, College of Med., Cincinnati, OH.*
- 208 11:00 **Enzymatic Reduction of Chloramphenicol and Nitrochloramphenicol by Rat Liver Microsomal Preparations.** L.O. Lim and A.A. Yunis, *Depts. of Med. and Biochem., Univ. of Miami School of Med., Miami, FL.* Sponsor: W.E. McCormick.
- 209 11:15 **Effects of Chlorpropamide and Tolbutamide on *In Vivo* Acetaldehyde Oxidation.** D.R. Peterson, N. Atkinson and R.G. Little, *School of Pharmacy and Alcohol Res. Ctr., Univ. of Colorado, Boulder, CO.* Sponsor: C.D. Klaassen.
- 210 11:30 **Thyroidectomy Cells in Pituitary Gland of Sulfonamide Treated Dogs.** S.E. Sadek, *Dept. of Toxicol. and Pathol., Hoffmann-La Roche Inc., Nutley, NJ.*
- 211 11:45 **The Influence of Methylxanthines on Cardiotoxicity of Isoproterenol in Rats and Minipigs.** V. Whitehurst, X. Joseph, J. Vick and T. Balazs, *U.S. FDA, Washington, DC.*

**Wednesday Morning, March 9, 1983**

**PLATFORM SESSION 8: Neurological II**

Neros Room

**Co-Chairs: P.S. Spencer, Albert Einstein College of Med., Bronx, NY  
B.W. Wilson, Univ. of California, Davis, CA**

- | Paper No. | Time (A.M.) |  |
|-----------|-------------|--|
| 212       | 8:30        | <b>A Sensitive Measure of Peripheral Nerve Function in the Rat Following Acrylamide.</b> <u>M.J. Miller</u> , <u>M.S. Miller</u> , <u>T.F. Burks</u> and <u>I.G. Sipes</u> , <i>Toxicol. Program and Dept. of Pharmacol., Univ. of Arizona, Tucson, AZ.</i>  |
| 213       | 8:45        | <b>Experimental Neurotoxicity of Lucel-7® (2-t-Butylazo-2-hydroxy-5-methyl-hexane).</b> <u>P.S. Spencer</u> , <u>M.C. Bischoff</u> and <u>C. Beaubernard</u> , <i>Inst. of Neurotoxicol., Albert Einstein College of Med., Bronx, NY.</i>  |
| 214       | 9:00        | <b>Neurotoxic Properties of Musk Ambrette.</b> <u>P.S. Spencer</u> and <u>M.C. Bischoff</u> , <i>Inst. of Neurotoxicol., Albert Einstein College of Med., Bronx, NY;</i> <u>O.M. Moreno</u> , <i>M B Res. Labs., Inc., Spinnerstown, PA;</i> <u>D.L. Opdyke</u> , <i>Res. Inst. for Fragr. Materials, Inc. (RIFM), Englewood Cliffs, NJ.</i> |
| 215       | 9:15        | <b>Recovery and Assembly of 20S AChE in Cultured Muscle After Treatment with Diisopropylfluorophosphate (DFP).</b> <u>B.W. Wilson</u> , <u>W.R. Randall</u> and <u>P.S. Nieberg</u> , <i>Avian Sciences, Univ. of California, Davis, CA.</i>   |

- 216 9:30 **The *In Vitro* Reactivity and *In Vivo* Toxicity of the  $\delta$ -Diketone, 2,6-Heptanedione.** K. Boekelheide, D.C. Anthony, F. Giangaspero and D.G. Graham, *Dept. of Pathol., Duke Univ. Med. Ctr., Durham, NC.*
- 217 9:45 **Delayed Neuropathy in Dog by the Insecticide Leptophos.** S.A. Soliman, *Alexandria Univ., Dept. Pesticide Chem., Alexandria, Egypt*; J.D. Farmer, *U.S. EPA, Neurotoxicol. Div., Research Triangle Park, NC*; D.G. Graham, *Duke Univ., Pathol. Dept., Durham, NC.*
- 218 10:00 **Neurological Effects in Workers Occupationally Exposed to Pesticides.** D. Otto, A. Soffar and D. Svendsgaard, *HERL, U.S. EPA, Neurotoxicol. Div., Research Triangle Park, NC*; *Med. School, Tanta Univ., Egypt*; N. Bakry and S. Soliman, *Alexandria Univ., Pesticide Chem. Div., Alexandria, Egypt.*
- 219 10:15 **Neurotoxic Esterase in Rooster Testis.** M. Lotti, W. Margaretten, E.T. Wei, R.C. Spear and C.E. Becker, *Northern California Occup. Hlth. Ctr., Univ. of California, San Francisco and Berkeley, CA.*
- 220 10:30 **Effect of Occupational Exposure to Pesticides on the Levels of Serum Cholinesterase and Lymphocyte Neurotoxic Esterase-like Activities.** D. Svendsgaard, N.S. Ahmed, K.S. El-Gendy and D. Otto, *U.S. EPA, HERL, Research Triangle Park, NC*; S.A. Soliman, *Alexandria Univ., Pesticide Chem. Div., Alexandria, Egypt.*
- 221 10:45 **Altered Neurotrophic Factor Availability: A Novel Neurotoxic Mechanism.** M.S. Miller, S.H. Buck, T.F. Burks and I.G. Sipes, *Program in Pharmacol. & Toxicol., Arizona Health Sciences Ctr., Tucson, AZ.*
- 222 11:00 **The Covalent Binding of Carbon Disulfide (CS<sub>2</sub>) in the Nerve Tissues of Adult Hens.** P.W. Lee and R.A. Neal, *Dept. of Biochem., Vanderbilt Univ., Nashville, TN.*

**Wednesday Morning, March 9, 1983**

**POSTER SESSION 3A: Immunological**

Rear of Colosseum Exhibit Area

**Organizer: M.A. Hollinger, Univ. of California - Davis, Davis, CA**

**Displayed: 8:30 A.M. — 11:30 A.M.**

**Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)**

**10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)**

**Paper No.**

223

**Effects of Cocaine Exposure on Immune Function.** R.E. Faith and J.L. Valentine, *Biomed. Res. Ctr. and Dept. of Pharmacol., Oral Roberts Univ., Tulsa, OK.* Sponsor: R.L. Dixon.

- 224 **Multiple Immunoassays in a "One Rat" System.** L.D. Koller, J.H. Exon, G.M. Henningsen and C.A. Osborne, *Vet. Med., Univ. of Idaho, Moscow, ID.*
- 225 **Rat Delayed-type Hypersensitivity Assays to Assess Immunomodulation.** G.M. Henningsen and L.D. Koller, *Vet. Med., Univ. of Idaho, Moscow, ID.*
- 226 **General Toxicology and Immunotoxicology of Mice Exposed to Naphthalene (NAP).** G.M. Shopp, K.L. White, Jr., M.P. Holsapple, D.W. Barnes, L. Condie and J.F. Borzelleca, *Dept. of Pharmacol. and Toxicol., Med. College of Virginia, Richmond, VA, and Dept. of Pharmacol., East Carolina Univ., Greenville, NC.*
- 227 **Expression of Natural Killer Cells in Chemically Treated Hosts.** T.A. Talcott and L.D. Koller, *Vet. Med., Univ. of Idaho, Moscow, ID.*
- 228 **Persorption of Carrageenan: Uptake, Distribution and Immunological Implications.** S. Nicklin and K. Miller, *British Indus. Biol. Res. Assoc., Carshalton, Surrey, U.K.* Sponsor: S.D. Gangolli.
- 229 **Development of *In Vitro* Bioassays for the Detection of Immunotoxic Effects in Humans.** F. Wilson, R. Graham and G. Fisher, *Battelle Columbus Labs., Columbus, OH.*
- 230 **Effects of Acetonitrile Inhalation on Cellular and Humoral Immune Responses of B6C3F1 Mice.** C.A. Bowles, D.M. McCartney, W.B. Coate and J.L. McCoy, *Hazleton Labs. America, Vienna, VA, and NIEHS, Bethesda, MD.* Sponsor: J.L. Gargus.
- 231 **Immunological Effects of Feeding Two Plant Growth Regulators to Deer Mice, *Peromyscus maniculatus*.** L.J. Olson and R.D. Hinsdill, *Dept. of Bacteriol. and Env. Toxicol. Ctr., Univ. of Wisconsin, Madison, WI.* Sponsor: R.E. Peterson.
- 232 **Influence of Maleic Hydrazide and Cycloheximide on Several Immune System Components in White Mice.** L.J. Olson, R.D. Hinsdill and D. Weltman, *Env. Toxicol. Ctr. and Dept. of Bacteriol., Univ. of Wisconsin, Madison, WI.* Sponsor: M.T.S. Hsia.
- 233 **Elevation of Mouse Serum Complement Levels Following Subchronic Exposure to Diethylstilbestrol.** K.L. White, Jr., A.C. Anderson, H.H. Lysy and A.E. Munson, *Depts. of Pharmacol. & Toxicol., and Microbiol. & Immunol., Med. College of Virginia, Richmond, VA.*
- 234 **Selective Immunosuppression by a Formamidine Pesticide.** M.P. Holsapple, G.R. Shopp, J.A. Munson and A. Tucker, *Dept. of Pharmacol., Med. College of Virginia, Richmond, VA.* Sponsor: A.E. Munson.
- 235 **Effect of Immunomodulating Chemicals on Interleukins.** J.H. Exon, L.D. Koller and D.J. Hinrichs, *Vet. Med., Univ. of Idaho, Moscow, ID.*

**Wednesday Morning, March 9, 1983**  
**POSTER SESSION 3B: Inhalation III**

Rear of Colosseum Exhibit Area

**Organizer: R.J. Rubin, Johns Hopkins Univ., Baltimore, MD**

Displayed: 8:30 A.M. — 11:30 A.M.

Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)

10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)

**Paper No.**

- 236                    **Electrocardiographic Changes in F344 Rats Exposed to Inhaled Allylamine Vapor.** D.W. Lynch, W.J. Moorman, J.C. Clark, R.L. Hamlin and T.R. Lewis, *Nat'l Inst. for Occup. Safety & Health, Div. of Biomed. and Behav. Sci., Exp. Toxicol. Branch, Cincinnati, OH, and Dept. of Vet. Physiol. & Pharmacol., Ohio State Univ., Columbus, OH.*
- 237                    **Toxic and Mutagenic Effects of Ethylene Oxide and Propylene Oxide on Spermatogenic Functions in Cynomolgus Monkeys.** D.W. Lynch, T.R. Lewis, W.J. Moorman, P.S. Sabharwal and J.A. Burg, *Nat'l Inst. for Occup. Safety & Health, Div. of Biomed. & Behav. Sci., Exp. Toxicol. Branch, Cincinnati, OH, and Env. Health Res. & Testing, Lexington, KY.*
- 238                    **Monochlorodiisobutylene (CDIB) Vapor Acute and 9-day Inhalation Studies in F-344 Rats and B6C3F1 Mice.** W.M. Snellings and D.E. Dodd, *Bushy Run Res. Ctr., Export, PA;* R.D. Phillips, *Exxon Corp., Res. Env. Health Div., East Millstone, NJ.* Sponsor: H.C. Grice.
- 239                    **The Toxicity of Dicyclopentenylxyethyl Methacrylate (DPOMA): I. Acute and Subacute Inhalation Studies.** R.C. Baldwin, J.V. Hagan and T. Fedorowski, *Toxicol. Dept., Rohm & Haas Co., Spring House, PA;* D.R. Klonne and C.E. Ulrich, *Int'l Res. & Dev. Corp., Mattawan, MI.* Sponsor: A.W. Hayes.
- 240                    **The Comparative Absorption and Excretion of Chemical Vapors by the Upper, Lower and Intact Respiratory Tracts of Rats.** W.T. Stott, J.C. Ramsey and M.J. McKenna, *Toxicol. Res. Lab., Dow Chemical U.S.A., Midland, MI.*
- 241                    **The Toxicity of Dicyclopentenylxyethyl Methacrylate (DPOMA): II. Inhalation Cytogenetic and Teratology Studies.** R.C. Baldwin, J.V. Hagan, K.L. McCarthy, P.L. McLeod, J.A. Reustle, H.E. Scribner and T. Fedorowski, *Toxicol. Dept., Rohm & Haas Co., Spring House, PA;* M.C. Florek and M.S. Christian, *Argus Research Labs., Inc., Horsham, PA.* Sponsor: A.W. Hayes.
- 242                    **Covalent Binding of Formaldehyde with Macromolecules in the Rat Nasal Mucosa.** H.d'A. Heck and M. Casanova-Schmitz, *Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.*
- 243                    **Metabolism of Formaldehyde in the Rat Nasal Mucosa In Vivo.** M. Casanova-Schmitz and H.d'A. Heck, *Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.*

- 244 **Subchronic Inhalation Exposure of Guinea Pigs to Formaldehyde (CH<sub>2</sub>O).** T.C. Marshall, F.F. Hahn, R.F. Henderson, S.A. Silbaugh and R.K. Wolff, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.*
- 245 ***In Vitro* Cytotoxicity of Vapor Phase Environmental Pollutants in Lung Epithelial Cells and Fibroblast Cells.** P.O. Zamora, J.M. Benson, B.V. Mokler, A.P. Li, A.R. Dahl, A.L. Brooks and R.O. McClellan, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.*
- 246 **A Simple Dynamic Flow-through Exposure System for Assessment of Biological Activity of Complex Organic Mixtures to Mammalian Cells *In Vitro*.** J.M. Benson, P.O. Zamora, A.R. Dahl and R.L. Hanson, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.*
- 247 **Morphogenesis of the Reproductive Lesions in Male F-344 Rats after Methyl Chloride (MeCl) Inhalation.** R.E. Chapin, R.D. White, K.T. Morgan and J.S. Bus, *NIEHS/NTP and Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.*
- 248 **Acute and Subacute Inhalation Toxicity of Sulfuryl Chloride in Rats.** D.P. Kelly and E.F. Stula, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.*
- 249 **Acute Toxicity and Upper Respiratory Tract Irritation of Carbonyl Sulfide (COS) and Carbon Disulfide (CS<sub>2</sub>) in Rats.** B.A. Burgess, P.A. Ashley and G.L. Kennedy, Jr., *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.*
- 250 **Reactions of Inhaled Chlorine with Rat Nasal Mucosal Tissues.** M.J. McNulty, J.C.F. Chang, C.S. Barrow, M. Casanova-Schmitz and H.d'A. Heck, *Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.*
- 251 **A 90-day Inhalation Study of Hydrogen Sulfide in Fischer-344 Rats, Sprague-Dawley Rats, and B6C3F1 Mice.** J.M. Morgan, H.W. Casey, J.S. Bus, T. Hamm and H. Salem, *ToxiGenics, Inc., Decatur, IL; Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.*
- 252 **Visual Toxicity of Carbon Disulfide in Primates.** W.H. Merigan, R.W. Wood and D. Zehl, *Depts. Ophthalmol., Rad. Biol. Biophys., and Env. Health Sci. Ctr., Univ. of Rochester Med. Ctr., Rochester, NY.*
- 253 **A 90-day Inhalation Study of Carbon Disulfide in Fischer-344 Rats, Sprague-Dawley Rats, and B6C3F1 Mice.** J.M. Morgan, H.W. Casey, W.C. Hall, J.S. Bus, T. Hamm and H. Salem, *ToxiGenics, Inc., Decatur, IL; Microbiological Associates, Bethesda, MD; Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.*
- 254 **The Cyanogenic Potential of 2-Chlorobenzylidene Malononitrile.** B. Ballantyne, *Union Carbide Corp., South Charleston, WV.*
- 255 **Changes in Hematological Parameters Following Subacute Inhalation Exposure to p-Nitroaniline and p-Nitrochlorobenzene.** R.S. Nair, F.R. Johannsen and G.J. Levinskas, *Monsanto Co., St. Louis, MO; R. Ben-Dyke, Bio/dynamics, East Millstone, NJ.*

**Wednesday Morning, March 9, 1983**

**SYMPOSIUM 3: (SOT Metals Section)  
Selenium — Toxin or Panacea?**

Julius Room

*Chairwoman: C.R. Angle, Univ. of Nebraska Med. Ctr., Omaha, NE*

**Time (A.M.)**

- 8:30 **Introduction.** R.C. Schnell, *Univ. of Nebraska, Omaha, NE.*
- 8:35 **Environmental Selenium and its Significance.** L. Fishbein, *NCTR/FDA, Jefferson, AR.*
- 9:15 **Selenium — Interaction with Carcinogens.** P. Wanger, *Oregon State Univ., Corvallis, OR.*
- 9:50 **Discussion.**
- 10:00 **Essentiality of Selenium — Metabolic Mechanisms.** R.F. Burk, *Univ. of Texas, San Antonio, TX.*
- 10:40 **New Biologic Functions — Selenium Dependent Nucleic Acids and Proteins.** T. Stadtman, *NIH, Bethesda, MD.*
- 11:20 **Discussion.**
- 11:35 **Summation.** E. Massaro, *Pennsylvania State Univ., University Park, PA.*

**Wednesday Morning, March 9, 1983**

**POSTER SESSION 3C: Reproduction/Teratology III**

Rear of Colosseum Exhibit Area

*Organizer: R.D. Short, Jr., Monsanto Co., St. Louis, MO*

**Displayed: 8:30 A.M. — 11:30 A.M.**

**Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)**

**10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)**

**Paper No.**

256

**Teratogenic Evaluation of the Cyanogenic Glycoside Linamarin, a Toxic Constituent of Cassava, in the Golden Hamster.**  
R.A. Frakes, C.C. Willhite and R.P. Sharma, *Toxicol. Program, Utah State Univ., Logan, UT; USDA, Western Regional Res. Ctr., Berkeley, CA.*

- 257 **Teratogenicity Studies with a Candidate Antileishmanial Drug.** J.A. Trutter, F.E. Reno and R.S. Durloo, *Hazleton Labs. America, Inc., Vienna, VA*; D.W. Korte, Jr., *Walter Reed Army Inst. of Res., Washington, DC.*
- 258 **Pharmacokinetic Parameters and Teratogenic Endpoints Following Prenatal Caffeine Exposure.** J.F. Young and C.A. Kimmel, *Div. of Teratogenesis Res., Nat'l Ctr. for Toxicol. Res., Jefferson, AR.*
- 259 **Absence of a Teratogenic Response in Rats with Monosodium Cyanurate.** T. Cascieri, *FMC Corp., Princeton, NJ*; S.J. Barbee, *Olin Corp., New Haven, CT*; B.G. Hammond, *Monsanto Co., St. Louis, MO*; T. Inoue, *Nissan Chem. Ind., New York, NY*; N. Ishida, *Shikoku Chem. Corp., Los Angeles, CA*; A.G. Wheeler, *ICI Americas Inc., Wilmington, DE*; J.L. Schardein, *Int'l Res. & Dev. Corp., Mattawan, MI.*
- 260 **The Embryotoxicity of Ring Hydroxylated and Deacetylated Derivatives of 2-Acetylaminofluorene (AAF).** E. Faustman-Watts, J. Greenaway, A. Fantel and M. Juchau, *Depts. of Pharmacol. & Pediatrics, Univ. of Washington, Seattle, WA.*
- 261 **Teratogenic Studies of Macrochantin® in Sprague-Dawley Rats and New Zealand White Rabbits.** M.L. Sutton, J.P. Prytherch and E.P. Denine, *Pathol./Toxicol. Sec., Norwich Eaton Pharmaceuticals, Inc., Norwich, NY.*
- 262 **General Reproduction Study and Peripostnatal Study of Macrochantin® in Sprague-Dawley Rats.** J.P. Prytherch, M.L. Sutton and E.P. Denine, *Pathol./Toxicol. Sec., Norwich Eaton Pharmaceuticals, Inc., Norwich, NY.*
- 263 **Teratogenic Potential of Hexachlorocyclopentadiene in Rats.** M.S. Root, *Velsicol Chem. Corp., Chicago, IL*; D.E. Rodwell, *WIL Res. Labs., Inc., Ashland, OH*; E.I. Goldenthal, *Int'l Res. & Dev. Corp., Mattawan, MI.*
- 264 **Hypervitaminosis A and the Arnold-Chiari Syndrome: Dose-response Relationships.** C.C. Willhite, *Toxicol. Res. Unit, USDA, Western Regional Res. Ctr., Berkeley, CA.* Sponsor: S.T. Omaye.
- 265 **Teratological Evaluation of  $\gamma$ -Glycidoxypropyltrimethoxysilane in Rats.** W.H. Siddiqui and E.J. Hobbs, *Toxicol. Dept., Health & Env. Sci., Dow Corning Corp., Midland, MI.*
- 266 **The Influence of Malathion on Carbaryl's Teratologic Potential in Rat.** D.M. Waldron and M.S. Abdel-Rahman, *UMDNJ-NJ Med. School, Pharmacol. Dept., Toxicol. Lab., Newark, NJ.*
- 267 **Teratogenicity of TCDD and its Congeners.** E. Hassoun, R. d'Argy and L. Dencker, *Dept. of Toxicol., Univ. of Uppsala, Sweden.* Sponsor: A.E. Ahmed.

- 268 **Effects of Perinatal Hypothyroidism on Neonatal Exploratory Behavior and Locomotor Activity.** J. Orme, D.H. Taylor, R.D. Laurie and R.J. Bull, *Toxicol. & Microbiol. Div., HERL, U.S. EPA, Cincinnati, OH.*
- 269 **Developmental Toxicity of Nitrofen in Fischer 344 Rats.** R.J. Kavlock and L.E. Gray, Jr., *HERL, U.S. EPA, Research Triangle Park, NC.* Sponsor: Neil Chernoff.
- 270 **Neurobehavioral Effects of Perinatal MAM Administration.** K. Kabat, G. Buterbaugh and C. Eccles, *Dept. of Pharmacol. & Toxicol., Univ. of Maryland, School of Pharm., Baltimore, MD.* Sponsor: L. Fechter.
- 271 **Locomotor Hyperactivity in Offspring of Rhesus Monkeys Exposed to Low Levels of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD).** S.L. Schantz and R.E. Bowman, *Univ. of Wisconsin Primate Lab., Madison, WI.* Sponsor: R.E. Peterson.
- 272 **Polychlorinated Biphenyl Effects on Delayed Spatial Alternation in Monkeys.** E.D. Levin and R.E. Bowman, *Primate Lab., Univ. of Wisconsin-Madison, Madison, WI.* Sponsor R.E. Peterson.
- 273 **Developmental Studies of Model Chlorinated Humics in Drinking Water.** G.E. Michael, E.L. George and M.K. Smith, *HERL U.S. EPA, Cincinnati, OH.* Sponsor: M.A. Pereira.
- 274 **Perinatal Toxicity of Polybrominated Biphenyls: Effects on Early Behaviors.** J.W. Henck, C.L. Carlson, D.H. Rezabek and R.H. Rech, *Dept. of Pharmacol./Toxicol., Michigan State Univ., East Lansing, MI.* Sponsor: J.B. Hook.
- 275 **Excitotoxic Amino Acids and Reproductive Deficits.** W.J. Pizzi, H.A. James, J.E. Barnhart and J.R. Unnerstall, *Northeastern Illinois Univ., Chicago, IL.* Sponsor: G.J. Youkilis.
- 276 **Spatial Vision Deficits in Adult Rats Following Developmental Lead Exposure.** D.A. Fox, L. Costa and A.A. Wright, *College of Optometry, Univ. of Houston and Univ. of Texas Health Sci. Ctr., Houston, TX.*
- 277 **Selective Optic Nerve and Visual Cortex Deficits in Adult Rats Following Neonatal Lead Exposure.** C.L. Lear, D. Impelman, R. Wilson and D.A. Fox, *Div. Tox., Univ. of Texas Med. School and College of Optometry, Univ. of Houston, Houston, TX.*
- 278 **Postnatal Ontogeny of the Nephrotoxic Response to Sodium Fluoride.** G.P. Daston, B. Rehnberg and R.J. Kavlock, *DBD, HERL, U.S. EPA, Research Triangle Park, NC.* Sponsor: N. Chernoff.
- 279 **The Teratogenic Potential of Diethylene Glycol Mono Methyl Ether (DGME) as Assayed in the Postnatal Development Test by the Subcutaneous Route in Rats.** J.E. Doe, D. Hart and G.A. de S. Wickramaratne, *ICI PLC, Central Toxicol. Lab., Alderley Park, North Macclesfield, Cheshire, U.K.* Sponsor: I.F.H. Purchase.

Wednesday Afternoon, March 9, 1983  
**PLATFORM SESSION 9: Cardiovascular/Renal**

Colosseum II

**Co-Chairs: W.O. Berndt, Univ. of Nebraska, Omaha, NE**  
**W.R. Hewitt, Univ. of Missouri, Columbia, MO**

Paper No.	Time (P.M.)	
280	1:30	<b>Induction of Renal Lesions Following Oral Dosing with Hydrocarbon Fuels.</b> L.L. Pitts, R.H. Bruner, A.P.D'Addario and D.E. Uddin, <i>Naval Med. Res. Inst. Toxicol. Detachment, and Air Force Aerospace Med. Res. Lab., Wright Patterson AFB, OH.</i> Sponsor: M.E. Andersen.
281	1:45	<b>Regulation of DCVC-Induced Renal Tubular Toxicity by Glutathione.</b> C.D. Hassall, A.J. Gandolfi and K. Brendel, <i>Depts. of Pharmacol. &amp; Anesthesiol., Univ. of Arizona, Tucson, AZ.</i>
282	2:00	<b>Cytotoxicity, Accumulation, and Distribution of Mercuric Chloride in Bovine Kidney Epithelial Cells.</b> W.M. Bracken, R.P. Sharma and D.R. Bourcier, <i>Toxicol. Program, UMC 56, Logan, UT</i>
283	2:15	<b>Renal Function and Hypertrophy in Rats with Nephrocalcinosis Induced by Different Diets.</b> M.D. Stonard, M.D. Samuels and E.A. Lock, <i>Central Toxicol. Lab., Imperial Chem. Industries PLC, Alderley Park, Near Macclesfield, Cheshire, U.K.</i> Sponsor: I.F.H. Purchase.
284	2:30	<b>The Pathogenesis in Rats of Nephrocalcinosis Induced by Different Diets.</b> D.M. Samuels, M.D. Stonard and E.A. Lock, <i>Central Toxicol. Lab., Imperial Chemical Industries PLC, Alderley Park, Near Macclesfield, Cheshire, U.K.</i> Sponsor: I.F.H. Purchase.
285	2:45	<b>Nephrotoxicity of 1-(2-Chloroethyl)-3-(trans-4-methylcyclohexyl)-1-nitrosourea (MeCCNU) in Rat.</b> R. Kramer and M. Boyd, <i>NCI, Bethesda, MD.</i>
286	3:00	<b>Computerized Health Surveillance: A Complement to Animal Testing.</b> F.J. Murray, E.F. Brennan and B.L. Reeve, <i>Syntex (U.S.A.) Inc., Palo Alto, CA.</i>
287	3:15	<b>Chronic Toxicity of S-(Trans-1,2-dichlorovinyl)-L- Cysteine (DCVC) in Mice.</b> D.R. Jaffe, A.J. Gandolfi and R.B. Nagle, <i>Toxicol. Program and Depts. of Anesthesiol. and Pathol., Univ. of Arizona, Tucson, AZ.</i>

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Wednesday Afternoon, March 9, 1983

**ANNUAL BUSINESS MEETING**

3:30 P.M.

Julius Room

**President Robert L. Dixon, Presiding**

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Wednesday Afternoon, March 9, 1983  
**SPECIALTY SECTION MEETINGS**  
5:30 P.M.

**Inhalation**  
Neros Room

***James T. Stevens, Presiding***

The first Inhalation Research Award will be presented

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**Metals**  
Colosseum II

***Zahir A. Shaikh, Presiding***

Cash Bar

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**Neurotoxicology**

Colosseum III

***Toshio Narahashi, Presiding***

Cash Bar

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**Reproductive Toxicology**

Julius Room

***E. Marshall Johnson, Presiding***

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Each of the above is open to all current and prospective  
members of the respective section

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Wednesday Afternoon, March 9, 1983  
**PLATFORM SESSION 10: Inhalation IV**

Colosseum III

***Co-Chairs: D.J. Ecobichon, McGill Univ., Montreal, Que., Canada***  
***W.E. Ribelin, Monsanto Co., St. Louis, MO***

Paper No.	Time (P.M.)	
288	1:30	<b>Pulmonary and Sensory Irritation in Mice of Dicyclohexylmethane 4,4'-diisocyanate (SMDI).</b> D.A. Weyel and R.B. Schaffer, <i>Dept. of Ind. Env. Health Sci., Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.</i> Sponsor: Y. Alarie.
289	1:45	<b>The Subchronic Inhalation Toxicity of Dimethylformamide in Rats and Mice.</b> D.K. Craig, R.J. Weir, W. Wagner and D. Groth, <i>Litton Bionetics, Inc., Rockville, MD; NIOSH, Cincinnati, OH.</i>
290	2:00	<b>Immunotoxic and Pathologic Effects of Inhalation of Various Levels of Formaldehyde Vapor in F-344 Rats.</b> C.L. Leach, R.P. Sharma and S.G. Oberg, <i>Toxicol. Program, Utah State Univ., Logan, UT.</i>

- 291 2:15 **A 26-week Inhalation Toxicity Study with Formaldehyde in the Monkey, Rat and Hamster.** G.M. Rusch, J.J. Clary, W.E. Rinehart and H.F. Bolte, *Bio/dynamics, East Millstone, NJ.*
- 292 2:30 **Tolerance and Cross-tolerance to the Sensory Irritants Chlorine and Formaldehyde in F-344 Rats.** J.C.F. Chang and C.S. Barrow, *CIIT, Dept. of Toxicol., Research Triangle Park, NC.*
- 293 2:45 **Formaldehyde: An Exception in the Series of Saturated Aldehydes, Aliphatic Alcohols and Alkyl-benzenes.** J.E. Luo, G.D. Nielsen and Y. Alarie, *Toxicol. Lab., Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.*
- 294 3:00 **Methyl Bromide Toxicity in Mice Following Inhalation Exposure.** G.V. Alexeeff, W.W. Kilgore, D. Watt and P. Munoz, *Dept. of Env. Toxicol., Univ. of California, Davis, CA.*
- 295 3:15 **Morphology of Nasal Tumors in Rats Exposed to Phenylglycidyl Ether Vapor by Inhalation.** K.P. Lee, P.W. Schneider, Jr. and H.J. Trochimowicz, *Haskell Lab., E.I. du Pont de Nemours & Co., Inc., Elkton Rd., Newark, DE.*
- 296 3:30 **Carcinogenesis Bioassay of 2,6-Xylidine in Rats.** J.F. Hardisty, *Experimental Pathol. Labs., Raleigh, NC;* C.A. Montgomery and M. Kornreich, *NTP/NIEHS, Research Triangle Park, NC.* Sponsor: J.A. Moore.

**Wednesday Afternoon, March 9, 1983**

**PLATFORM SESSION 11: Metals II**

Neros Room

**Co-Chairs: C.R. Angle, Univ. of Nebraska, Omaha, NE**

**M.M. Joselow, Univ. of Medicine of New Jersey, Newark, NJ**

- | <b>Paper No.</b> | <b>Time (P.M.)</b> |   |
|------------------|--------------------|---|
| 297              | 1:30               | <b>Erythrocyte Pyrimidine Nucleotides in Uremia: Accumulation Independent of Pyrimidine-5'-nucleotidase or Blood Lead.</b> C.R. Angle, M.S. Swanson and S. Stohs, <i>Univ. of Nebraska Med. Ctr., Omaha, NE.</i>  |
| 298              | 1:45               | <b>Disposition of Metallothionein in Rat Liver During Postnatal Development.</b> M.G. Cherian, M. Panemangalore and D. Banerjee, <i>Dept. of Pathology, Univ. of Western Ontario, London, Ont., Canada.</i>   |
| 299              | 2:00               | <b>Effects of Vanadate and Vanadyl on Sodium Transport in Toad Urinary Bladder.</b> M.D. Walker and T.D. Phillips, <i>Dept. of Vet. Pub. Health, College of Vet. Med., Texas A&amp;M Univ., College Station, TX.</i>  |
| 300              | 2:15               | <b>Subcellular Distribution of Lead and Calcium in the Isolated Rat Hepatocyte.</b> R.A. Mittelstaedt and J.G. Pounds, <i>Nat'l Ctr. for Toxicol. Res., Jefferson, AR; Div. of Interdisciplinary Toxicol., UAMS, Little Rock, AR.</i> Sponsor: L. Fishbein. |

- 301 2:30 **Induction and Cycloheximide-mediated superinduction of metallothionein in Cadmium-resistant CHO Cells by Crystalline CdS and CdCl<sub>2</sub>.** S.R. Patierno, R.M. Evans and M. Costa, *Div. of Toxicol., Dept. of Pharmacol., Univ. of Texas, Med. School, Houston, TX.*
- 302 2:45 **Trimethyltin (TMT) Induced Lesions in the Mouse Anterior Horn Motor Neurons.** L.W. Chang, G.R. Wenger, D.E. McMillan and R.S. Dyer, *Depts. of Pathol. & Pharmacol., Univ. of Arkansas for Med. Sci., Little Rock, AR; Neurotox. Lab., U.S. EPA, Research Triangle Park, NC.*
- 303 3:00 **Comparative Studies of the Neuropathological Effects of Trimethyltin (TMT) in Mice and Rats.** L.W. Chang, D.E. McMillan, G.R. Wenger and R.S. Dyer, *Depts. of Pathol. & Pharmacol., Univ. of Arkansas for Med. Sci., Little Rock, AR; Neurotox. Lab., U.S. EPA, Reseach Triangle Park, NC.*
- 304 3:15 **Age-dependent Patterns of Trimethyltin-induced Hippocampal Injury.** K.R. Reuhl and B.A. Mackenzie, *Ecotox Group, Div. Biol. Sci., Nat'l Res. Council, Ottawa, Ont., Canada.* Sponsor: L. Fishbein.
- 305 3:30 **Optic Nerve Toxicity of Triethyltin in Adult Primates.** W.H. Merigan, E. Barkdoll, J.P.J. Maurissen, M. del Cerro and R. Herndon, *Dept. of Ophthalmol., Ctr. for Brain Res., Env. Health Sci. Ctr., Univ. Rochester Med. Ctr., Rochester, NY.* Sponsor: R.W. Wood.

**Wednesday Afternoon, March 9, 1983**

**POSTER SESSION 4A: Metabolism III — Agricultural**

Rear of Colosseum Exhibit Area

**Organizer: G.L. Kennedy, Jr., E.I. DuPont de Nemours & Co.,  
Newark, DE**

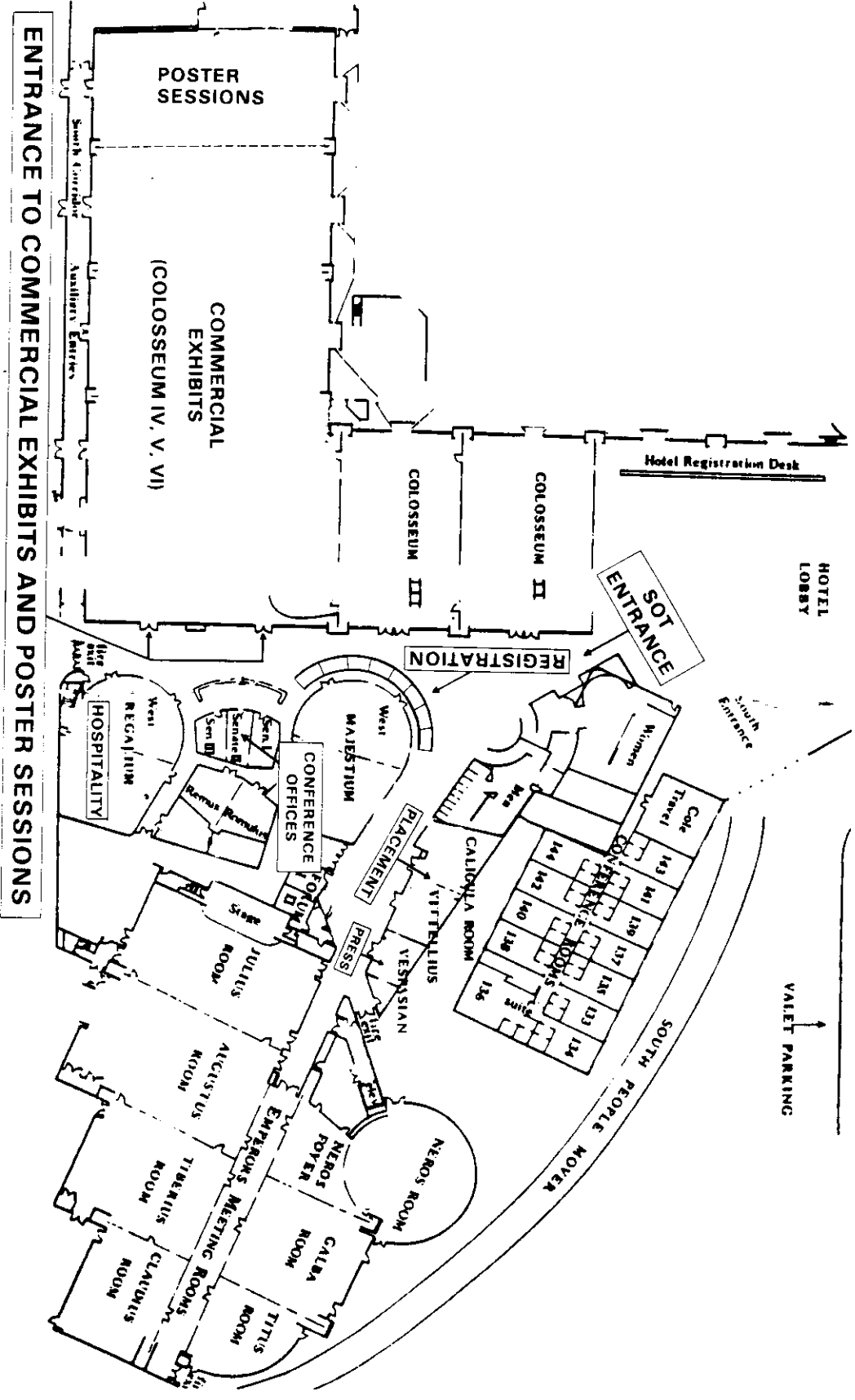
**Displayed: 1:30 P.M. — 4:30 P.M.**

**Attended: 1:30 P.M. — 3:00 P.M. (Even Paper Numbers)**

**3:00 P.M. — 4:30 P.M. (Odd Paper Numbers)**

**Paper No.**

- 306 **Correlation of Inhibitory Enzyme Kinetics with Altered Toxicities of Azinphosmethyl (AM), Azinphosethyl (AE) and Their Oxygen Analogues (AMO and AEO) Induced by Piperonyl Butoxide (PB).** S.-N. Lin and S.D. Murphy, *Div. of Toxicol., Univ. of Texas Med. School, Houston, TX.*
- 307 **The Role of Hepatic Biotransformation in the Acute Toxicity of the Organophosphate Chlorpyrifos.** L.G. Sultatos, M. Shao and S.D. Murphy, *Div. of Toxicol., Univ. of Texas Med. School, Houston, TX.*
- 308 **Influence of Lindane and Yellow (A<sup>yy</sup>/a) Obese Phenotype on Hepatic Glutathione S-Transferase Activity in Mice.** G.L. Wolff and R.L. Suber, *Nat'l Ctr. for Toxicol. Res. & Pathol. Associates, Inc., Jefferson, AR.*



ENTRANCE TO COMMERCIAL EXHIBITS AND POSTER SESSIONS

- 309            **Metabolism of Pesticides by Purified, Reconstituted Cytochrome P-450 Dependent Monooxygenase Systems.** P.E. Levi and E. Hodgson, *Interdepartmental Toxicol. Program, North Carolina State Univ., Raleigh, NC.*
- 310            **Binding of the Organophosphates Chlorpyrifos and Parathion to Bovine Serum Albumin.** L.G. Sultatos, K.M. Basker and S.D. Murphy, *Div. of Toxicol., Univ. of Texas Med. School, Houston, TX.*
- 311            **Influence of Pregnancy on the Hepatic Metabolism of Parathion.** S. Weitman and J. Lech, *Dept. of Pharmacol. & Toxicol., Med. College of Wisconsin, Milwaukee, WI.*
- 312            **Allyl Isothiocyanate: Comparative Disposition in Male and Female Rats and Mice.** Y.M. Ioannou and H.B. Matthews, *Sys. Toxicol. Branch, Nat'l Inst. of Env. Health Sci., Research Triangle Park, NC.*
- 313            **The Induction of Rat Hepatic Microsomal Enzymes by Toxaphene and Toxaphene Fractions.** G.A. Pollock, *WOI Regional Program in Vet. Med., Vet. Med., Univ. of Idaho, Moscow, ID.*
- 314            **Disposition of Radioactivity in Rats and Mice Following an Acute Dose of [ring 14-C] RO-NEET®.** T.Y. Chin, R.P. Clement, J. Adir and R.I. Freudenthal, *Stauffer Chem. Co., Env. Health Ctr., Farmington, CT.*
- 315            **Urinary Metabolites of [ring 14-C] RO-NEET® in Rats and Mice.** T.Y. Chin, R.P. Clement, L.E. Somma, J. Adir, M.F. Marcus and R.I. Freudenthal, *Stauffer Chem. Co., Env. Health Ctr., Farmington, CT.*
- 316            **Metabolism and Disposition of Dermally Applied [<sup>14</sup>C]-Tri-*o*-cresyl Phosphate (TOCP) in the Male Cat.** A.A. Nomeir and M.B. Abou-Donia, *Dept. of Pharmacol., Duke Univ. Med. Ctr., Durham, NC.*
- 317            **Percutaneous Absorption of Captan in Rats.** J. Adir, T.Y. Chin and R.P. Clement, *Stauffer Chem. Co., Env. Health Ctr., Farmington, CT.* Sponsor: R.I. Freudenthal.

**Wednesday Afternoon, March 9, 1983**

**STUDENT/POSTDOCTORAL COLLOQUIUM  
(Arranged by SOT Education Committee)**

Tiberius Room

**Chairman: C. McGowan, North Carolina State Univ., Raleigh, NC**

**Time (P.M.)**

- 3:00    **Introduction.** A.P. Autor, *Dept. of Pharmacol., Univ. of Iowa, Iowa City, IA.*
- 3:10    **Mechanisms of Lipid Peroxidation: Implications for Cell Toxicity and Disease.** A. Sevanian, *Inst. for Toxicol., Univ. of Southern California, Los Angeles, CA.*

- 3:45 **Metabolism of Methyl Chloride by Single Carbon Pathways: Formation of Toxic Products.** D.J. Kornbrust, *Research Triangle Inst., Research Triangle Park, NC.*
- 4:20 **Molecular Pathogenesis of Hexane Neuropathy.** D.C. Anthony, *Dept. of Pathol., Duke Univ. Med. Ctr., Durham, NC.*
- 4:55 **Cyproheptadine Toxicity in the Developing Endocrine Pancreas.** S.A. Chow, *Dept. of Pharmacol., Univ. of Iowa, Iowa City, IA* (Procter & Gamble-SOT Graduate Student Fellowship Awardee, 1982-1983).
- 5:30 **Conclusion.**

Note: The time allotted for each speaker includes 30 minutes for the presentation and 5 minutes for questions from the audience.

**Wednesday Afternoon, March 9, 1983**

**POSTER SESSION 4B: Metabolism III — Disposition**

Rear of Colosseum Exhibit Area

**Organizer: B.W. Wilson, Univ. of California, Davis, CA**

Displayed: 1:30 P.M. — 4:30 P.M.

Attended: 1:30 P.M. — 3:00 P.M. (Even Paper Numbers)

3:00 P.M. — 4:30 P.M. (Odd Paper Numbers)

**Paper No.**

- 318 **Effects of Polyamines on Acetone-enhancement of Aniline Hydroxylases.** A. Kulkarni and I. Gonzalez, *Toxicol. Program, Dept. of Env. & Ind. Health, Univ. of Michigan, Ann Arbor, MI.*
- 319 **Metabolism and Disposition of Sodium Cyanurate.** S.J. Barbee, *Olin Corp., New Haven, CT*; T. Cascieri, *FMC Corp., Princeton, NJ*; B.G. Hammond, *Monsanto Co., St. Louis, MO*; T. Inoue, *Nissan Chem. Co., New York, NY*; N. Ishida, *Shikoku Chemicals, Los Angeles, CA*; A.G. Wheeler, *ICI Americas, Inc., Wilmington, DE*; M. Chadwick, D. Hayes, J. Macauley and M. McComish, *A.D. Little Inc., Cambridge, MA.*
- 320 **Interaction of Nitriles with Rat Liver Cytochrome P450.** D.C. Kossor, P. Ackerman and E.H. Silver, *Dept. of Env. Commun. Med., UMDNJ-Rutgers Med. School/Rutgers Univ. Joint Grad. Program in Toxicol., Piscataway, NJ.* Sponsor: B.D. Goldstein.
- 321 **The Binding of Isocyanides to Cytochrome P-450.** G.A. Beumel and E. Hodgson, *Interdepartmental Toxicol. Program, North Carolina State Univ., Raleigh, NC.*
- 322 **Metabolism of para-Nitrochlorobenzene in the Male Rat at a Dose Level Producing Methemoglobinemia.** W.P. Ridley, M.R. Sewall and M.W. Dietrich, *Monsanto Env. Health Lab., St. Louis, MO.* Sponsor: W.E. Ribelin.

- 323 **Hepatic Macromolecular Covalent Binding and Intestinal Disposition of Mononitrotoluenes.** R.M. Long and D.E. Rickert, *Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.*
- 324 **Influence of Diet on Hepatic Macromolecular Binding of 2,6-Dinitrotoluene (DNT) in Rats.** J.D. deBethizy, M. Sherrill, D.E. Rickert and T.E. Hamm, Jr., *CIIT, Research Triangle Park, NC.*
- 325 **Comparative Metabolism and Disposition of Ethylene Glycol Monomethyl Ether (EGME) and Propylene Glycol Monomethyl Ether (PGME) in Male Rats.** R.R. Miller, E.A. Hermann, P.W. Langvardt, M.J. McKenna and B.A. Schwetz, *Toxicol. Res. Lab., Dow Chem. U.S.A., Midland, MI.*
- 326 **Prostaglandin Synthetase Dependent Metabolism of N,N,N',N'-Tetramethylbenzidine.** K. Sivarajah, R.P. Mason, T.E. Eling and B. Kalyanaraman, *Labs. of Pulmonary Function and Toxicol. & Env. Biophysics, Nat'l Inst. of Env. Health Sci., Research Triangle Park, NC.*
- 327 **The Effect of Cholestyramine on Elimination of Ammonium Perfluorooctanoate from the Blood of Rats and Mice.** T.P. Pastoor, K.W. Kinzler and G.L. Kennedy, Jr., *E.I. du Pont de Nemours and Co., Inc., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.*
- 328 **Cytochrome P-450 Induction by Ammonium Perfluorooctanoate.** T.P. Pastoor and K.W. Kinzler, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.* Sponsor: G.L. Kennedy, Jr.
- 329 **Comparative Excretion Profiles of 3 Tricresyl Phosphates After Oral Administration to Fischer 344 Rats.** D.F. Perry, D.E. Carter and I.G. Sipes, *Dept. Pharmacol./Toxicol., Univ. of Arizona, Tucson, AZ.*
- 330 **In Vivo and In Vitro Metabolism of Orthochlorophenol (OCP) in Male Rats.** W. Houser, A.P. Kulkarni and R. Hartung, *Toxicol. Program, Dept. of Env. & Ind. Health, Univ. of Michigan, Ann Arbor, MI.*
- 331 **Disposition of Inhaled (14-C)Acetaldehyde.** R.M. David and H.d'A. Heck, *CIIT, Research Triangle Park, NC.*

Thursday Morning, March 10, 1983

**PLATFORM SESSION 12: General III**

Colosseum II

**Co-Chairs: A.J. Gandolfi, Univ. of Arizona, Tucson, AZ**  
**D.M. Serrone, Diamond Shamrock Corp., Painesville, OH**

Paper No.	Time (A.M.)	
332	8:30	<b>Modification of TOTP Toxicity in Chickens by Stress.</b> M. Ehrich and W.B. Gross, <i>Virginia-Maryland Regional College of Vet. Med., Blacksburg, VA</i>

- 333 8:45 **Carcinogenic Properties of Acrylamide in the Mouse Skin and Lung Adenoma Assays.** R.D. Laurie, M. Robinson, R.J. Bull and D. Cmehil, *Toxicol. and Microbiol. Div., HERL, U.S. EPA, Cincinnati, OH.*
- 334 9:00 **A Wide-range Method for Measuring Partition Coefficients for Weakly Ionizable Compounds.** A. Jayaraj, A.O. Obaseki and W.R. Porter, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.* Sponsor: R.E. Peterson.
- 335 9:15 **Cardiotoxicity of 1-Isoproterenol in Cultured Myocytes: Prevention by 1-Ascorbic Acid and Sodium Bisulfite.** K. Ramos, A.B. Combs and D. Acosta, *Dept. of Pharmacol./Toxicol., College of Pharmacy, Univ. of Texas, Austin, TX.*
- 336 9:30 **Studies on the Steady State Levels and Turnover Rates of Catecholamines in Rat Brain Following Chlordecone Treatment.** C.N. Aldous, C.S. Chetty and D. Desaiyah, *Dept. of Neurol., Univ. of Mississippi Med. Ctr., Jackson, MS.*
- 337 9:45 **Biological Monitoring for Exposure to Synthetic Estrogens.** E.F. Brennan and F.J. Murray, *Syntex (U.S.A.) Inc., Palo Alto, CA.*
- 338 10:00 **Diethyl Succinate Carboxylesterase Activity in Human Blood Serum.** R.E. Talcott, S.M. Pond, C.E. Becker and A. Ketterman, *Northern California Occup. Health Ctr., Univ. of California, San Francisco, San Francisco, CA.*
- 339 10:15 **Experimental Sensitization to Formaldehyde.** M.H. Karol and K. Lee, *Dept. of Ind. Env. Health Sci., Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.*
- 340 10:30 **Effect of Estrogen Metabolites on PHA and MAF-Stimulated Cell Aggregation in Mouse Lymphocytes and Peritoneal Cells.** R.W. Pfeifer and M.I. Luster, *STB, NIEHS, Research Triangle Park, NC.* Sponsor: J. Goldstein.
- 341 10:45 **Evaluation of Citrinin Toxicity on the Immune System in Mice.** R.V. Reddy, M.J. Taylor and R.P. Sharma, *Toxicol. Program, Utah State Univ., Logan, UT*
- 342 11:00 **Regulation of Estrogen-induced Immunotoxicity.** M.I. Luster, G.A. Boorman, H.T. Hayes and R. Pfeifer, *Nat'l Inst. of Env. Health Sci., Research Triangle Park, NC.* Sponsor: J.A. Goldstein.
- 343 11:15 **B-Cell Immunosuppression Following Exposure to Benzo-pyrene.** J.H. Dean, L.D. Lauer and M.I. Luster, *Chem. Ind. Inst. of Toxicol., and Nat'l Inst. of Env. Health Sci., Research Triangle Park, NC.* Sponsor: J.E. Gibson.
- 344 11:30 **Immunotoxicologic Evaluation of Rubratoxin B in Male CD-1 Mice.** M.J. Taylor, R.V. Reddy and R.P. Sharma, *Toxicol. Program, Utah State Univ., Logan, UT.*
- 345 11:45 **Assessment of Primary Irritation of Parenteral Drugs *In Vitro* and Correlation with *In Vivo* Tests.** R.E. Bagdon, *Robert Edward Bagdon, Inc., Livingston, NJ;* H.N. Prince, *Gibraltar Biological Labs., Fairfield, NJ.*

Thursday Morning, March 10, 1983

**PLATFORM SESSION 13: Metabolism IV — Industrial**

Colosseum III

**Co-Chairs: M.B. Abou-Donia, Duke Univ. Med. Ctr., Durham, NC**

**B.R. Manno, Louisiana State Univ., Shreveport, LA**

Paper No.	Time (A.M.)	
346	8:30	<b>Metabolism of 1,2,3-Trimethylbenzene (Hemimellitene) in Rabbits.</b> S. Laham and M. Potvin, <i>Occup. Toxicol. Res., Env. Health Directorate, Health &amp; Welfare Canada, Ottawa, Ont., Canada.</i>
347	8:45	<b>The Kinetics of Benzene Metabolism in Primary Hepatocyte Cultures of Guinea Pig and Rat Compared to Inhalation Uptake Kinetics.</b> S.A. Knadle and J.L. Byard, <i>Dept. of Env. Toxicol., Univ. of California, Davis, CA.</i>
348	9:00	<b>The Fate of <sup>14</sup>C-Ethylenediamine (EDA) in the Mouse Following Different Routes of Administration.</b> J.A. McKelvey, M.J. Tallant and R.S.H. Yang, <i>Bushy Run Res. Ctr., Union Carbide Corp., Export, PA.</i>
349	9:15	<b>Biochemical and Morphological Studies of the Percutaneous Uptake of <sup>14</sup>C-Ethylenediamine in the Rat.</b> R.S.H. Yang, C.M. Anuszkiewicz, S.C. Chu, R.H. Garman, J.A. McKelvey and M.J. Tallant, <i>Bushy Run Res. Ctr., Mellon Inst. -Union Carbide Corp., Export, PA.</i>
350	9:30	<b>In Vivo Metabolism of Inhaled Dimethylamine in the Rat Nasal Mucosa.</b> M.J. McNulty, M. Casanova-Schmitz and H.d'A. Heck, <i>Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.</i>
351	9:45	<b>In Vitro Methylation and N-Oxidation of Morpholine — Species Differences.</b> O.S. Sohn, E.I. Walter, E.S. Fiala, C.C. Conaway and J.H. Weisburger, <i>Naylor Dana Inst. for Disease Prevention, American Health Foundation, Valhalla, NY; Texaco Inc., Beacon, NY.</i>
352	10:00	<b>Dephenylation of N-Phenyl-2-Naphthylamine (PBNA) in the Albino Rabbit.</b> S. Laham and M. Potvin, <i>Occup. Toxicol. Res., Env. Health Directorate, Health &amp; Welfare Canada, Ottawa, Ont., Canada.</i>
353	10:15	<b>Disposition of 4,4'-Thio-bis-(6-tert-butyl-m-cresol) in Rats.</b> L.S. Birnbaum and H.B. Matthews, <i>Sys. Toxicol. Branch, Nat'l Inst. of Env. Health Sci., Research Triangle Park, NC.</i>
354	10:30	<b>Biliary Excretion of <sup>3</sup>H Nitropyrene.</b> M.A. Medinsky and H. Shelton, <i>Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.</i> Sponsor: R.O. McClellan.
355	10:45	<b>Metabolism of Pyridine to Pyridine-N-oxide in Rabbit Liver Microsomal Suspensions.</b> K.K. Hajek and R.F. Novak, <i>Dept. of Pharmacol., Northwestern Univ. Med. School, Chicago, IL.</i> Sponsor: T. Narahashi.

- 356 11:00 **Spectral and Metabolic Properties of Imidazole Induced Rabbit Liver Microsomes.** K.K. Hajek and R.F. Novak, *Dept. of Pharmacol., Northwestern Univ. Med. School, Chicago, IL.* Sponsor: T. Narahashi.
- 357 11:15 **Diethyl Ether Anesthesia Depletes UDP-Glucuronic Acid (UDPGA) and Depresses Biliary Excretion.** J.B. Watkins, Z. Gregus, T.N. Thompson and C.D. Klaassen, *Dept. of Pharmacol., Toxicol. & Therap., Univ. of Kansas Med. Ctr., Kansas City, KS.*
- 358 11:30 ***In Vitro* and *In Vivo* Sex Differences in the Renal Glucuronidation of p-Nitrophenol (PNP).** G.F. Rush, J.F. Newton and J.B. Hook, *Dept. of Pharmacol. & Toxicol., Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.*
- 359 11:45 **Induction of Cytochrome P-450 by Methyleneoxyphenyl Compounds: Importance of the Methylene Carbon.** J.C. Cook and E. Hodgson, *Interdepartmental Toxicol. Program, North Carolina State Univ., Raleigh, NC.*

**Thursday Morning, March 10, 1983**  
**POSTER SESSION 5A: Biochemical I**

Rear of Colosseum Exhibit Area

**Organizer: H. Chung, Walter Reed Army Med. Ctr., Washington, DC**

Displayed: 8:30 A.M. — 11:30 A.M.

Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)

10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)

**Paper No.**

- 360 **Differences in Inducibility of Hepatic Monooxygenases in Rats and Mice by Ethanol.** R.G. Elves, T.H. Ueng and A.P. Alvares, *Dept. of Pharmacol., Uniformed Services Univ., Bethesda, MD.*
- 361 **Characterization and Partial Purification of Rabbit Nasal Cytochrome P-450.** A.R. Dahl, L. Hall and W.M. Hadley, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.*
- 362 **Changes in Rat Cytochrome P-450 Subpopulations Following Partial Hepatectomy.** P.L. Iversen and M.R. Franklin, *Dept. of Biochem. Pharmacol. & Toxicol., Univ. of Utah, Salt Lake City, UT.*
- 363 **Protective Role of Butylated Hydroxyanisole (BHA) Against Chemical-induced Acute Hepatotoxicity (HP) in Mice.** C.L. Miranda, M.C. Henderson, J.A. Schmitz and D.R. Buhler, *Dept. of Agric. Chem., Env. Health Sci. Ctr., and School of Vet. Med., Oregon State Univ., Corvallis, OR.*
- 364 **Effects of Chronic Exposure to Aflatoxin B<sub>1</sub> and Aflatoxin M<sub>1</sub> on the *In Vivo* Covalent Binding of Aflatoxin B<sub>1</sub> to Hepatic Macromolecules.** D.N. Loury and D.P.H. Hsieh, *Dept. of Env. Toxicol., Univ. of California, Davis, CA.*
- 365 **The *In Vivo* and *In Vitro* Effects of Soman on Aldolase Activity.** D.E. Lenz and B.A. Barney, *Basic Pharmacol. Branch, USAMRICD, Aberdeen Proving Ground, MD.* Sponsor: W.E. Sultan.

- 366 **The Effect of Captan on Duodenal Sulfhydryl Levels in Rats.** A.C. Katz, M.W. Sauerhoff, G.M. Zwicker and R.I. Freudenthal, *Stauffer Chemical Co., Env. Health Ctr., Farmington, CT.*
- 367 **Dinitrotoluene (DNT) Structure-dependent Effects on Hepatic Epoxide Hydrolase (EH) and Mixed-function Oxidase (MFO) Activity.** M.E. Graichen, J.A. Popp, J.G. Dent and T.B. Leonard, *CIIT, Research Triangle Park, NC.*
- 368 **Acetaminophen (APAP) Hepatotoxicity in the Mouse: Time Course of Ultrastructural and Biochemical Changes.** M.E. Placke, G.L. Ginsberg, D.S. Wyand and S.D. Cohen, *U-92 Univ. of Connecticut, Storrs, CT.*
- 369 **Cytotoxicity of Muconaldehyde Toward Mammalian Cells in Culture.** E.G. Lee, J.D. Laskin, M.A. Amoruso, G. Witz and B.D. Goldstein, *Dept. of Env. & Comm. Med., Rutgers Med. School/Rutgers Univ. Program in Toxicol., Piscataway, NJ.*
- 370 **The Influence of Protein Type and Level on the Toxicity and Hepatocarcinogenicity of Cyclopropenoid Fatty Acids in the Rainbow Trout.** T.A. Eisele, J.D. Hendricks, P.M. Loveland, J.S. Wilcox, N.E. Pawlowski, G.S. Bailey and J.E. Nixon, *Dept. of Food Sci. & Tech., Oregon State Univ., Corvallis, OR.*
- 371 **Decreased Hepatic Covalent Binding of Nitrotoluenes After Sulfotransferase Inhibition.** G.L. Kedderis, S.R. Schnell and D.E. Rickert, *Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.*
- 372 **Effects of Methoxyacetic Acid and Ethoxyacetic Acid on Mitochondrial Function.** P.J. Beattie and M.J. Brabec, *Dept. of Env. & Ind. Health, Toxicol., Univ. of Michigan, Ann Arbor, MI.*
- 373 **Stimulation of Cytochrome P-450-Mediated Monooxygenase Activity in Primary Mouse Hepatocyte Cultures.** G.L. Parker, J.W. Bridges and C.R. Elcombe, *Imperial Chem. Ind. PLC, Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire, U.K.; Univ. of Surrey, Guildford, Surrey, U.K. Sponsor: I.F.H. Purchase.*
- 374 **Peroxisome Proliferation in Primary Hepatocyte Cultures.** A.M. Mitchell, J.W. Bridges and C.R. Elcombe, *Imperial Chem. Ind. PLC, Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire, U.K.; Univ. of Surrey, Guildford, Surrey, U.K. Sponsor: I.F.H. Purchase.*
- 375 **Comparison of Glutathione Peroxidase from Rat Liver Cytoplasm and Mitochondria.** J. Voigt and A.P. Autor, *Toxicol. Ctr., Dept. of Pharmacol., Univ. of Iowa, Iowa City, IA.*
- 376 **Relationship Between Metabolism and Cytotoxicity of Acetaminophen in Isolated Hepatocytes.** C.E. Green and C.A. Tyson, *SRI Int'l, Menlo Park, CA.*
- 377 **Circadian Variations in Acetaminophen (AAP)-Induced Lethality in Male Mice.** H.P. Bozigian, M.H. Davies, B.A. Merrick, K.L. Johnson and R.C. Schnell, *Dept. Pharmacodynamics-Toxicol., College of Pharmacy, Univ. of Nebraska Med. Ctr., Omaha, NE.*
- 378 **Nonenzymatic Activation of Adriamycin and Initiation of Lipid Peroxidation.** K.B. Wallace, *Dept. of Pharmacol., Univ. of Minnesota-Duluth, Duluth, MN. Sponsor: J.B. Hook.*

- 379 **Cocaine-induced Hepatotoxicity in Mice.** M.W. Kloss, G.M. Rosen and E.J. Rauckman, *Dept. of Pharmacol., Duke Univ. Med. Ctr., Durham, NC.*
- 380 **Cocaine-induced Hepatotoxicity: Lipid Peroxidation as a Possible Mechanism.** C.M. Teaf, R.W. Freeman and R.D. Harbison, *Div. Interdis. Toxicol., Univ. Arkansas Med. Sci., Little Rock, AR.*
- 381 **Paraquat (PQ)-Induced Conditioned Taste Aversions (CIA) and Weight Loss: Mediation by the Area Postrema (AP).** M.S. Dey, G. Edwards, R.I. Krieger, B.E. Renzi and R.C. Ritter, *Vet. Med., Univ. of Idaho, Moscow, ID.*
- 382 **Influence of Uric Acid on Oxidation of Ascorbic Acid in Biological Fluids.** L. Hatch, P. Hochstein and A. Sevanian, *Inst. for Toxicol., Univ. of Southern California, Los Angeles, CA.*
- 383 **Comparison of Dose Response Relationships Between the Inducers Phenobarbital,  $\beta$ -Naphthoflavone, and Aroclor 1254 on the Hepatic Monooxygenase Activity in *Microtus Montanus*.** J.R. Hincks and W.A. Brindley, *Toxicol. Program, Utah State Univ., Logan, UT.* Sponsor: R.P. Sharma.
- 384 **Biochemical, Hematological and Histological Changes in B6C3F1 Mice After Intramuscular Administration of PROven.** R.L. Suber, C.H. Frith and R.L. Kodell, *Pathol. Services Project and Division of Biometry, U.S. FDA, Nat'l Ctr. for Toxicol. Res., Jefferson, AR.* Sponsor: G. Wolff.

**Thursday Morning, March 10, 1983**

**POSTER SESSION 5B: Halogenated Hydrocarbons I**

Rear of Colosseum Exhibit Area

**Organizer: R.M. Joy, Univ. of California, Davis, CA**

Displayed: 8:30 A.M. — 11:30 A.M.

Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)

10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)

Paper No.

- 385 **Cystamine Treatment of Chemically Induced Hepatotoxicity.** J.R. MacDonald, A.J. Gandolfi and I.G. Sipes, *Dept. of Pharmacol. & Toxicol., College of Pharm., and Dept. of Anesth., Univ. of Ariz., Tucson, AZ.*
- 386 **Effect of Dibromoethane and Dichloroethane on the Non-protein Sulfhydryl Content of Rat Organs.** D.A. Wiersma and I.G. Sipes, *Dept. of Pharmacol. & Toxicol., College of Pharmacy, Univ. of Arizona, Tucson, AZ.*
- 387 **Inhibition of Sperm Energy Metabolism by 1,2-Dibromo-3-chloropropane (DBCP).** W.M. Kluwe, A. Greenwell and F. Harrington, *Nat'l Toxicol. Program, Nat'l Inst. of Env. Health Sci., Research Triangle Park, NC.*

- 388 **The Effect of *In Vivo* CCl<sub>4</sub> Exposure on Rat Liver Free Polysomes and *In Vitro* Protein Synthesis.** S. Pavittranon, J. Nelson and M.J. Brabec, *Toxicol. Program, School of Pub. Health, Univ. of Michigan, Ann Arbor, MI.*
- 389 **Induction of Porphyria in Rats by PBB.** R. Voorman, R.K. Jensen, S.D. Sleight and S.D. Aust, *Depts. of Biochem. and Pathol., Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.*
- 390 **Carbon Skeleton Length and Dosage Relationships in Ketone Potentiation of CHCl<sub>3</sub> Toxicity: Renal Histopathology.** E.M. Brown and W.R. Hewitt, *Dept. of Vet. Anat./Physiol., Univ. of Missouri, Columbia, MO.*
- 391 **Carbon Skeleton Length and Dosage Relationships in Ketone Potentiation of CHCl<sub>3</sub> Toxicity: Hepatic Histopathology.** E.M. Brown and W.R. Hewitt, *Dept. of Vet. Anat./Physiol., Univ. of Missouri, Columbia, MO.*
- 392 **Effect of Hypoxia on the Hepatic and Renal Toxicity of Several Haloforms in Mice.** J.A. Zempel, G.J. Traiger and R.P. Hanzlik, *Dept. of Pharmacol. & Toxicol., Med. Chem., School of Pharmacy, Univ. of Kansas, Lawrence, KS.*
- 393 **Quantitation of Carbon Tetrachloride Metabolism in Periportal (PP) and Pericentral (PC) Regions of the Liver Lobule.** R.G. Thurman, F.C. Kauffman and V. Christenson, *Depts. of Pharmacol., Univ. of North Carolina at Chapel Hill, NC; Univ. of Maryland, Baltimore, MD.*
- 394 **Time Course of Chloroform Toxicity in Male and Female ICR Mice.** J.B. Hook, J.H. Smith, K. Maita and S.D. Sleight, *Depts. of Pharmacol. & Toxicol. and Pathol., Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.*
- 395 **Effect of Perfluoro-N-decanoic Acid on Cell Composition and Membranes.** C.T. Olson, M.E. George and M.E. Andersen, *AFAMRL/THT, Wright-Patterson Air Force Base, OH.*
- 396 **Correlation of Biotransformation-detoxication Parameters with 2-Hexanone (MBK), 2-Butanone (MEK) and Acetone-potentiated Chloroform (CHCl<sub>3</sub>) Hepatotoxicity.** L.A. Hewitt, C. Valiquette and G.L. Plaa, *Dépt. de Pharmacologie, Université de Montréal, Montréal, Que., Canada.*
- 397 **Interaction of Carbon Tetrachloride with Rat Liver Mitochondrial DNA.** G.N. Levy and M.J. Brabec, *Toxicol. Program, School of Pub. Health, Univ. of Michigan, Ann Arbor, MI.*
- 398 **Effects of Aroclor 1254 on Rat Hepatic Glutathione (GSH), GSH-Reductase, GSH-Transferase and GSH-Peroxidase.** L.W. Robertson, J. Merrill, I. Lambert and S. Safe, *Veterinary Physiol. & Pharmacol., Texas A&M Univ., College Station, TX.*
- 399 **High Resolution, Isomer Specific Capillary Gas Chromatography of Firemaster BP-6 and FF-1.** L. Robertson, M.D. Mullin and S. Safe, *Dept. of Vet. Physiol. & Pharmacol., Texas A&M Univ., College Station, TX; U.S. EPA, Grosse Ile, MI.*
- 400 **Synthesis of Protein by Isolated Rat Hepatic Mitochondria After Acute CCl<sub>4</sub> Exposure.** R.H. De Wit, M.J. Brabec, R. Chen, N. Maizlish, G. Levy and S. Pavittranon, *Toxicol. Program, School of Pub. Health, Ann Arbor, MI.*

- 401 **Lack of Hepatocarcinogenic Activity After 2,3,6,2',3',6'-Hexachlorobiphenyl (HCB) Exposure in Sprague-Dawley Rats: A Sequential Ultrastructural Study.** R.H. Weltman and D.H. Norback, *Wm. S. Middleton Memorial VA Hosp., Univ. of Wisconsin, Dept. of Pathol., Madison, MI; Hazleton Raltech, Inc., Madison, WI.*
- 402 **Structure-activity Studies on Ketone-induced Potentiation of Halocarbon Hepatotoxicity in Mice.** J.D. Jernigan and R.D. Harbison, *Univ. Arkansas for Med. Sci., Little Rock, AR.*
- 403 **Site-specific Renal Tubular Necrosis in Rat and Mouse Produced by Hexachloro-1:3-Butadiene.** I. Pratt, J. Ishmael and E.A. Lock, *Imperial Chem. Industries PLC, Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire, U.K.* Sponsor: I.F.H. Purchase.
- 404 **Comparative *In Vivo* Genotoxicity and Acute Hepatotoxicity of Three 1,2-Dihaloethanes.** R.D. Storer and R.B. Conolly, *Toxicol. Program, School of Pub. Health, Univ. of Michigan, Ann Arbor, MI.* Sponsor: R. Hartung.
- 405 **Redistribution of PCBs During Pregnancy.** M.V. Spindler, M.J. Vodcnik and J.J. Lech, *Dept. of Pharmacol. & Toxicol., Med. College of Wisconsin, Milwaukee, WI.*
- 406 **Toxicokinetics of [<sup>14</sup>C] Hexafluoroacetone (HFA) in the Rat.** P.J. Gillies and R.W. Rickard, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. & Ind. Medicine, Newark, DE.*
- 407 **Potentiation of 2,3,7,8-Tetrachlorodibenzo-p-dioxin-induced Prostatic Aryl Hydrocarbon Hydroxylase Activity by Various DNA Modifying Agents.** I.P. Lee, D. Mosser and R.L. Dixon, *Lab. of Reproductive & Developmental Toxicol., Nat'l Inst. of Env. Health Sci., Research Triangle Park, NC.*
- 408 **Metabolism of Polybrominated Biphenyls by 3-Methylcholanthrene Induced Rat Liver Microsomes.** R.A. Mills, C.D. Millis and S.D. Aust, *Dept. of Biochem. and Ctr. for Env. Toxicol., Michigan State University, East Lansing, MI*
- 409 **Toxicity of 3,4,5,3',4',5'-Hexabrominated Biphenyl and 3,4,3',4'-Tetrabrominated Biphenyl.** C.D. Millis, R.A. Mills and S.D. Aust, *Dept. of Biochem. and Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.*
- 410 **Comparative Metabolism and Elimination of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD).** J.R. Olson and W.E. Bittner, *Dept. of Pharmacol. & Therap., SUNY at Buffalo, NY.* Sponsor: R.E. Peterson.
- 411 ***In Vitro* Metabolism and Cytotoxicity of Chlorinated Hydrocarbon Solvents.** D.L. Story, S.J. Gee, K. Hawk-Prather, C.A. Tyson and C. Mitoma, *SRI Int'l, Menlo Park, CA; H.A. Milman, U.S. EPA, Washington, DC.*
- 412 ***In Vivo* Metabolism of Chlorinated Ethanes.** C. Mitoma, T. Steeger and S.E. Jackson, *SRI Int'l, Menlo Park, CA; H.A. Milman, U.S. EPA, Washington, DC.*
- 413 **Effect of Selenium on the Metabolic Excretion of Bromobenzene (BB) in Rats.** S. Chakrabarti and J. Brodeur, *Dép. Méd. du Trav. et Hyg. du Mil., Fac. Méd., Univ. Montréal, Montreal, Que., Canada.*

- 414 **Tissue Distribution, Metabolism and Excretion of Three Tetrachlorobenzene Congeners in the Rat.** I. Chu, D.C. Villeneuve, Y.H. Qin, A. Viau and G.C. Becking, *Env. & Occup. Toxicol. Div., Env. Health Directorate, Ottawa, Ont., Canada.*
- 415 **Carbon Tetrachloride (CCl<sub>4</sub>) - Induced Adrenal Cortical Necrosis in Guinea Pigs: Site of CCl<sub>4</sub> Activation.** P.I. Eacho, W.C. Brogan, III, D.E. Hinton and H.D. Colby, *West Virginia Univ. Med. Ctr., Morgantown, WV.*
- 416 **1,2-Dibromo-3-chloropropane as a Substrate for Hepatic, Renal, and Testicular Glutathione S-Transferases in the Rat.** G.E. Miller and A.P. Kulkarni, *Toxicol. Program, Dept. of Env. & Ind. Health, Univ. of Michigan, Ann Arbor, MI.*
- 417 **In Vitro Metabolism of 1,1-Dichloroethylene (Vinylidene Chloride) by Rat Hepatic Microsomes and Mitochondria.** R. Chen, M.J. Brabec and R.B. Conolly, *Toxicol. Program, Dept. of Env. & Ind. Health, Univ. of Michigan, Ann Arbor, MI.*

**Thursday Morning, March 10, 1983**  
**SYMPOSIUM 4: Current Concepts in Food Toxicology**  
**(Co-sponsored by American College of**  
**Veterinary Toxicologists)**

Julius Room

**Co-Chairs: J.B. Hook, Michigan State Univ., East Lansing, MI**  
**J. Robens, U.S. Dept. of Agriculture, Beltsville, MD**

**Time (A.M.)**

- 8:30 **Introduction.** J.B. Hook.
- 8:35 **Toxic and Anti-nutritional Factors in Legumes.** I.E. Liener, *College of Biological Sciences, Univ. of Minnesota, St. Paul, MN.*
- 9:05 **Discussion.**
- 9:15 **Implications of Fusarium Toxins in Foods and Feeds.** G.D. Osweller, *College of Veterinary Med., Univ. of Missouri, Columbia, MO.*
- 9:45 **Discussion.**
- 9:55 **Experimental In Vitro Approaches to Studying Xenobiotic Metabolism in Large Food Animals.** L. Shull, *Dept. of Env. Toxicol., Univ. of California, Davis, CA.*
- 10:25 **Discussion.**
- 10:35 **Halogenated Biphenyls in Cattle: Effects on Reproduction and Target Organs.** L. Willett, *Ohio Agricultural Research & Development Ctr., Wooster, OH.*
- 11:05 **Discussion.**
- 11:15 **Summary of USDA/Michigan State University Feasibility Study on Role of USDA in Food Toxicology Research.** J. Robens, *Food Safety & Health, Agricultural Research, U.S. Dept. of Agriculture, Beltsville, MD.*
- 11:45 **Discussion.**

Thursday Morning, March 10, 1983  
**POSTER SESSION 5C: Inhalation V**

Rear of Colosseum Exhibit Area

**Organizer: R.F. Henderson, Inhal. Tox. Res. Inst., Albuquerque, NM**

Displayed: 8:30 A.M. — 11:30 A.M.

Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)

10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)

**Paper No.**

- 418 **Acute Inhalation Toxicity of the Smoke Produced by Five Halogenated Polymers.** H.L. Kaplan, A.F. Grand and W.G. Switzer, *Dept. of Fire Tech., Southwest Res. Inst., San Antonio, TX*; S.D. Gad, *Allied Corp., Morristown, NJ.*
- 419 **Acute Smoke Inhalation Toxicity of Certain Fabrics.** D. Drozdowski and J.J. Meyer, *United States Testing Co., Hoboken, NJ.* Sponsor: G. Loewengart.
- 420 **Formation of Naphthalene Glutathione Adducts in Microsomes from Target and Non-target Tissues of the Mouse.** A.R. Buckpitt, G. Smart and L. Bahnsen, *Dept. of Community & Env. Med., Univ. of California, Irvine, CA.*
- 421 **Effect of Treatment with Bronchiolar or Alveolar Cytoxicants on the Formation of Bromobenzene-glutathione Conjugates in Lung Slices.** N. Fakjian and A.R. Buckpitt, *Community & Env. Med., Univ. of California, Irvine, CA.*
- 422 **The Role of Zeta Potential in the Interaction of Particulates and Cells.** J.D. Heck, D.-S. Wang and M. Costa, *Div. of Toxicol., Dept. Pharmacol., Univ. of Texas Med. School, Houston, TX.*
- 423 **Respiratory Responses in Guinea Pigs Exposed to Submicron Zinc Oxide Particles and Sulfur Dioxide Mixed in a Humidified Furnace.** M.W. Conner, H.F. Lam, A.E. Rogers and M.O. Amdur, *Dept. of Nutrition and Food Sci. and Energy Lab., Massachusetts Inst. of Tech., Cambridge, MA.*
- 424 **Subchronic Inhalation Study of a High Boiling Solvent Refined Coal Material.** D.L. Springer, D.D. Mahlum and H.A. Ragan, *Biol. Dept., Pacific Northwest Lab., Richland, WA.*
- 425 **Comparison of the Effects of Asbestos and Wollastonite on Alveolar Macrophages.** W.H. Pailles, D.J. Judy, H. Resnick and V. Castranova, *Nat'l Inst. for Occup. Safety & Health, Morgantown, WV.*
- 426 **Toxicity of Metallic Ions to Isolated Rat Alveolar Macrophages and Alveolar Type II Cells.** V. Castranova, G.S. Jones and P.R. Miles, *NIOSH, Morgantown, WV.*
- 427 **Inhalation Toxicity of Fly Ash.** C.H. Hobbs, D.E. Bice, R.L. Carpenter, F.F. Hahn, R.F. Henderson, J.L. Mauderly, J.A. Pickrell, S.A. Silbaugh and R.K. Wolff, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.*

- 428 **Pulmonary Biochemical Responses of Rats to Acute Inhalation Exposure to Perfluoroisobutylene (PFIB).** F.O. O'Neal, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.* Sponsor: G.L. Kennedy, Jr.
- 429 **Inhalation Toxicity of Perfluorobutylethylene in the Rat.** R.L. Ferenz, B.A. Burgess and G.L. Kennedy, Jr., *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.*
- 430 **Inhalation Toxicology of Aerosols of Corn Oil (CO) and di(2-Ethylhexyl)sebacate (DEHS).** R.J. Rubin, N.J. Allegretto, G.E. Butterfield, R.B. Kroll, H. Lum, W.A. Mitzner, C.A. Mumma, R.T. Rabold, D.L. Swift and G.A. Warr, *Dept. of Env. Health Sci., Johns Hopkins School of Hygiene & Pub. Health, Baltimore, MD.*
- 431 **Chemical Deposition of Aerosolized <sup>3</sup>H-Catechol in BC3F1/CUM Female Mice.** K.K. Hwang, O. Sonko, D.R. Dansie, D. Mullinax, R.E. Kouri and C.J. Henry, *Dept. of Inhal. Toxicol., Microbiological Associates, Bethesda, MD.*
- 432 **Lipid Peroxidation and Histamine Release from Rat Isolated Perfused Lung (IPL): A Potential Mechanism for Pulmonary O<sub>2</sub> Toxicity.** A.J. Januszkiewicz, P.K. Wilson and M.D. Faiman, *Dept. of Pharmacol. & Toxicol., Univ. of Kansas, Lawrence, KS.*
- 433 **Effects of Short-term Ozone Exposure on Lung Lysyl Oxidase Activity and Lavage Cell Populations.** J.K. Yermakoff, T.E. White and R.T. Drew, *Med. Dept., Brookhaven Nat'l Lab., Upton, NY.*
- 434 **Pulmonary Effects of Intravenously Injected Chloramine-T in the Dog.** R.R. King, R.F. Henderson, R.K. Wolff and J.L. Mauderly, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.*
- 435 **Enhanced Acute Lung Damage Following the Administration of Corticosteroids.** J.P. Kehrer, *Dept. of Pharmacol., College of Pharmacy, Univ. of Texas at Austin, Austin, TX.*
- 436 **Comparative Study of Pulmonary Fibrosis in Fischer 344 Rats Induced by Bleomycin or Pepleomycin.** K.L. Pavkov, *Battelle, Columbus Labs., Columbus, OH.* Sponsor: G.L. Fisher.
- 437 **Sulfur Dioxide-induced Chronic Bronchitis in Beagle Dogs.** S.A. Greene and R.K. Wolff, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.* Sponsor: R.O. McClellan.
- 438 **Development of a Murine Model of Pulmonary Emphysema for Use in Toxicological Studies.** R. Valentine, R.B. Rucker, C.E. Chrisp and G.L. Fisher, *Battelle Columbus Labs., Columbus, OH; Univ. of California, Davis, CA; Univ. of Michigan, Ann Arbor, MI.*
- 439 **Inhaled <sup>14</sup>C-Phosgene: Species Comparison and Biochemical Fate.** R. Slade, J.A. Graham and G.E. Hatch, *Inhal. Toxicol. Div., Health Effects Res. Lab., U.S. EPA, Research Triangle Park, NC.*
- 440 **Behavioral Effects of Ozone or Ammonia in Mice and Rats.** J.L. Tepper, R.W. Wood and B. Weiss, *Depts. of Pharmacol., Rad. Biol. and Biophys., Univ. of Rochester Med. Ctr., Rochester, NY; Northrup Serv., Env. Sci., Research Triangle Park, NC.*

Thursday Afternoon, March 10, 1983

PLATFORM SESSION 14: Biochemical II

Colosseum II

Co-Chairs: M. Vore, Univ. of Kentucky, Lexington, KY

J.S. Woods, Battelle Seattle Res. Ctr., Seattle, WA

Paper No.	Time (P.M.)	
441	1:30	<b>Formation and Persistence of a Putative N-Nitrosopyrrolidine-derived (NP) DNA Adduct in Rats.</b> E.J. Hunt and R.C. Shank, <i>Dept. Comm. &amp; Env. Med., Univ. of California Southern Occup. Health Ctr., Univ. of California, Irvine, CA.</i>
442	1:45	<b>Studies of the Metabolic Bioactivation of N-Nitrosopyrrolidine in the Rat.</b> R.C. Cottrell, S.D. Blower, D.G. Walters, R. Purchase, B.G. Lake, J.C. Phillips and S.D. Gangolli, <i>British Ind. Biol. Res. Assoc., Carshalton, Surrey, U.K.</i>
443	2:00	<b>Protection from Alloxan Diabetes by High Doses of Nicotinamide and a Metabolite N'-Methylnicotinimide.</b> L.J. Fischer, R. Fisher and J. Falany, <i>Toxicol. Ctr., Dept. of Pharmacol., Univ. of Iowa, Iowa City, IA.</i>
444	2:15	<b>Studies on Uroporphyrinogen Decarboxylase in Adult and Fetal Rat Liver.</b> J.S. Woods and R.M. Kardish, <i>NIEHS, NIH, Research Triangle Park, NC.</i>
445	2:30	<b>Effect of Benzene on DNA Synthesis in Bone Marrow Cells.</b> E.W. Lee, <i>Biomed. Sci. Dept., General Motors Res. Labs., Warren, MI.</i> Sponsor: J.J. Vostal.
446	2:45	<b>Binding of Cholic Acid to Putative Bile Acid Carriers: Effect of Pregnancy, Estrogen Treatment and Estrogen Glucuronides.</b> M. Vore and A. Auansakul, <i>Grad. Ctr. Toxicol., Dept. Pharmacol., Univ. of Kentucky, Lexington, KY.</i>
447	3:00	<b>Effects of Acetaminophen on Primary Cultures of Rat Kidney Epithelial Cells.</b> M.A. Smith and D. Acosta, <i>Dept. of Pharmacol./Toxicol., College of Pharmacy, Univ. of Texas, Austin, TX.</i>
448	3:15	<b>The Role of p-Aminophenol (PAP) in Acetaminophen (APAP) Induced Nephrotoxicity. I: Effect of bis(p-Nitrophenyl) Phosphate (BNPP) on Nephrotoxicity of APAP and PAP in the F344 Rat.</b> C.-H. Kuo, J.F. Newton, G.M. DeShone, D. Hoefle and J.B. Hook, <i>Dept. of Pharmacol. &amp; Toxicol., Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.</i>
449	3:30	<b>The Role of p-Aminophenol (PAP) in Acetaminophen (APAP) Induced Nephrotoxicity. II: The Effect of bis-(p-Nitrophenyl) Phosphate (BNPP) on APAP and PAP Metabolism in the F344 Rat.</b> J.F. Newton, C.-H. Kuo, D. Hoefle and J.B. Hook, <i>Dept. of Pharmacol. &amp; Toxicol., Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.</i>

- 450 3:45 **Subcellular Localization of Hepatocyte Injury Due to Metabolic Activation of Acetaminophen.** D. Acosta and D.B. Mitchell, *Univ. of Texas at Austin, Austin, TX; Procter & Gamble Co., Cincinnati, OH.*
- 451 4:00 **Latent Toxicity of a Synthetic Cephalosporin by Assessment of Endoplasmic Reticulum Function in Rat Liver.** R.A. Martin, G. Feuer, C.J. Di Fonzo, J.M. Sturgess and F.A. de la Iglesia, *Path. Exp. Tox., Warner-Lambert/Parke-Davis Pharm. Res. Div., Mississauga, Ont., Canada and Ann Arbor, MI; Path. and Clin. Biochem. Depts., Univ. of Toronto, Toronto, Ont., Canada*
- 452 4:15 **Effect of Chain Branching on the Liver Toxicity of Dialkyl Phthalates.** A.H. Mann, *Shell, London*; S.H. Price, F.E. Mitchell and R.H. Hinton, *Univ. of Surrey*; P. Grasso, *BP Res., Sunbury, U.K.* Sponsor: J.W. Bridges.
- 453 4:30 **Structure-activity Analysis of Binding to the TCDD Receptor.** S. Bandiera, T. Fujita and S. Safe, *Vet. Physiol. & Pharmacol., Texas A&M Univ., College Station, TX; Dept. of Agric. Chem., Kyoto Univ., Kyoto, Japan.* Sponsor: L.W. Robertson.
- 454 4:45 **Microsomal Flavin Containing Monooxygenase (MFMO) Activity During Pregnancy in CD<sub>1</sub> Mice.** T.G. Osimitz and A.P. Kulkarni, *Dept. of Env. & Ind. Health, Univ. of Michigan, Ann Arbor, MI.*

Thursday Afternoon, March 10, 1983

**PLATFORM SESSION 15: Halogenated Hydrocarbons II**

Colosseum III

**Co-Chairs: L.R. Pohl, Nat'l Heart, Lung & Blood Inst., Bethesda, MD  
D.R. Buhler, Oregon State Univ., Corvallis, OR**

- | Paper No. | Time (P.M.) |   |
|-----------|-------------|---|
| 455       | 1:30        | <b>Metabolism of Trichloroethylene in Microsomal and Reconstituted Cytochrome P-450 Systems.</b> R.E. Miller and F.P. Guengerich, <i>Depts. of Pharmacol. and Biochem. and Ctr. in Env. Toxicol., Vanderbilt Univ., Nashville, TN.</i>                    |
| 456       | 1:45        | <b>Covalent Binding of Glutathione to Nucleic Acids by 1,2-Dibromoethane by Glutathione S-Transferase and in Isolated Hepatocytes.</b> N. Ozawa and F.P. Guengerich, <i>Dept. of Biochem. and Ctr. in Env. Toxicol., Vanderbilt Univ., Nashville, TN.</i> |
| 457       | 2:00        | <b>Reductive-oxygenation of Carbon Tetrachloride to Phosgene by Rat Liver Cytochrome P-450.</b> L.R. Pohl, P.L. Morris, R.D. Schulick and J.W. George, <i>Nat'l Heart, Lung &amp; Blood Inst., Bethesda, MD.</i>  |

- 458 2:15 ***In Vitro* Evidence for Renal Metabolism of Chloroform.** J.H. Smith and J.B. Hook, *Dept. of Pharmacol./Toxicol., Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.*
- 459 2:30 **Induction of Hepatic Drug Metabolizing Enzymes and Hexachlorobenzene (HCB)-Induced Porphyrin in Japanese Quail.** H.M. Carpenter, D.E. Williams, M.C. Henderson, R.C. Bender and D.R. Buhler, *Dept. of Agric. Chem. and Env. Health Sci. Ctr., Oregon State Univ., Corvallis, OR.*
- 460 2:45 **The Comparative Acute, Subacute and Subchronic Toxicity of Three Tetrachlorobenzene Congeners in the Rat.** D.C. Villeneuve, I. Chu, V.E.O. Valli, V.E. Secours and G.C. Becking, *Env. & Occup. Toxicol. Div., Env. Health Directorate, Ottawa, Ont., Canada; Biopath Analysts, Guelph, Ont., Canada.*
- 461 3:00 **Induction of Cytochrome P-450 Dependent Enzymes by PCB Congeners: Structure-activity Correlations and Species Dependence.** I. Lambert, M.A. Denomme, L. Copp, L. Robertson, L. Safe and S. Safe, *Dept. of Vet. Physiol. & Pharmacol., Texas A&M Univ., College Station, TX; GWC, Dept. of Chem., Univ. of Guelph, Guelph, Ont., Canada.*
- 462 3:15 **Endotoxin Mediated Mechanisms of Halothane Hepatitis.** R.C. Lind, A.J. Gandolfi, I.G. Sipes and B.R. Brown, *Dept. of Anesthesiol., Univ. of Arizona, Tucson, AZ.*
- 463 3:30 **Delayed Wasting Syndrome in Rats Exposed to Tetrachloroazobenzene and Azoxybenzene.** M.T.S. Hsia, B.L. Kreamer and L.E. Guagliardi, *Env. Toxicol. Ctr. and Dept. of Entomol., Univ. of Wisconsin, Madison, WI.*
- 464 3:45 **Effects of Pre- and Isopredioxins on Thermotropic Properties of the Human Erythrocyte Membrane.** T.L. Miller and R.J. Smith, *Env. Health Sci. Ctr., Oregon State Univ., Corvallis, OR.*
- 465 4:00 **Enhancement of Carrageenan and Dextran-induced Edemas by 2,3,7,8-Tetrachlorodibenzo-p-dioxin.** M.H. Theobald, R.W. Moore, L.B. Katz and R.E. Peterson, *Univ. of Wisconsin, Madison, WI.*
- 466 4:15 **Comparative Effects of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) on Lipid Absorption in C57BL/6J and DBA/2J Mice.** D.E. Chapman, R. Walden and C.M. Schiller, *Lab. of Pharmacol., NIEHS/NIH, Research Triangle Park, NC.*
- 467 4:30 **Applications of *In Vitro* Bioassays for Toxic Halogenated Aromatics.** T. Sawyer, S. Bandiera, K. Olie, O. Hutzinger and S. Safe, *Dept. of Vet. Physiol. & Pharmacol., Texas A&M Univ., College Station, TX; Dept. of Env. & Toxicol. Chem., Univ. of Amsterdam, Amsterdam, Netherlands.* Sponsor: L.W. Robertson.
- 468 4:45 **Comparative Biologic and Toxic Effects of Polychlorinated and Polybrominated Biphenyls.** J. Andres, I. Lambert, L. Robertson, T. Sawyer, S. Bandiera and S. Safe, *Dept. of Vet. Physiol. & Pharmacol., Texas A&M Univ., College Station, TX.*

Thursday Afternoon, March 10, 1983  
PLATFORM SESSION 16: Inhalation VI

Neros Room

Co-Chairs: D.K. Craig, Litton Bionetics, Inc., Rockville, MD  
G.M. Rusch, Allied Corp., Morristown, NJ

Paper No.	Time (P.M.)	
469	1:30	<b>Long-term Evaluation of the Pulmonary Toxicity of Polyvinyl Chloride Combustion Products in Guinea Pigs.</b> K.L. Wong, Y. Alarie and M.F. Stock, <i>Dept. of Ind. Env. Health Sci., Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.</i>
470	1:45	<b>A Rapid and Easy Procedure to Detect Acute Bronchoconstriction Induced by Inhalation of Airborne Chemicals.</b> M. Matijak-Schaper and Y. Alarie, <i>Toxicol. Lab., Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.</i>
471	2:00	<b>Single Tracer Technique to Evaluate Pulmonary Irritation and its Application to Detect the Effect of Hexamethylene Diisocyanate Trimer Exposures.</b> J.E. Valentini, K.L. Wong and Y. Alarie, <i>Dept. of Ind. Env. Health Sci., Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.</i>
472	2:15	<b>The Effect of Inhalation Exposure Technique on the LC<sub>50</sub> of Test Materials.</b> R.J. LaBauve, B.O. Stuart and R.I. Freudenthal, <i>Stauffer Chem. Co., Farmington, CT.</i>
473	2:30	<b>Reducing External Body Contamination from Radioactive Aerosols in Nose Only Inhalation Experiments in Rats.</b> G. Oberdoerster, S.M. Meinhold and N.L. Marcello, <i>Dept. RBB, Med. Ctr., Univ. of Rochester, Rochester, NY.</i> Sponsor: P.E. Morrow.
474	2:45	<b>Tissue Distribution and Behavioral Effects of Inhalation Exposure to Manganese (MnO<sub>2</sub>) in the Mouse.</b> E.J. Massaro, J.B. Morganti, B.A. Lown, R.B. D'Agostino and C.H. Stineman, <i>Ctr. for Air Env. Studies, Penn State Univ., University Park, PA; Dept. Psychol., SUCNY-Buffalo, Buffalo, NY.</i>
475	3:00	<b>Pulmonary Clearance of Soluble and Insoluble Forms of Manganese.</b> D.B. Brown, S.G. Oberg and R.P. Sharma, <i>Toxicol. Program, Utah State Univ., Logan, UT.</i>
476	3:15	<b>Influence of Exercise on Respiratory Tract Uptake of Pollutant Gases.</b> M.T. Kleinman, C. Bufalino, W.J. Mautz and R.F. Phalen, <i>Dept. of Comm. &amp; Env. Med., Univ. of California, Irvine, CA.</i>
477	3:30	<b>Cytokinetic Changes in the Lungs and Thoracic Lymph Nodes of the Rat After Inhalation of Fly Ash.</b> S.G. Shami, S.A. Silbaugh and F.F. Hahn, <i>Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.</i> Sponsor: R.O. McClellan.
478	3:45	<b>Pulmonary Clearance of Nitrate Aerosols.</b> J.E. Valentini, D. Deal and D.B. Menzel, <i>Dept. of Pharm. &amp; Med., Duke Med. Ctr., Durham, NC.</i>
479	4:00	<b>Uptake of NO<sub>2</sub> in Animals and Man.</b> F.J. Miller and J.A. Graham, <i>HERL, U.S. EPA, Research Triangle Park, NC; J.H. Overton, Jr. and E.T. Myers, Northrop Services, Inc., Research Triangle Park, NC.</i>

- 480 4:15 **Effect of Urban Patterns of Nitrogen Dioxide (NO<sub>2</sub>) on Susceptibility to Pulmonary Infection.** J.A. Graham, F.J. Miller, J.W. Illing, D. Davies and D.E. Gardner, *HERL, U.S. EPA, Research Triangle Park, NC.*
- 481 4:30 **Effect of Inhaled Hexamethylene Diisocyanate (HDI) on Guinea Pig Cholinesterases.** M.H. Karol and G.A. Hansen, *Dept. of Ind. Env. Health Sci. Grad. School of Pub. Health, Univ. of Pittsburgh, Pittsburgh, PA.*
- 482 4:45 **The Neuropathic Activity of Commercial Hexane Mixtures in the Male Rat: Part II.** A.W. Lington and S.C. Lewis, *Exxon Corp., East Millstone, NJ*; F.B. Thomas, *Shell Development Co., Houston, TX*; G.C. Granville, *Shell Canada Ltd., Toronto, Ont., Canada*; S.T. Cragg, *American Petroleum Inst., Washington, DC*; P.S. Spencer, *Albert Einstein Univ., Bronx, NY.* Sponsor: G.F. Egan.

**Thursday Afternoon, March 10, 1983**  
**POSTER SESSION 6A: General IV**

Rear of Colosseum Exhibit Area

**Organizer: R.C. Schnell, Univ. of Nebraska, Omaha, NE**

**Displayed: 1:30 P.M. — 4:30 P.M.**

**Attended: 1:30 P.M. — 3:00 P.M. (Even Paper Numbers)**

**3:00 P.M. — 4:30 P.M. (Odd Paper Numbers)**

**Paper No.**

- 483 **Toxicology Data Bank as an Information Resource for Toxic and Hazardous Substances.** P.-Y. Lu, *Toxicol. Data Bank, Oak Ridge Nat'l Lab., Oak Ridge, TN.* Sponsor: R.E. Menzer.
- 484 **The WIL On-line Teratology Data Management System.** D.E. Rodwell, R.E. Wilson, M.D. Nemeč and G.B. Briggs, *WIL Res. Labs., Inc., Ashland, OH.* Sponsor: G.M. Szczech.
- 485 **Computer-based Data Acquisition and Information System for Toxicology Laboratories.** E.J. McGuire, C.J. DiFonzo, D. Scales, A. Daly and F.A. de la Iglesia, *Dept. of Pathol. & Exp. Toxicol., Warner-Lambert/Parke-Davis Pharm. Res. Div., Ann Arbor, MI and Mississauga, Ont., Canada.*
- 486 **Computerization of Clinical Signs Data and Enhancements to Dose Administration Reporting.** A.J. George, K.W. Smith, P.J. DeBaecke and J.J. Druding, *Stuart Pharmaceuticals and Management Information Services Dept., ICI Americas Inc., Wilmington, DE.* Sponsor: L.E. Gongwer.
- 487 **Data Management System for a GLP Analytical Chemistry Laboratory.** M.F. Marcus, S.J. Foulk and R.I. Freudenthal, *Stauffer Chem. Co., Env. Health Ctr., Farmington, CT.*
- 488 **DFP Does Not Inhibit Lectin or Alloantigen Induced Transformation of Human Lymphocytes *In Vitro*.** G.A.W. Waterhouse, G.L. Brandt and R.B. Forney, *Dept. of Pharmacol. & Toxicol. and Dept. of Surgery, Indiana Univ. School of Med., Indianapolis, IN.*

- 489 **Nonquaternary Cholinesterase Reactivators: 3-Substituted 5-Hydroxyiminomethyl 1,2,4-Oxadiazoles.** R. Howd, C. Bedford, O. Dailey, A. Miller and R. Kenley, *SRI Int'l, Menlo Park, CA*. Sponsor: D.C.L. Jones.
- 490 **Assessment of Neuronal Damage in TOCP-Dosed Hens: A Quantitative Neurohistochemical Approach Using Horseradish Peroxidase.** R. DeGrandchamp, R.H. Gray and R.J. Richardson, *Toxicol. Program, Univ. of Michigan, Ann Arbor, MI*.
- 491 **Chronic Toxicity and Carcinogenicity Study with Santocure® MOR (N-Oxydiethylene-2-benzothiazole Sulfenamide).** M.W. Stevens, F.R. Johannsen and G.J. Levinskas, *Dept. of Med. & Env. Health, Monsanto Co., St. Louis, MO*; A. Spivey and K. Baker, *Monsanto Europe*.
- 492 **Six Month Feeding Study of Fenvalerate in Dogs.** C.M. Parker, *Shell Development Co., Houston, TX*; V.J. Piccirillo, S.L. Kurtz and F.M. Garner, *Borrison Labs. Inc., Temple Hills, MD*.
- 493 **A Subacute and Subchronic Study of 2,6-Diethylaniline (DEA).** R.W. Naismith and E. Larson, *Pharmakon Res. Int'l Inc., Waverly, PA*; T. Pullin, R. Smith and G. Ter Haar, *Ethyl Corp., Baton Rouge, LA*; W. Halliwell, *Westpath Assoc., Fort Collins, CO*; E. Whorton, *ASI, Inc., Galveston, TX*.
- 494 **The Oral Toxicity of R-33865 Technical in Beagle Dogs.** R.E. Ouellette, R.W. Thomassen, M.W. Sauerhoff, and G.M. Zwicker, *Stauffer Chem. Co., Env. Health Ctr., Farmington, CT*.
- 495 **Effect of Pre-exposure to Methyl Butyl Ketone (MBK) Vapors on the Disposition of a Single Topical Dose of O,O-Diethyl O-4-Nitrophenyl Phenylphosphonothioate (EPN) in the Adult Hen.** K.M. Abdo, P.R. Timmons and M.B. Abou-Donia, *Dept. of Pharmacol., Duke Univ. Med. Ctr., Durham, NC*; *Nat'l Toxicol. Program, Research Triangle Park, NC*.
- 496 **Subchronic Dietary Toxicity of Fyrol® PCF in Rats.** A.C. Katz, D.W. Frank, G.M. Zwicker and M.W. Sauerhoff, *Stauffer Chem. Co., Env. Health Ctr., Farmington, CT*.
- 497 **Subchronic Toxicity of Chlorinated Trisodium Phosphate in Rats.** A.C. Katz, D.W. Frank, M.W. Sauerhoff, G.M. Zwicker, D.R. Saunders and J.H. Wedig, *Stauffer Chem. Co., Env. Health Ctr., Farmington, CT*; *Olin Corp., New Haven, CT*.
- 498 **Acute, Subacute and Subchronic Toxicity of Cyclohexanone Oxime.** S.C. Gad, W.J. Powers, M.J. Derelanko, B.J. Dunn, S.B. Mulder and P.C. Babich, *Dept. of Toxicol., Allied Corp., Morristown, NJ*.
- 499 **Subchronic Dietary Toxicity of Trichlorobenzyl Chloride in the Rat.** F.R. Johannsen and G.J. Levinskas, *Dept. of Med. & Env. Health, Monsanto Co., St. Louis, MO*.
- 500 **Pathophysiology of Splenic Toxicity in Mice and Rats Following Oral Nitrobenzene (NB) Administration.** R.S. Goldstein, R.D. Irons, D.E. Rickert, J.K. Davis and T.E. Hamm, Jr., *CIIT, Research Triangle Park, NC*.
- 501 **Observations on Spontaneous Seminal Plug Emission in Rats Receiving 2,5-Hexanedione.** W.H. Ralston and R.W. Gardier, *Dept. Pharmacol. & Toxicol., Wright State Univ., Dayton, OH*; R.L. Hilderbrand and L.L. Pitts, *NMRI/TD, Wright Patterson AFB, Dayton, OH*.

- 502 **Preclinical Toxicity of Vehicle 12 in Beagle Dogs.** B.H. Neal, V.J. Piccirillo, J.C. Rowland and M.D. Castello, *Borriston Labs., Inc., Temple Hills, MD; Battelle Toxicol. Program Office, Vienna, VA.*
- 503 **Comparative Toxicological Evaluation of Two Triarylphosphate Based Hydraulic Fluids.** C.L. Gaworski, E.R. Kinkead and J.D. MacEwen, *Univ. of California, Toxic Hazards Res. Unit, Dayton, OH; A.P. D'Addario and R. Salomon, NMRI/TD and AFAMRL, Wright Patterson AFB, OH.*
- 504 **Diethanolamine-induced Changes in Liver and Kidney of Neonatal Rat.** G.A. Burdock, *Hazleton Labs. America, Inc., Vienna, VA.* Sponsor: M. Steinberg.
- 505 **Toxicity of 3,4-Dehydro-l-proline (DHP) in the Dog.** R.M. McClain, G.K.S. Roberts, J.C. Downing and J.J. Kamm, *Dept. of Toxicol. & Pathol., Hoffmann-La Roche Inc., Nutley, NJ.*
- 506 **Assessment of Potential Toxic Effects of Treated Hemofil® (T-AHF) Injection on Rats and Mice and on the Systemic Hemodynamics in Dogs.** Y. Greener, G. Jesmok, N. Grove, D. Schmitt and D. Wienckowski, *Travenol Labs., Inc., Morton Grove, IL.* Sponsor: G.J. Youkilis.
- 507 **Comparative Toxicity of di-(2-Ethylhexyl)phthalate (DEHP) in Rats and Marmosets.** C.R. Elcombe, P.L. Batten, S.J. Jackson, I.S. Pratt and C. Rhodes, *Imperial Chem. Industries PLC, Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire, U.K.* Sponsor: I.F.H. Purchase.
- 508 **Investigation of the Toxicity of Gossypol in the Rat.** J.C. Merrill, I. Lambert, L.W. Robertson, H.L. Kim and S. Safe, *Dept. of Vet. Physiol. & Pharmacol., Texas A&M Univ., College Station, TX.*
- 509 **Response of Erythrocyte and Spleen to Aniline Insult in Fischer-344 Rats.** P. Robertson, Jr., M.G. Cox and J.S. Bus, *Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.*
- 510 **The Subchronic Toxicity of p-Nitroaniline Administered to Male and Female Sprague-Dawley Rats for 90 Days.** R.M. Houser, L.D. Stout and W.E. Ribelin, *Env. Health Lab., Dept. of Env. Health, Monsanto Co., St. Louis, MO.*
- 511 **Subacute Toxicity of p-Nitroaniline in Mice.** R. Chhabra, K. MacKenzie, P. MacWilliams, T. Jackson and R. Maronpot, *Nat'l Toxicol. Program, NIEHS, Research Triangle Park, NC; Hazleton Raltech, Inc., Madison, WI.*
- 512 **Subchronic Feeding Study in Rats of N,N-Dimethylformamide (DMF).** W.D. Johnson, K.A. Voss, M.A. Gallo and P.J. Becci, *Food & Drug Res. Labs., Inc., Waverly, NY.*
- 513 **Subchronic Feeding Study in Mice of N,N-Dimethylformamide.** K.A. Voss, W.D. Johnson, M.A. Gallo and P.J. Becci, *Food & Drug Res. Labs., Inc., Waverly, NY.*
- 514 **Chronic Oral Toxicity/Carcinogenicity Studies of Food, Drug and Cosmetic Colors in CD Rats.** J.F. Borzelleca, J. Hallagan, C. Reese, E. Goldenthal and G. Hogan, *Med. College of Virginia, Richmond, VA, Certified Colors Manufacturers Assoc., Washington, DC; Int'l Res. & Dev. Corp., Mattawan, MI; Bio-Dynamics, Millstone, NJ.*

- 515 **Salt Appetite Studies of an Angiotensin Converting Enzyme Inhibitor, MK-0421, in Rats.** D.H. Minsker, R.T. Robertson, W.J. Bagdon and D.L. Bokelman, *Merck Inst. for Therap. Res., West Point, PA.*
- 516 **Ocular Changes in Dogs After Intravenous Administration of a Macrolide Antibiotic - SCH 14947.** T. Massa, G.J. Davis, D. Schiavo, D.P. Sinha, R.J. Szot, H.E. Black and E. Schwartz, *Schering Corp., Lafayette, NJ.*
- 517 **Toxicity of Enalapril in Dogs Ameliorated by Saline Supplementation.** W.J. Bagdon and D.L. Bokelman, *Merck Inst. for Therap. Res., West Point, PA.*
- 518 **Toxicological Assessment of a 20% Lipid Emulsion.** E. Youkilis, Y. Greener, D. Wienckowski and R. Izzo, *Travenol Labs., Inc., Morton Grove, IL.*
- 519 **The Effects of Phenobarbital, PCB, and Piperonyl Butoxide on the Antagonistic Interaction of 1,2-Dichloroethane and 1,1-Dichloroethylene Nephrotoxicity.** N.M. Jackson and R.B. Conolly, *Toxicol. Program, School of Pub. Health, Univ. of Michigan, Ann Arbor, MI.* Sponsor: M.J. Brabec.
- 520 **Hepatotoxicological Evaluation of Dantrolene Sodium.** J.A. Durham, A.J. Gandolfi and J.B. Bentley, *Toxicol. Program and Dept. of Anesthesiol., Univ. of Arizona, Tucson, AZ.*
- 521 **Isoproterenol-induced Myocardial Resistance in Rats.** X. Joseph, S. Bloom and T. Balazs, *U.S. FDA, Washington, DC; George Washington Univ. Med. Ctr., Washington, DC.*
- 522 **Enhanced Lethality Due to Combined Intravenous Administration of Pyribenzamine (PB) and Pentazocine (PZ): Protection by Diazepam and Naloxone.** A. El-Hage and E. Herman, *Nat'l Ctr. for Drugs & Biologics, Drug Pharmacol. Branch, U.S. FDA, Washington, DC.*
- 523 **Validation of a Computer-automated Procedure for Detecting Sensory Deficits in Rats.** G.T. Pryor and E.T. Uyeno, *Psychobiol. Physiol. Dept., SRI Int'l, Menlo Park, CA.* Sponsor: D.C.L. Jones.
- 524 **Procedures to Enhance Withdrawal of Xenobiotics from Food Animals.** D. Polin, E. Lehning, D. Pullen and R. Leavitt, *Dept. of Animal Sci. and Pest. Res. Ctr., Michigan State Univ., East Lansing, MI.* Sponsor: S. Aust.
- 525 **Synthesis, Identification, and High Performance Liquid Chromatography (HPLC) Analysis of Tri-*o*-cresyl Phosphate and Some of its Metabolites.** A.A. Nomeir and M.B. Abou-Donia, *Dept. of Pharmacol., Duke Univ. Med. Ctr., Durham, NC.*
- 526 **Transoral Tracheal Instillation of Rodents Using a Fiberoptic Laryngoscope.** J.R. Lehmann, D.L. Costa, W.M. Harold and R.T. Drew, *Med. Dept., Brookhaven Nat'l Lab., Upton, NY.*
- 527 **Effects of Species Variation and Primaquine Treatment on Serum Biochemical, Hematological and EKG Parameters in Anesthetized Monkeys.** A.J. Verlangieri, J.P. DePriest and J.C. Kapeghian, *Dept. of Pharmacol., School of Pharm., Univ. of Mississippi, University, MS.* Sponsor: W.M. Davis.

- 528            **Enhancement of the Sensitivity of the Buehler Method by Use of the Hill Top Chamber.** M. Polikandritou, J.L. Lichtin and D.L. Conine, *Dept. of Pharmacy, Univ. of Cincinnati; Hill Top Res., Inc., Cincinnati, OH.*
- 529            **Improved Technique for the Cyanomethemoglobin Portion of the Austin and Drabkin Sulfmethemoglobin Assay.** J.C. Anders and H. Chung, *Dept. of Pharmacol., Walter Reed Army Inst. of Res., Washington, DC.*
- 530            **A Method for Dissection of Discrete Regions of Rat Brain Following Microwave Irradiation.** J.P. O'Callaghan and K.L. Lavin, *Neurotoxicol. Div., Health Effects Res. Lab., U.S. EPA, Research Triangle Park, NC.* Sponsor: L.W. Reiter.
- 531            **Acute Dermal Toxicity of Dilute Aqueous Hydrofluoric Acid (HF).** M.J. Derelanko, S.C. Gad, F. Gavigan, R.D. Walsh and B.J. Dunn, *Dept. of Toxicol., Allied Corp., Morristown, NJ.*

**Thursday Afternoon, March 10, 1983**

**SYMPOSIUM 5: (Neurotoxicology Section)  
The Application of Neurophysiological Techniques to  
Toxicological Problems**

Augustus Room

**Chairwoman: D.E. Woolley, Univ. of California, Davis, CA**

**Time (P.M.)**

- 1:30    **Overview.** D.E. Woolley.
- 1:40    **Correlations Between *In Vitro* and *In Vivo* Mechanisms of Pyrethroid Insecticide Action.** D.W. Gammon, *Univ. of California, Berkeley, CA.*
- 2:10    **Discussion.**
- 2:20    **The Effects of Neurotoxicants on Kindling and Kindled Seizures.** R.Joy and J. Stark, *Univ. of California, Davis, CA.*
- 2:50    **Discussion.**
- 3:00    **Localization of the Neurophysiological Effects of Trimethyltin and Insecticides on the Limbic System in the Awake, Unrestrained Rat.** D. Woolley, L. Zimmer, Z. Hasan and K. Swanson, *Univ. of California, Davis, CA.*
- 3:30    **Discussion.**
- 3:40    **The Use of Sensory Evoked Potentials in Toxicology.** R.S. Dyer, *U.S. EPA, Research Triangle Park, NC.*
- 4:10    **Discussion.**
- 4:20    **Peripheral and Spinal Correlates of Toxic Neuropathies as Revealed by Single Unit Recordings.** H.E. Lowndes, *New Jersey Med. School, Newark, NJ.*
- 4:50    **Discussion.**

Thursday Afternoon, March 10, 1983  
POSTER SESSION 6B: Metals III

Rear of Colosseum Exhibit Area

Organizer: J.J. Vostal, General Motors Corp., Warren, MI

Displayed: 1:30 P.M. — 4:30 P.M.

Attended: 1:30 P.M. — 3:00 P.M. (Even Paper Numbers)  
3:00 P.M. — 4:30 P.M. (Odd Paper Numbers)

Paper No.

- 532                    **Similarity in the Acute Cytotoxic Response of Mammalian Cells to Mercury (II) and X-Rays: DNA Damage and Glutathione Depletion.** O. Cantoni, R.M. Evans and M. Costa, *Div. of Toxicol., Dept. of Pharmacol., Univ. of Texas, Med. School, Houston, TX.*
- 533                    **Diocetyl tin Dichloride (DOTC)-Induced Changes in Thymic Epithelial Cells.** K. Miller and J.R. Foster, *British Ind. Biol. Res. Assoc., Carshalton, Surrey, U.K.* Sponsor: S.D. Gangolli.
- 534                    **Functional Significance of Diocetyl tin (DOTC)-Induced Thymic Injury.** K. Miller, M.P. Scott and J. Maissey, *British Ind. Biol. Res. Assoc., Carshalton, Surrey, U.K.* Sponsor: S.D. Gangolli.
- 535                    **Rat Liver Subcellular Distribution of Manganese in Manganese and Manganese-Bilirubin Induced Cholestasis.** P. Ayotte and G.L. Plaa, *Dépt. de pharmacologie, Université de Montréal, Montreal, Que., Canada.*
- 536                    **Differential Electrophysiological Effects of Trimethyltin on Limbic Structures.** L. Zimmer, Z. Hasan and D. Woolley, *Dept. of Animal Physiol., Univ. of California, Davis, CA.*
- 537                    **Modulation of Neurotransmitter Receptor Binding by Trimethyltin in Mouse Brain.** S.F. Ali, J.M. Cranmer, P.T. Goad and M.F. Cranmer, *Div. Inter. Toxicol., Univ. of Arkansas Med. Sci., Little Rock, AR; Intox Labs., Little Rock, AR.*
- 538                    **Effects of Triethyltin on Brain Catecholamine Concentrations in the Adult Rat.** L.L. Cook, *Neurotoxicol. Div., Health Effects Res. Lab., U.S. EPA, Research Triangle Park, NC.* Sponsor: L.W. Reiter.
- 539                    **Intracellular and Extracellular Actions of Lead at the Neuromuscular Junction.** W.D. Atchison and T. Narahashi, *Northwestern Univ. Med. School, Chicago, IL.*
- 540                    **Studies on the Ultrastructural and Hematotoxic Effects of Bismuth in Rat Liver and Kidney.** J.S. Woods and B.A. Fowler, *NIEHS, NIH, Research Triangle Park, NC.*
- 541                    **Modification of Cd-Induced Hepatotoxicity by Alteration of Hepatic Glutathione (GSH) Status.** R.E. Dudley and C.D. Klaassen, *Dept. of Pharmacol., Toxicol. & Therap., Univ. of Kansas Med. Ctr., Kansas City, KS.*

- 542                   **A Mechanistic Study of Mercury Accumulation in the Kidney.**  
A. Blacker and R.J. Richardson, *Toxicol. Program, Dept. of  
Env. & Ind. Health, Univ. of Michigan, Ann Arbor, MI.*
- 543                   **Role of an SH Carrier in Cadmium and Mercury Uptake by  
Hepatocyte Primary Cultures.** R.J. Gerson and Z.A. Shaikh,  
*Div. of Toxicol., Univ. of Rochester, Rochester, NY.*
- 544                   **Genotoxicity of the Particulate Fraction of Alpha Nickel  
Subsulfide.** J. Smith-Sonneborn, R.A. Palizzi, E.A. McCann and  
G.L. Fisher, *Zool. & Physiol. Dept., Univ. of Wyoming, Laramie,  
WY; Battelle Columbus Labs., Columbus, OH.*
- 545                   **Dexamethasone-induced Alteration of Hepatic Trace Metal  
Metabolism During Neonatal and Postnatal Development.**  
E.M.K. Lui, *Dept. of Pharmacol. & Toxicol., Univ. of Western  
Ontario, London, Ont., Canada.* Sponsor: G.M. Cherian.
- 546                   **Cardiovascular Actions of Methylmercury at Environmentally  
Relevant Concentrations.** A.I. Ally and D.R. Miller, *Ecotoxicol.  
Group, Nat'l Res. Council of Canada, Ottawa, Ont., Canada.*  
Sponsor: C. Miller.
- 547                   **The Uptake and Distribution of Lead and Mercury in Rat  
Kidney Epithelial Cells with and Without Nuclear Inclusion  
Bodies.** M.G. Cherian and K. Rodgers, *Dept. of Pathol., Univ. of  
Western Ontario, London, Ont., Canada.*
- 548                   **Characterization of Mercury Uptake in Chick Embryonal  
Retinal Cell Aggregates.** M. Yoneyama, S.J. Kleinschuster  
and R.P. Sharma, *Toxicol. Program, Utah State Univ.,  
Logan, UT.*
- 549                   **A Physiological Model of Methyl Mercury Retention, Metab-  
olism and Excretion.** L.L. Hall, H.L. Fischer, D.J. Thomas, M.  
Sumler and P. Mushak, *U.S. EPA, Research Triangle Park, NC;  
Dept. Pathol., Univ. of North Carolina School of Med., Chapel  
Hill, NC; NSI, Research Triangle Park, NC.*
- 550                   **Biliary Secretion of Inorganic Mercury: I, The Chemical  
Form of the Mercury Complex in Rat Bile.** N. Ballatori and  
T.W. Clarkson, *Div. of Toxicol. Dept. Radiation Biol. & Biophys.,  
Univ. of Rochester School of Med., Rochester, NY.*
- 551                   **Biliary Secretion of Inorganic Mercury: II, The Role  
of the Biliary Transport System for Glutathione.** N.  
Ballatori and T.W. Clarkson, *Div. of Toxicol., Dept. of Radia-  
tion Biol. & Biophys., Univ. of Rochester School of Med.,  
Rochester, NY.*
- 552                   **Response of Hepatic and Renal Glutathione (GSH) and  
Related Enzyme Activities to Dietary Selenium (Se).** M.H.  
Davies, B.A. Merrick, D.F. Birt and R.C. Schnell, *Univ. Nebraska  
Med. Ctr., Dept. Pharmacodynam./Toxicol., College of Pharmacy,  
Omaha, NE.*

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Thursday Evening, March 10, 1983

**ANNUAL BANQUET**

7:00 P.M.

Julius Room

Open to all attendees and guests

Complimentary Wine

Courtesy, Charles River Breeding Laboratories, Inc.

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Friday Morning, March 11, 1983

**PLATFORM SESSION 17: Biochemical III**

Colosseum II

**Co-Chairs: S. Laham, Health & Welfare Canada, Ottawa,  
Ont., Canada**

**S.T. Omaye, U.S. Dept. of Agriculture, Berkeley, CA**

Paper No.	Time (A.M.)	
553	8:30	<b>Effect of Extracellular Ca<sup>2+</sup> on Adriamycin Mediated Toxicity in Isolated Rat Hepatocytes.</b> M.W. Fariss and D.J. Reed, <i>Dept. of Biochem. Biophys., Oregon State Univ., Corvallis, OR.</i>
554	8:45	<b>A Study of Adriamycin-induced Cardiac Toxicity.</b> M. George, V. Shirhatti and G. Krishna, <i>NHLBI, Bethesda, MD.</i> Sponsor: H.M. Maling.
555	9:00	<b>Anthracenedione Antineoplastic Agent Inhibition of Lipid Peroxidation.</b> E.D. Kharasch and R.F. Novak, <i>Dept. of Pharmacol., Northwestern Univ. Med. School, Chicago, IL.</i> Sponsor: T. Narahashi.
556	9:15	<b>Lead Induced Changes in Indices of Lipid Peroxidation in the Retina.</b> D.M. Talsma and K.L. Stemmer, <i>Univ. of Cincinnati, Kettering Lab., Cincinnati, OH.</i>
557	9:30	<b>Adriamycin Cardiotoxicity and Superoxide Dismutase in the Rat Heart.</b> B.C. Lee and K.L. Stemmer, <i>Univ. of Cincinnati Med. Ctr., Kettering Lab., Cincinnati, OH.</i>
558	9:45	<b>Decreased Superoxide Anion Radical Production by Phagocytic Cells Following Incubation with Lipid Oxidation Products.</b> M.A. Amoruso, G. Witz, H.E. Ferran, Jr., J.J. Kocsis and B.D. Goldstein, <i>Dept. of Env. &amp; Comm. Med., UMDNJ-Rutgers Med. School/Rutgers Univ. Joint Grad. Program in Toxicol., Piscataway, NJ; Dept. of Pharmacol., Thomas Jefferson Univ., Philadelphia, PA.</i>

- 559 10:00 **Influence of Selenium on Response to Toxins.** P.M. Newberne, *Dept. of Nutrition and Food Sci., Massachusetts Inst. of Tech., Cambridge, MA.*
- 560 10:15 **Effects of Intratracheal Administration of Bleomycin on GSH-Shuttle Enzymes, Lipid Peroxidation and Collagen Content in Hamster Lung.** S.N. Giri, Z. Chen, W.R. Younker and M.J. Schiedt, *Dept. Pharmacol. Toxicol., School of Vet. Med., Univ. of California, Davis, CA.*
- 561 10:30 **Role of Prostaglandin (PGF<sub>2</sub>α) in the Onset of Oxidant-induced Pulmonary Edema.** R.C. Lindenschmidt, C.E. Patterson, R.A. Rhoades and R.B. Forney, *Dept. of Pharmacol. & Toxicol. and Dept. of Physiol., Indiana Univ. School of Medicine, Indianapolis, IN.*
- 562 10:45 **Mechanisms in the Inflammatory Response and Genesis of Pulmonary Edema Resulting from Oxidizing Agent Exposure.** P.L. Kenley, *Univ. of Texas Med. School, San Antonio, TX;* E.J. Fairchild, *Univ. of Texas School of Pub. Health, Houston, TX.*
- 563 11:00 **Evidence for Oxy-Radical Involvement in the Mutagenicity of Alpha-Hydroxy Ketones.** P. Stapleton, J. Garst and J. Johnston, *Univ. of Illinois, Urbana, IL.* Sponsor: B.J. Wilson.
- 564 11:15 **Functional Status of Rat Adrenal Medullary Tumors Encountered in Chronic Toxicity Studies.** W.E. Ribelin, M.V. Roloff and R.M. Houser, *Monsanto Env. Health Lab., St. Louis, MO.*
- 565 11:30 **Species Difference in the Duration of Anticoagulation Due to Brodifacoum.** G.J.A. Oliver, I.K. Smith and P.L. Batten, *JCI/PLC, Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire, U.K.* Sponsor: I.F.H. Purchase.
- 566 11:45 **Metabolic Distribution of Benzo(a)pyrene (BaP) in the Circulation of the Rodent.** B.J. Kelman, D.L. Springer and R.B. Westerberg, *Pacific Northwest Lab., Richland, WA.*

**Friday Morning, March 11, 1983**

**PLATFORM SESSION 18: Oncogenesis/Mutagenesis II**

Colosseum III

**Co-Chairs: F.A. De La Iglesia, Warner Lambert/Parke Davis Co.,  
Ann Arbor, MI**

**A. Sivak, Arthur D. Little Inc., Cambridge, MA**

- | <b>Paper No.</b> | <b>Time (A.M.)</b> |   |
|------------------|--------------------|---|
| 567              | 8:30               | <b>A Comparison of Responses in the C3H-10T<sup>1/2</sup> and BALB/c-3T3 Neoplastic Transformation Systems.</b> A. Sivak and A.S. Tu, <i>Arthur D. Little, Inc., Cambridge, MA.</i>   |
| 568              | 8:45               | <b>Ethanol - Dimethylnitrosamine (DMN) Interactions in Primary Cultures of Rat Hepatocytes Detected by Unscheduled DNA Synthesis (UDS).</b> M.J. Olson, D.A. Casciano and J.G. Pounds, <i>Div. of Interdisciplinary Toxicol., Univ. of Arkansas for Med. Sci., Little Rock, AR; NCTR, Jefferson, AR.</i> Sponsor: R.G. Thurman. |

- 569 9:00 **Conditions that Affect the Response in the Rat Liver Foci Bioassay.** M.A. Pereira, S.L. Herren, A.L. Britt and M.K. Khoury, *HERL, U.S. Env. Protection Agency, Cincinnati, OH; Dept. Lab. Animal Med., Univ. of Cincinnati, Cincinnati, OH.*
- 570 9:15 **Promotion of Liver Nodules in B<sub>6</sub>C<sub>3</sub>F<sub>1</sub> Male Mice by Choline Deficiency and Phenobarbital.** J.L. de Camargo and P.M. Newberne, *Dept. of Nutrition and Food Sci., Massachusetts Inst. of Tech., Cambridge, MA.*
- 571 9:30 **Histochemical Evaluation of Gamma Glutamyl Transpeptidase in Putative Preneoplastic Lesions and Hepatocellular Carcinomas Induced in Rats by Wy-14, 643, a Hypolipidemic Peroxisome Proliferator.** M.S. Rao, N.D. Lalwani, D.G. Scarpelli and J.K. Reddy, *Northwestern Univ. Med. School, Chicago, IL.*
- 572 9:45 **o,p'-DDT and Estrogen-dependent Tumor Growth.** A.K. Robison, D.A. Sirbasku and G.M. Stancel, *Toxicol. Div., Univ. of Texas Med. School, Houston, TX.* Sponsor: S.D. Murphy.
- 573 10:00 **Mouse Skin Painting - Initiation-promotion Study with Formaldehyde Solutions — Preliminary Results.** N.D. Krivanek, J.W. McAlack and N.C. Chromey, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab., Newark, DE.* Sponsor: C.F. Reinhardt.
- 574 10:15 **A Comparison of the Reversibility of Phorbol Diester-induced Changes in Macrophage Morphology.** B.M. Smith, R.W. Lane, R.A. Carchman and J.F. Borzelleca, *Dept. of Pharmacol. & Toxicol., Med. College of Virginia, Richmond, VA.*
- 575 10:30 **Phorbol Diester (PDE) Binding and Oxygen Metabolism in Differentiated HL-60 Cells.** R.W. Lane, R.A. Carchman and J.F. Borzelleca, *Dept. of Pharmacol., Med. College of Virginia, Richmond, VA.*
- 576 10:45 **Altered Immune Function and Tumor Resistance in Phorbol Myristate Acetate (PMA)-Treated Mice.** M.J. Murray, L.D. Lauer and J.H. Dean, *Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.* Sponsor: J.E. Gibson.
- 577 11:00 **Carcinogenesis Studies with Oxisuran, an Immunosuppressive Agent.** F.A. de la Iglesia and E.J. McGuire, *Pathol. Exp. Toxicol., Warner-Lambert/Parke-Davis Pharm. Res. Div., Ann Arbor, MI; Env. Ind. Health, Univ. of Michigan, Ann Arbor, MI.*
- 578 11:15 **Combined Mouse Lung Adenoma and Skin Initiation/Promotion Assays for Chemical Carcinogens.** R.J. Bull, M.R. Robinson and D. Laurie, *Toxicol. & Microbiol. Div., Health Effects Res. Lab., U.S. EPA, Cincinnati, OH.*
- 579 11:30 **Urethane Kinetics and Pulmonary Adenoma Prevalence in Swiss-Cox Mice.** S.P. Sichak and E.J. O'Flaherty, *Dept. Env. Health, Univ. Cincinnati, Cincinnati, OH.* Sponsor: P.B. Hammond.
- 580 11:45 **Evaluation of Tumors in Medaka Fish Induced by Diethylnitrosamine or N-Methyl-N'-Nitro-N-Nitrosoguanidine.** H.C. Chen, M.R. Brittelli and C.F. Muska, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab., Newark, DE.* Sponsor: L.S. Mullin.

Friday Morning, March 11, 1983

**POSTER SESSION 7A: Environmental**

Rear of Colosseum Exhibit Area

**Organizer: G.L. Sprague, Stauffer Chemical Co., Richmond, CA**

Displayed: 8:30 A.M. — 11:30 A.M.

Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)

10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)

**Paper No.**

- 581                    **Postirradiation Histamine Variations in the Beagle.** L.G. Cockerham, T.F. Doyle, E.A. Helgeson and M.A. Donlon, *Physiol. and Biochem. Depts., Armed Forces Radiobiol. Res. Inst., Bethesda, MD.* Sponsor: K.C. Back.
- 582                    **Biocomplexes of Cadmium in New Zealand Oysters.** I. Nuottaniemi, M. Nordberg and G.F. Nordberg, *Dept. of Env. Med., Umea Univ., Sweden*; M.G. Cherian, *Dept. of Pathol., Univ. of Western Ont., London, Ont., Canada*; T. Kjellström, *Dept. Comm. Health, Univ. of Auckland, New Zealand.*
- 583                    **Effects of Copper and Fenvalerate on Developing Steelhead Trout Exposed Continuously or Intermittently to the Toxicant.** L.R. Curtis and W.K. Seim, *Dept. of Fisheries and Wildlife, Oregon State Univ., Corvallis, OR.* Sponsor: L.J. Weber.
- 584                    **Influence of Environmental Temperature on Biliary Excretion of Taurocholate by Rainbow Trout.** L.R. Curtis, *Dept. of Fisheries and Wildlife, Oregon State Univ., Corvallis, OR.* Sponsor: L.J. Weber.
- 585                    **Effect of Dose on the Inhibition of Carcinogenesis/Mutagenesis by Aroclor 1254 in Rainbow Trout Fed Aflatoxin B<sub>1</sub>.** D.W. Shelton, R.A. Coulombe, J.E. Nixon and J.D. Hendricks, *Dept. of Food Sci. & Tech., Oregon State Univ., Corvallis, OR.*
- 586                    **Severe Chronic Ergotism (SCE) in Cattle and Swine: Chemical Analysis and Toxicologic Evaluation of *Claviceps Purpurea* Contaminated Feeds.** R.I. Krieger, P.B. Anderson, A.M. Gallina, G.M. Henningsen, L.J. Naser, M.J. Parnell, J.K. Porter, E.E. Steele, and D.W. Warner, *Russell Agric. Res. Ctr., Athens, GA; WO1 Reg. Prog. in Vet. Med. Educ., Dept. of Animal and Vet. Sci., Washington State Univ. and Univ. of Idaho, Pullman, WA and Moscow, ID.*
- 587                    **Toxicity of Sodium Monofluoroacetate (Compound 1080) to Mink.** T. Hornshaw, R. Ringer and R. Aulerich, *Dept. Animal Sci., Michigan State Univ., East Lansing, MI.* Sponsor: J. Hook.
- 588                    **Potentiation of Carbon Tetrachloride Hepatotoxicity by Chlordecone — Changes in Subcellular Calcium.** A.K. Agarwal and H.M. Mehendale, *Dept. of Pharmacol. & Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS.*

- 589 **1,1-Dichloroethylene (1,1-DCE)-Induced Lipid Peroxidation of Renal Microsomes.** R. Luthra, G.M. Kyle and J.V. Bruckner, *Dept. of Pharmacol., Div. of Toxicol., Univ. of Texas Med. School, Houston, TX.*
- 590 **Effects of Ethylenediaminetetraacetate (EDTA) on Hexachlorobenzene (HCB) Induced Changes in the Rat.** R.W. Lambrecht, E. Erturk, C.R. Morris, J.A. Arnold and G.T. Bryan, *Dept. of Human Oncology, Univ. of Wisconsin, Madison, WI; U.S. EPA, Washington, DC.*
- 591 **The Effects of Perfluoro-n-decanoic Acid (PFDA) on the Rat Heart.** G.D. Pilcher, A.E. Langley and S.G. Smith, *Dept. of Pharmacol. & Toxicol., Wright State Univ., Dayton, OH.* Sponsor: M.E. Andersen.
- 592 **Tolerance and Cross-tolerance to the Acute Behavioral Toxicity of Carbaryl in Rats.** D.B. Miller, *Biol. Sci. Res. Ctr., Univ. of North Carolina, Chapel Hill, NC; U.S. EPA, Neurotoxicol. Div., Research Triangle Park, NC.* Sponsor: L.W. Reiter.
- 593 **Renal Neoplasia and Lesions Induced by Ethylnitrosourea and Diethylnitrosamine.** M.J.W. Chang, A. Koestner and R.W. Hart, *Battelle Columbus Labs., Columbus, OH; Michigan State Univ., East Lansing, MI; Nat'l Ctr. for Toxicol. Res., Jefferson, AR.* Sponsor: G.L. Fisher.
- 594 **The Effects of Ochratoxin A in the Partially Nephrectomized Rat.** A.F. Stein, R.G. Morgan, S. Geerling, H.H. Mollenhauer, N.D. Heidelbaugh and T.D. Phillips, *Dept. of Vet. Pub. Health, College of Vet. Med., Texas A&M Univ., College Station, TX.*
- 595 **Sex and Strain Differentiation of Subchronic Caprolactam Nephrotoxicity in Rats.** W.J. Powers, S.C. Gad, S. Mulder, K.M. Brand and G. Hoffman, *Dept. of Toxicol., Allied Corp., Morristown, NJ.*
- 596 **Induction of Aryl Hydrocarbon Hydroxylase (AHH) Activity in Offspring of Lake Michigan Lake Trout by Residues of PCBS Transferred During Gametogenesis.** R.L. Binder and J.J. Lech, *Dept. of Pharmacol. & Toxicol., Med. College of Wisconsin, Milwaukee, WI.*
- 597 **Glycolytic Rate in Tissues of Fresh Water Mussel During Methy Parathion Toxicity.** C.S. Chetty, K.S. Moorthy and K.S. Swami, *Dept. of Zool., S.V. Univ., Tirupati, India; Dept. of Neurol., Univ. Mississippi Med. Ctr., Jackson, MS.* Sponsor: D. Desaiiah.
- 598 **Tissue and Subcellular Distribution of Rotenone in Rainbow Trout.** W.H. Gingerich, *Nat'l Fish. Res. Lab., U.S. Fish & Wildlife Serv., La Crosse, WI.*
- 599 **Chlorpyrifos: Pharmacokinetics in Male Volunteers.** R.J. Nolan, D.L. Rick, N.L. Freshour and J.H. Saunders, *Biomed. Res. Lab., Dow Chem. Co., Midland, MI.* Sponsor: J.C. Ramsey.
- 600 **Surface Tension Effects of Cotton Dust.** K.C. Weber and J. Ma, *NIOSH-CDC, Morgantown, WV.* Sponsor: V. Castranova.

Friday Morning, March 11, 1983  
**POSTER SESSION 7B: General V**

Rear of Colosseum Exhibit Area

**Organizer: S.D. Murphy, Univ. of Texas Science Ctr., Houston, TX**

**Displayed: 8:30 A.M. — 11:30 A.M.**

**Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)**

**10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)**

**Paper No.**

- 601            **Sodium Hexametaphosphate Decreases Bone Cr and Mn Content in the Rat.** J.P. Bercz, *Toxicol. & Microbiol. Div., HERL, U.S. EPA, Cincinnati, OH*; M. Melnickoff, *Worthington Corp., Freehold, NJ*; K.L. Gabriel, *Med. College of Pennsylvania, Philadelphia, PA.*
- 602            **Target Organ Toxicology of Chlorinated Humic Substances in the Rat.** L.W. Condie, J.P. Bercz and R.D. Laurie, *Toxicol. & Microbiol. Div., HERL, U.S. EPA, Cincinnati, OH.* Sponsor: R.J. Bull.
- 603            **An Adaptation of the Jordan Method for Predicting Photo-allergic Contact Dermatitis in Guinea Pigs.** J. Kreuzmann and D.L. Conine, *Dept. of Toxicol., Hill Top Research, Inc., Cincinnati, OH.*
- 604            **Evidence of a Reduced Set-point for Regulated Body Weight in Rats Treated with 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD).** M.D. Seefeld and R.E. Peterson, *Univ. of Wisconsin, Madison, WI.*
- 605            **The Production of Aflatoxin M<sub>1</sub> for Toxicologic Studies.** D.P.H. Hsieh, L.M. Beltran and D.W. Rice, *Dept. of Env. Toxicol., Univ. of California, Davis, CA.*
- 606            **The Carcinogenicity of Aflatoxin M<sub>1</sub> in the Adult Rats.** D.P.H. Hsieh and B.H. Ruebner, *Dept. of Env. Toxicol. and Dept. of Pathol., Univ. of California, Davis, CA.*
- 607            **Susceptibility of Non-human Primates to Omadine® MDS.** W.J. Tierney, *Bio/dynamics, East Millstone, NJ*; C. Mitoma, *SRI Int'l, Menlo Park, CA*; S.J. Barbee and J.H. Wedig, *Olin Corp., New Haven, CT.*
- 608            **Tripropylene Glycol Diacrylate (TRPGDA) Toxicity with Repeated Dermal Exposure.** R.A. Davis, C.S. Auletta, G.M. Benke and J.J. Clary, *Celanese Corp., New York, NY*; *Bio/dynamics Inc., East Millstone, NJ.*
- 609            **Delayed Neurotoxicity of Leptophos and its O-Ethyl Analog Following Oral and Intravenous Administration to Hens.** E.M. Cozzi, T.K. Eastin and L.G. Hansen, *Dept. of Vet. Biosci., College of Vet. Med., Univ. of Illinois, Urbana, IL.*
- 610            **Intravenous Lethality and Toxicity Studies in Sprague-Dawley Rats and Defined Dose Toxicity Studies in Beagle Dogs of NSC-301,467 (SR-2508).** S. Unwin, T. Shellenberger, S. Frick and M. Castello, *Midwest Res. Inst., Kansas City, MO*; *Battelle Columbus Labs., Vienna, VA.*

- 611 **Subchronic Neurotoxicity of N-Methylolacrylamide in Fischer 344 Rats.** P. Kurtz, D. Thake, D. Gerken, A. Peters and R. Chhabra, *Battelle Memorial Inst., Columbus, OH; NIEHS/NTP, Research Triangle Park, NC.*
- 612 **Subacute Toxicity of O-Nitroanisole in Rats.** K. MacKenzie, P. MacWilliams, T. Jackson and R. Chhabra, *Hazleton Raltech, Inc., Madison, WI; Nat'l Toxicol. Program, NIEHS, Research Triangle Park, NC.*
- 613 **Immunosuppressive Effects of a Contaminant in Technical Malathion.** B.H. Devens, M.H. Grayson, T. Imamura and K.E. Rodgers, *Depts. of Biomed. Sci. and Entomol., Univ. of California, Riverside, CA.* Sponsor: T.R. Fukuto.
- 614 **An In Vitro Model for the Study of Immunosuppression by Organophosphorus Compounds.** K.E. Rodgers, M.H. Grayson, T. Imamura and B.H. Devens, *Depts. of Biomed. Sci. and Entomol., Univ. of California, Riverside, CA.* Sponsor: T.R. Fukuto.
- 615 **Evaluation of the Irritancy Potential of Oral Products Using a Rat Brushing Procedure.** R. Grieco, A. Rothenstein and M. Stern, *Lever Brothers Res. Ctr., Edgewater, NJ.* Sponsor: J. Lubansky.
- 616 **A Methodological Comparison of Dermal Sensitization Assays Using Magnolene, a Fragrance Ingredient.** K.R. Schrankel, R.W. Naismith, F.H. Stults, G.R. Thompson, *Int'l Flavors & Fragrances, Frag. Safety Assurance Dept., Union Beach, NJ; Pharmakon Res. Int'l, Waverly, PA.*
- 617 **Safety Assessment of Galaxolide: A Widely Used Fragrance Material.** F.H. Stults, D.M. Ford and G.R. Thompson, *Int'l Flavors & Fragrances, Union Beach, NJ; Cubicon, Holmdel, NJ.*
- 618 **Nephrotoxicity of Uranyl Fluoride in Guinea Pigs.** H.K. Gardner and F.A. Smith, *Dept. of Radiation Biol. & Biophys., Univ. of Rochester, Rochester, NY.*
- 619 **Contact Sensitization of Guinea Pigs to Benzisothiazolin-3-one(bit) and Related Compounds.** G.J.A. Oliver and P.A. Botham, *ICI PLC, Central Toxicol. Lab., Alderley Park, Nr Macclesfield, Cheshire, U.K.* Sponsor: I.F.H. Purchase.
- 620 **Identifying Photoallergenic Potential: A Comparison of Methods.** G.J.A. Oliver and J.A. Brock, *Central Toxicol. Lab., ICI PLC, Alderley Park, Nr Macclesfield, Cheshire, U.K.* Sponsor: I.F.H. Purchase.
- 621 **Regimen-dependent Embryotoxicity of Nicotine.** M. Prevo, A. Amkraut and J. Fara, *Biomed. Dept., ALZA Corp., Palo Alto, CA.* Sponsor: J. Menn.
- 622 **Effects of Propylene Glycol Dinitrate (PGDN) on Motor Performance of Rats.** V. Bogo, T.A. Hill and J. Nold, *Armed Forces Radiobiol. Res. Inst. and Naval Med. Res. Inst., Bethesda, MD.* Sponsor: L.J. Jenkins, Jr.

- 623 **Effect of Metabolic Inhibitors on 2,5-Hexanedione-induced Potentiation of Halocarbon Toxicity in Primary Cultures of Adult Rat Hepatocytes.** J.D. Jernigan, S. Jarmer, J.G. Pounds and R.D. Harbison, *Univ. of Arkansas for Med. Sci., Little Rock, AR; Nat'l Ctr. for Toxicol. Res., Jefferson, AR.*
- 624 **Cytotoxicity of 2,3,7,8-Tetrachlorodibenzo-p-dioxin on Primary Culture of Adult Rat Hepatocytes.** K.H. Yang, E.J. Choi and S.Y. Choe, *Dept. of Biol. Sci. & Eng., Korea Advanced Inst. of Sci. & Tech., Seoul, Korea.* Sponsor: R.E. Peterson.
- 625 **Acute and Short-term Toxicity of Formaldehyde Dimethylhydrazone.** W.C. Keller, T.R. Boosinger, R.H. Bruner and M.E. Andersen, *AFAMRL/TH, Wright-Patterson AFB, OH.*
- 626 **Comparative 28-day Oral Toxicity of Selected Phthalate Esters.** T.E. Shellenberger, J.J. Kowalski, S. Unwin, C. Grandjean, J. Carter and J.R. Hodgson, *Midwest Res. Inst., Kansas City, MO; Tenneco Chem., Inc., Piscataway, NJ.*
- 627 **The Ledtox Necropsy System: An Interactive Protocol Driven Gross Postmortem Examination Data Collection System.** R.S. Wasserman, B.M. Sparano and V.K. Soni, *Med. Res./Info. Serv. Div., American Cyanamid Co., Pearl River, NY.*
- 628 **Studies on the Stability of Soman in Aqueous Solution.** C.A. Broomfield, D.E. Lenz and D.K. Clark, *U.S.A. Med. Res. Inst. of Chem. Defense, Aberdeen Proving Ground, MD.* Sponsor: W.E. Sultan.
- 629 **A Fluorometric Method for Determination of Toxic Drug Effects on Brain Histidine Concentration Using Fluorescamine.** G.D. Prell and I.M. Mazurkiewicz-Kwilecki, *Dept. Pharmacol., School of Med., Univ. of Ottawa, Ottawa, Ont., Canada.*

**Friday Morning, March 11, 1983**

**POSTER SESSION 7C: Metabolism V**

Rear of Colosseum Exhibit Area

**Organizer: T.A. Marks, Upjohn Co., Kalamazoo, MI**

**Displayed: 8:30 A.M. — 11:30 A.M.**

**Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)  
10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)**

**Paper No.**

- 630 **Effect of Chronic Ethanol Diet on Hepatic Mixed Function Oxygenase Activity in Mice.** R.G. Schnellmann, D.J. Randall, T.L. Smith and I.G. Sipes, *Dept. Pharmacol. & Toxicol., College of Pharmacy, Arizona Health Sci. Ctr. and Res. Serv., Veterans Admin., Tucson, AZ.*
- 631 **The Effect of Cimetidine and Ranitidine on Lidocaine Pharmacokinetics in Man.** S.J. Glass, J.B. Bentley, J.E. Jackson, W. Banner, A.J. Gandolfi and J.R. Plachetka, *Depts. of Anesthesiol. and Pharmacol., Univ. of Arizona, Tucson, AZ; Glaxo Labs., Research Triangle Park, NC.*

- 632 **Lack of Aryl Hydrocarbon Hydroxylase Inhibition by Cimetidine.** J. Andres, L. Robertson, I. Lambert, J. Merrill and S. Safe, *Vet. Physiol. & Pharmacol., Texas A&M Univ., College Station, TX.*
- 633 **Toxic Pathways in the Metabolism of Hydralazine by Rat Liver Microsomes.** L.B. LaCagnin, H.D. Colby and J.P. O'Donnell, *West Virginia Univ. Med. Ctr., Morgantown, WV.*
- 634 **Species Differences in the Destruction of Adrenal Cytochromes P-450 by Spironolactone: Relationship to Metabolism.** J.H. Sherry, M.R. Pope, P.B. Johnson, J.P. O'Donnell and H.D. Colby, *West Virginia Univ. Med. Ctr., Morgantown, WV.*
- 635 **The Disposition and Metabolism of Etylenethiourea in Maternal, Fetal and Neonatal Tissues After Perinatal Exposure of Rat and Mouse Dams.** A.E. Chin, P.J. Kurtz, B.D. Carlton, A.C. Peters and R.S. Chhabra, *Battelle Memorial Inst., Columbus, OH; Nat'l Toxicol. Program, NIEHS, Research Triangle Park, NC.*
- 636 **Effects of Phenobarbital and 3-Methylcholanthrene in Mink (*Mustella Vison*).** J.A. Wisniewski, L.R. Shull, B.A. Olsen, S.D. Sleight, G.F. Rush and R.J. Aulerich, *Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.* Sponsor: J.L. Byard.
- 637 **Dietary and Age Influence on the Pharmacokinetic Parameters of 2-AAF in BALB/C Mice.** J.F. Young and M.J. Norvell, *Div. of Teratogenesis Res., Nat'l Ctr. for Toxicol. Res., Jefferson, AR; Toxicol. Dept., Chem. Res. & Dev. Ctr., FMC Corp., Princeton, NJ.*
- 638 **Affinity of [<sup>14</sup>C]Nitrosopyrrolidine and Metabolites for Mouse Epithelial Tissues.** C. Marlowe and W.J. Waddell, *Dept. of Pharmacol. & Toxicol., Univ. of Louisville, Louisville, KY.*
- 639 **Effects of Trans-Stilbene Oxide on Hepatic and Placental GSH Transferase and Hepatic Dimethylnitrosamine Demethylase During Pregnancy.** A. Kulkarni, P. Ronan, L. Radulovic and B. Strohm, *Dept. of Env. & Ind. Health, School of Pub. Health, Univ. of Michigan, Ann Arbor, MI.*
- 640 **Strain Differences in the *In Vivo* Metabolism of 3-Methylcholanthrene (MC) in Pregnant Mice.** J.D. George and J.M. Manson, *Dept. Env. Health and Obstet. & Gynecol., Univ. of Cincinnati, Cincinnati, OH.*
- 641 **The Kinetic Behavior of <sup>14</sup>C-2,4,5,2',4',5'-Hexachlorobiphenyl (6-CB) During *In Situ* Liver Perfusion in the Mouse.** L.A. Rau, S. Weitman, J.J. Lech and M.J. Vodcnik, *Dept. of Pharmacol. & Toxicol., Med. College of Wisconsin, Milwaukee, WI.*
- 642 **The Effect of Pregnancy and Lactation on the Elimination of <sup>14</sup>C-2,4,2',4'-Tetrachlorobiphenyl (4-CB) from Mouse Tissues.** M.J. Vodcnik, *Dept. Pharmacol. & Toxicol., Med. College of Wisconsin, Milwaukee, WI.* Sponsor: J.J. Lech.
- 643 **Xenobiotic Metabolism in Isolated Human Hepatocytes and Microsomes.** C.R. Elcombe, P.M. Canning and G.L. Parker, *Imperial Chem. Industries PLC, Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire, U.K.* Sponsor: I.F.H. Purchase.

- 644           **Pharmacokinetics of Oral Naphthalene (NTL) in CD-1 Mice.**  
*J.R. Hayes, L.W. Condie and J.F. Borzelleca, Dept. of Pharmacol., Med. College of Virginia, Richmond, VA; U.S. EPA, 26 W. St. Clair St., Cincinnati, OH.*
- 645           **Qualitative Evaluation of the Inhibition of Hepatic Drug Metabolism by Maleic Anhydride Divinyl Ether (MVE) Copolymer.** D.W. Barnes, *Dept. of Pharmacol., School of Med., East Carolina Univ., Greenville, NC.* Sponsor: A.E. Munson.
- 646           **Hepatic Phase I and Phase II Biotransformations in Quail and Trout: Comparisons to Species Commonly Used in Toxicity Testing.** J.B. Watkins, Z. Gregus, T.N. Thompson, M.J. Harvey, K. Rozman and C.D. Klaassen, *Dept. of Pharmacol., Toxicol. & Therap., Univ. of Kansas Med. Ctr., Kansas City, KS.*
- 647           **Effects of Various Chemicals and Fasting on Synthesis and Degradation of Hepatic UDP-Glucuronic Acid (UDPGA).** J.J. Hjelle and C.D. Klaassen, *Dept. of Pharmacol., Toxicol., & Therap., Univ. of Kansas Med. Ctr., Kansas City, KS.*
- 648           **Metabolic Heterogeneity of the Proximal and Distal Kidney Tubules.** C. Cojocel, K. Maita, D.A. Pasino, C.-H. Kuo, S.D. Sleight and J.B. Hook, *Depts. of Pharmacol. & Toxicol. and Pathol., Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.*
- 649           **Metabolism of Benzo(a)pyrene in F-344 Rat Lung Type II Cells — Effects of Organic Extracts of Pollutants on Metabolism and Covalent Binding.** J.A. Bond, C.E. Mitchell and A.P. Li, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.* Sponsor: R.O. McClellan.
- 650           **Metabolism of Benzidine (BZ) in the Isolated Perfused Rat Liver: Glutathione Conjugation.** R.K. Lynn, D.F. Milam, C.T. Garvie-Gould, H.B. Matthews and C.L. Eastman, *Dept. of Pharmacol., School of Med., Oregon Health Sci. Univ., Portland, OR.*
- 651           **Effects of Butylated Hydroxytoluene, Indole-3-carbinol, and  $\beta$ -Naththoflavone on the Metabolism and Genotoxicity of Aflatoxin B<sub>1</sub> in the Rat.** M. Fukayama and D.P.H. Hsieh, *Dept. of Env. Toxicol., Univ. of California, Davis, CA.*
- 652           **Interaction of *Clostridium difficile* Toxins and Hepatic Drug Metabolizing Enzymes in the Mouse.** M. Ehrich, *Virginia/Maryland Regional College Vet. Med., Blacksburg, VA.*
- 653           **The Effect of Buthionine Sulfoximine on Hepatic Microsomal Drug Metabolism Enzymes.** R.D. White, R. Norton and J.S. Bus, *Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.*
- 654           **Effect of Thioacetamide-induced Hepatic Necrosis on the Regioselective Metabolism of S-Warfarin by Rat Liver Mixed-function Oxidase Enzymes.** A. Jayaraj, A.O. Obaseki and W.R. Porter, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.* Sponsor: R.E. Peterson.

- 655 **FAD-dependent and Cytochrome P-450 S-Oxidation of Thiobenzamide by Liver and Lung Microsomes.** R.E. Tynes and E. Hodgson, *Interdepartmental Toxicol. Program, North Carolina State Univ., Raleigh, NC.*
- 656 **Metabolism of 2-Methylnaphthalene (2-MeN) by Rat Hepatic Microsomes and Purified Cytochromes P-450.** M. Melancon, D. Williams, D. Buhler and J. Lech, *Dept. of Pharmacol. & Toxicol., Med. College of Wisconsin, Milwaukee, WI; Dept. of Agricultural Chem., Oregon State Univ., Corvallis, OR.*
- 657 **Comparative Tolbutamide Metabolism by Isolated Hepatocytes.** S.J. Gee, C.E. Green and C.A. Tyson, *SRI Int'l, Menlo Park, CA.*

**Friday Morning, March 11, 1983**  
**POSTER SESSION 7D: Metals IV**

Rear of Colosseum Exhibit Area

**Organizer: B.J. Kelman, Battelle Pacific N.W. Labs., Richland, WA**

**Displayed: 8:30 A.M. — 11:30 A.M.**

**Attended: 8:30 A.M. — 10:00 A.M. (Even Paper Numbers)**

**10:00 A.M. — 11:30 A.M. (Odd Paper Numbers)**

**Paper No.**

- 658 **Unique Effect of HgCl<sub>2</sub> on the DNA of CHO Cells as Compared with the Effect of Seven Other Metal Compounds.** O. Cantoni, S.H. Robison, N.T. Christie and M. Costa, *Div. of Toxicol., Dept. of Pharmacol., Univ. of Texas, Medical School, Houston, TX.*
- 659 **Selenium Prevention of Manganese-induced Alterations in Drug Metabolism.** M.J. Deimling and R.C. Schnell, *Dept. Pharmacodynam./Toxicol., College of Pharmacy, Univ. of Nebraska Med. Ctr., Omaha, NE.*
- 660 **Species and Sex Differences in Selenium Inhibition of Hepatic Microsomal Drug Metabolism in Rodents.** B.A. Merrick, K.L. Johnson, K. Kester, M.H. Davies and R.C. Schnell, *Dept. of Pharmacodynam./Toxicol., College of Pharmacy, Univ. of Nebraska Med. Ctr., Omaha, NE.*
- 661 **Effect of Cadmium on Hepatic Metal Binding Proteins of a Marine Teleost.** T.D. Sabourin and D.B. Gant, *Oregon State Univ., Marine Sci. Ctr., Newport, OR.* Sponsor: L.J. Weber.
- 662 **Distribution of Cadmium After Oral Administration of Cd-Thionein (Cd-Th).** T. Maitani, M.P. Waalkes and C.D. Klaassen, *Dept. of Pharmacol., Toxicol. & Therap., Univ. of Kansas Med. Ctr., Kansas City, KS.*
- 663 **The Influence of Castration on the Response of the Adult Rat to Cadmium.** A.B. Chandler and J.U. Bell, *Dept. of Preventive Med., Univ. of Florida, Gainesville, FL.*
- 664 **Tissue Distribution and Metabolism of Cadmium-Metallothionein Polymers.** M.G. Cherian, *Dept. of Pathol., Univ. of Western Ontario, London, Ont., Canada;* M. Nordberg and I. Nuottaniemi, *Dept. of Env. Med., Umeå Univ., Umeå, Sweden.*

- 665 **Effects of Cadmium Exposure on Zinc and Copper Distribution in Neonatal Rats.** D.J. Thomas and P. Mushak, *School of Hyg., Johns Hopkins Univ., Baltimore, MD; School of Med., Univ. of North Carolina, Chapel Hill, NC.* Sponsor: J.M. Frazier.
- 666 **Testicular Cadmium-binding Proteins and Resistance to Testicular Necrosis in Cadmium-treated Mice.** G.L. Chellman and Z.A. Shaikh, *Div. of Toxicol., Univ. of Rochester, Rochester, NY.*
- 667 **Comparison of Pulmonary and Hepatic Toxicity Following Cadmium Chloride Inhalation.** E.C. Grose, *Northrop Services, Inc., Durham, NC; W.C. Dauterman, North Carolina State Univ., Raleigh, NC; J.A. Graham, U.S. EPA, Research Triangle Park, NC.*
- 668 **Organometal-induced Antinociception: A Time and Dose Response Comparison of Triethyl Lead, Trimethyl Lead, and Trimethyl Tin.** T.J. Walsh and H.A. Tilson, *Lab. of Behav. Neurol. & Toxicol., NIEHS, Research Triangle Park, NC.*
- 669 **Trimethyltin Disruption of Reflex Inhibition Indicates an Ototoxic Effect.** J.S. Young and L.D. Fechter, *Johns Hopkins School of Hyg. & Pub. Health, Baltimore, MD.*
- 670 **Effect of Trimethyltin (TMT) on Hepatic and Extrahepatic Glutathione (GSH) Levels in the Mouse.** S.V. Doctor, L.G. Sultatos and S.D. Murphy, *Div. of Toxicol., Dept. of Pharmacol., Univ. of Texas Health Sci. Ctr., Houston, TX.*
- 671 **Pattern Reversal Evoked Potentials Detect Triethyltin Toxicity Better than Flash Evoked Potentials.** W.K. Boyes and R.S. Dyer, *Neurotoxicol. Div., U.S. EPA, Research Triangle Park, NC.* Sponsor: L.W. Reiter.
- 672 **Trimethyltin (TMT) Disrupts Acoustic Startle Responding in Adult Rats.** L.W. Reiter, P.H. Ruppert and K.F. Dean, *Neurotoxicol. Div., HERL, U.S. EPA, Research Triangle Park, NC.*
- 673 **Triethyltin-induced Hearing Loss: A Study Using Pure Tone Auditory Brainstem Responses.** B.N. Evans, A. Yonovitz and D.A. Fox, *Speech & Hearing Inst., Univ. of Texas Grad. School of Biomed. Sci. and College of Optometry, Univ. of Houston, Houston, TX.*
- 674 **Lead Toxicity in Young Calves.** J. Zmudzki and G.R. Bratton, *Dept. of Vet. Anatomy, Texas A&M Univ., College Station, TX.* Sponsor: T.D. Phillips.
- 675 **The Effect of Thiamin on the Tissue Distribution and Excretion of Lead.** L.B. Sasser, G.G. Hall, G.R. Bratton and J. Zmudzki, *Pacific Northwest Lab., Richland, WA; Electric & Gas Comm., Columbia, SC; Texas A&M Univ., College Station, TX.*
- 676 **Clearance and Toxicity of Gallium Arsenide Particulates in Fisher 344 Rats.** D.R. Webb, I.G. Sipes and D.E. Carter, *Dept. Pharmacol./Toxicol., Univ. of Arizona, Tucson, AZ.*
- 677 **Comparative Acute Toxicity of Copper and Zinc Cyanide.** O.L. Dashiell and G.L. Kennedy, Jr., *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.*

Friday Morning, March 11, 1983

**SYMPOSIUM 6:  
Biological Effects of Chemical Interactions**

Julius Room

*Co-Chairs: W.O. Berndt, Univ. of Nebraska Med. Ctr., Omaha, NE*

*H.M. Mehendale, Univ. of Mississippi Med. Ctr., Jackson, MS*

**Time (A.M.)**

- 8:30 **Introduction.** W.O. Berndt
- 8:35 **Modulation of Carcinogenesis.** G.M. Williams, *Associate Director, American Health Foundation, Naylor Dana Inst. for Disease Prevention, Valhalla, NY.*
- 9:00 **Discussion.**
- 9:10 **Potentiation of Teratogenesis.** E.J. Ritter, *Research Pediatrics, Childrens' Hospital, Univ. of Cincinnati College of Med. and Research Foundation, Cincinnati, OH.*
- 9:30 **Discussion.**
- 9:45 **Biochemical Interactions and Nephrotoxicity.** J.B. Hook, *Ctr. for Env. Toxicol., Michigan State Univ., East Lansing, MI.*
- 10:10 **Discussion.**
- 10:20 **Potentiation of Halomethane Hepatotoxicity.** H.M. Mehendale, *Dept. of Pharmacol. & Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS.*
- 10:45 **Discussion.**
- 10:55 **Mechanisms of Toxicological Interactions Involving Organophosphate Insecticides.** S.D. Cohen, *School of Pharmacy, Univ. of Connecticut, Storrs, CT.*
- 11:20 **Discussion.**
- 11:30 **Compromised Immune System.** R.P. Sharma, *Dept. of Animal, Dairy & Vet. Sciences, Utah State Univ., Logan, UT.*
- 11:55 **Discussion.**

# **SOCIETY OF TOXICOLOGY OFFICERS, COUNCILORS, EXECUTIVE SECRETARY**

## **OFFICERS (1982-1983)**

Robert L. Dixon, President  
Gabriel L. Plaa, Vice-President  
Frederick W. Oehme, Vice-President Elect  
J. Wesley Clayton, Jr., Secretary  
Richard S. Waritz, Treasurer

## **COUNCILORS**

John Doull (1981-1983)  
James E. Gibson (1982-1984)  
A. Wallace Hayes (1982-1984)  
Ian C. Munro (1981-1983)  
Robert B. Forney, Past President

## **EXECUTIVE SECRETARY**

William E. McCormick  
475 Wolf Ledges Parkway  
Akron, OH 44311-1087  
(216) 762-2289

## **OFFICE OF THE SECRETARY**

Chemistry Building 320  
University of Arizona  
Tucson, AZ 85721  
(602) 626-4558

# **COMMITTEES, BOARDS, AND OTHER APPOINTMENTS 1982-1983**

## **ELECTED COMMITTEES**

### **Education Committee**

(John Doull\*)  
Anne P. Autor (1981-1983), Chairwoman  
Gary P. Carlson (1982-1984)  
Paul E. Morrow (1982-1984)  
John A. Thomas (1982-1983)

### **Membership Committee**

(Robert L. Dixon\*)  
Robert M. Hehir (1980-1983), Chairman  
Marion W. Anders (1981-1984)  
Clifford I. Chappel (1980-1983)  
Michael A. Gallo (1982-1985)  
Curtis D. Klaassen (1981-1984)  
I. Glenn Sipes (1982-1985)

## APPOINTED COMMITTEES

### **Animals in Research Committee**

(Ian C. Munro\*)  
Gordon W. Newell, Chairman  
Arthur L. Aronson  
Robert T. Drew  
Bruce A. Fowler  
Mary C. Henry  
Mark Hite  
John H. Mennear  
R. Craig Schnell  
James T. Stevens  
Robert J. Weir

### **Awards Committee**

(Robert B. Forney\*)  
Robert B. Forney, Chairman  
James E. Gibson  
A. Wallace Hayes  
Florence K. Kinoshita  
Orville E. Paynter

### **Board of Publications**

(Gabriel L. Plaa\*)  
Emil A. Pfitzer (1981-1983), Chairman  
William W. Carlton, Auditor  
Robert L. Dixon, President  
Paul B. Hammond (1981-1983)  
A. Wallace Hayes, Auditor  
Robert I. Krieger (1982-1985)  
Gabriel L. Plaa, Auditor  
Philip G. Watanabe, Auditor

### **Burroughs Wellcome Advisory Scholarship Committee**

(Robert L. Dixon\*)  
Tom S. Miya, Chairman  
Harold J. Fallon, Consultant  
Perry J. Gehring  
Ernest Hodgson

### **Finance Committee**

(Richard S. Waritz\*)  
Richard S. Waritz, Chairman  
Robert L. Dixon  
William E. McCormick  
Gabriel L. Plaa

### **Historian**

Harry W. Hays

### **Information Handling Committee**

(Robert L. Dixon\*)  
Elton R. Homan, Chairman  
George J. Cosmides  
Robert R. Maronpot  
Norbert P. Page  
Arthur A. Wykes

### **IUTOX Delegates**

Perry J. Gehring, Chairman  
Evelyn G. Burtis  
J. Wesley Clayton  
Frederick W. Oehme  
Richard S. Waritz  
James E. Gibson (Alternate)  
A. Wallace Hayes (Alternate)

### **Nominating Committee**

(J. Wesley Clayton\*)  
Perry J. Gehring, Chairman  
William O. Berndt  
Evelyn G. Burtis  
Robert T. Drew  
Gary L. Lage  
Timothy D. Phillips

### **Past Presidents' Task Group A - Constitution**

(Gabriel L. Plaa\*)  
Tom S. Miya, Chairman  
Joseph F. Borzelleca  
Frederick Coulston  
Seymour L. Friess  
Wayland J. Hayes, Jr.  
Harold C. Hodge  
Paul S. Larson  
Ted A. Loomis  
Harold M. Peck  
John A. Zapp, Jr.

*\*Council Liaison*

**Past Presidents' Task Group B -  
Headquarters**

(Robert B. Forney\*)  
Robert A. Scala, Chairman  
Victor A. Drill  
Perry J. Gehring  
Leon Golberg  
Harry W. Hays  
Sheldon A. Murphy  
Robert L. Roudabush  
Verald K. Rowe  
C. Boyd Shaffer  
Carroll S. Weil

**Placement Office**

(Richard S. Waritz\*)  
Frederick R. Johannsen, Director  
Richard A. Parent, Co-Director

**Professional Relations  
and Standards Committee**

(John Doull\*)  
Roger O. McClellan, Chairman  
Loren D. Koller  
Charles F. Reinhardt  
William E. Rinehart  
R. Craig Schnell  
Robert G. Tardiff  
Ralph C. Wands  
Anne M. Wolven-Garrett

**Program Committee**

(Frederick W. Oehme\*)  
Frederick W. Oehme, Chairman  
William O. Berndt (1982-1985)  
Donald J. Ecobichon (1981-1984)  
John L. Emmerson (1981-1984),  
*Chairman, Poster Session*  
Bernard D. Goldstein (1982-1985)  
Frederick P. Guengerich (1982-1985)  
Jerry B. Hook (1980-1983)  
Roger O. McClellan (1980-1983)  
Joseph E. Manno (1981-1984)  
Mary Vore (1980-1983)

**Regulatory Affairs and  
Legislative Assistance Committee**

(Richard S. Waritz\*)  
Marshall Steinberg, Chairman  
Kenneth C. Back  
Paul E. Brubaker  
Gio B. Gori  
Frederick R. Johannsen  
John G. Keller  
Peter D. Unger

**Technical Committee**

(Ian C. Munro\*)  
Daniel Couri, Chairman  
James S. Bus  
Stuart Z. Cagen  
William R. Hewitt  
Basil K.J. Leong  
Harihara M. Mehendale  
Ninfa Redmond  
Radhey L. Singhal  
Jerry M. Smith  
J. Jaroslav Vostal  
Gary M. Williams

*\*Council Liaison*

## LIAISON REPRESENTATIVES

- American Academy of Clinical Toxicology**  
Frederick W. Oehme
- American Accreditation Association for Laboratory Animal Care**  
Edward J. Gralla (Delegate)
- American Association of Anesthesiologists**  
A.J. Gandolfi
- American Association for Cancer Research**  
Richard H. Adamson
- American Association for Clinical Chemistry**  
Barry S. Levine
- American Association of Pathologists**  
Bruce A. Fowler
- American Association for Poison Control Centers**  
Anthony R. Temple
- American Board of Medical Toxicology**  
Barry H. Rumack
- American Board of Toxicology**  
C.J. Terhaar
- American Board of Veterinary Toxicology**  
Gary D. Osweiler
- American College of Toxicology**  
Marshall Steinberg
- American College of Veterinary Pathology**  
William W. Carlton
- American College of Veterinary Toxicologists**  
Frederick W. Oehme
- American Industrial Hygiene Association**  
Robert T. Drew
- American Institute of Nutrition**  
Stanley T. Omaye
- American Physiological Society**  
Robert A. Scala
- American Society for Biological Chemistry**  
Jerold A. Last
- American Society for Pharmacology & Experimental Therapeutics**  
Frederick P. Guengerich
- British Toxicology Society**  
I.F.H. Purchase
- Environmental Mutagen Society**  
David J. Brusick
- European Society of Toxicology**  
Bo Holmstedt

**Institute of Food Technology**

Stanley T. Omaye

**Society of Environmental Toxicology and Chemistry**

John G. Keller

**Society for Epidemiological Research**

James S. Woods

**Society for Risk Analysis**

John G. Keller

**Society of Toxicologic Pathologists**

John R. McCoy

**Society of Toxicology Newsletter**

J. Wesley Clayton

**Society of Toxicology Regional Chapters**

James E. Gibson

**Society of Toxicology Specialty Sections**

A. Wallace Hayes

**Teratology Society**

Raymond D. Harbison

**Tissue Culture Association**

Daniel Acosta

## PAST PRESIDENTS

Harold C. Hodge .....	1961-1962
C. Boyd Shaffer .....	1962-1963
Paul S. Larson .....	1963-1964
Harry W. Hays .....	1964-1965
Frederick Coulston .....	1965-1966
Verald K. Rowe .....	1966-1967
John A. Zapp, Jr. ....	1967-1968
Carrol S. Weil .....	1968-1969
Ted A. Loomis .....	1969-1970
Robert L. Roudabush .....	1970-1971
Wayland J. Hayes, Jr. ....	1971-1972
Victor A. Drill .....	1972-1973
Joseph F. Borzelleca .....	1973-1974
Sheldon D. Murphy .....	1974-1975
Seymour L. Friess .....	1975-1976
Robert A. Scala .....	1976-1977
Harold M. Peck .....	1977-1978
Leon Golberg .....	1978-1979
Tom S. Miya .....	1979-1980
Perry J. Gehring .....	1980-1981
Robert B. Forney .....	1981-1982

# AWARDS

Achievement	Education
1967 ..... G.L. Plaa	1975 ..... H.C. Hodge
1968 ..... A.H. Conney	1976 ..... T.A. Loomis
1969 ..... S.S. Epstein	1977 ..... R.B. Forney
1970 ..... S.D. Murphy	1978 ..... No Award
1971 ..... Y. Alarie	1979 ..... S.D. Murphy
1972 ..... R.L. Dixon	1980 ..... H.H. Cornish
1973 ..... No Award	1981 ..... F. Sperling
1974 ..... M.F. Cranmer	1982 ..... L.W. Hazleton
1975 ..... I.C. Munro	
1976 ..... C.D. Klaassen	
1977 ..... J.E. Gibson	
1978 ..... R.D. Harbison	
1979 ..... M.R. Boyd	
1980 ..... P.G. Watanabe	
1981 ..... No Award	
1982 ..... F.P. Guengerich	
	<b>Arnold J. Lehman</b>
	1980 ..... A.H. Conney
	1981 ..... G.L. Plaa
	1982 ..... G.M. Williams
<b>Frank R. Blood</b>	
1974 ..... Y. Alarie	
1975 ..... D.J. Ecobichon	
G.J. Johnstone	
O. Hutzinger	
1976 ..... R.D. Brown	
1977 ..... J. Dedinas	
G.D. DiVincenzo	
C.J. Kaplan	
1978 ..... P.J. Gehring	
E.O. Madrid	
G.R. McGowan	
P.G. Watanabe	
1979 ..... R. Fradkin	
E.J. Ritter	
W.J. Scott	
J.G. Wilson	
1980 ..... J.A. Last	
P.F. Moore	
O.G. Raabe	
B.K. Tarkington	
1981 ..... Y. Alarie	
M. Brady	
C. Dixon	
M. Karol	
1982 ..... M.E. Andersen	
M.L. Gargas	
L.J. Jenkins, Jr.	
R.A. Jones	
	<b>Merit</b>
	1966 ..... H.F. Smyth, Jr.
	1967 ..... A.J. Lehman
	1968 ..... R.T. Williams
	1969 ..... H.C. Hodge
	1970 ..... D.D. Irish
	1971 ..... K.P. DuBois
	1972 ..... O.G. Fitzhugh
	1973 ..... H.E. Stokinger
	1974 ..... W.B. Deichmann
	1975 ..... F. Coulston
	1976 ..... V.K. Rowe
	1977 ..... H.W. Hays
	1978 ..... J.M. Coon
	1979 ..... D.W. Fassett
	1980 ..... B.L. Oser
	1981 ..... J.H. Weisburger
	1982 ..... H.M. Peck

### Distinguished Fellow

The following have been given the Distinguished Fellow Award:

Joseph F. Borzelleca, Ph.D.	Paul S. Larson, Ph.D.
Julius M. Coon, M.D., Ph.D.	Ted A. Loomis, M.D., Ph.D.
Frederick Coulston, Ph.D.	Sheldon D. Murphy, Ph.D.
William B. Deichmann, M.D., Ph.D.	Harold M. Peck, M.D.
Victor A. Drill, M.D., Ph.D.	Robert L. Roudabush, Ph.D.
David W. Fassett, M.D.	Verald K. Rowe, Sc.D.
O. Garth Fitzhugh, Ph.D.	Robert A. Scala, Ph.D.
Seymour L. Friess, Ph.D.	C. Boyd Shaffer, Ph.D.
Leon Golberg, M.B., D.Sc., D. Phil.	Henry F. Smyth, Jr., Ph.D.
Wayland J. Hayes, Jr., M.D., Ph.D.	Herbert E. Stokinger, Ph.D.
Harry W. Hays, Ph.D.	Carrol S. Weil
Harold C. Hodge, Ph.D.	John A. Zapp, Jr., Ph.D.
Don D. Irish, Ph.D.	

Tuesday Afternoon, March 8, 1983  
**SPECIALTY SECTION MEETINGS**

**Mechanisms**

6:00 P.M.

Julius Room

***Robert Snyder, Presiding***

\*\*\*\*\*

Wednesday Afternoon, March 9, 1983

5:30 P.M.

**Inhalation**

Neros Room

***James T. Stevens, Presiding***

The first Inhalation Research Award  
will be presented

\*\*\*\*\*

**Metals**

Colosseum II

***Zahir A. Shaikh, Presiding***

Cash Bar

\*\*\*\*\*

**Neurotoxicology**

Colosseum III

***Toshio Narahashi, Presiding***

Cash Bar

\*\*\*\*\*

**Reproductive Toxicology**

Julius Room

***E. Marshall Johnson, Presiding***

\*\*\*\*\*

Each of the above is open to all current and prospective  
members of the respective section

## FUTURE MEETINGS

<b>Meeting</b>	<b>Year</b>	<b>Dates</b>	<b>Location</b>
23	1984	March 11-16	Atlanta Hilton Atlanta, GA
24	1985	March 17-22	Town and Country San Diego, CA
25	1986	March 2-7	Shamrock Hilton Houston, TX
26	1987	March 15-20	Washington Hilton Washington, DC