

# **21st ANNUAL MEETING**

**February 22-26, 1982**

**Sheraton-Boston Hotel  
Boston, Massachusetts**

**PROGRAM**

**MIXER AND RECEPTION**

Monday, February 22, 1982

6:00 - 7:30 P.M.

Grand Ballroom and Independence Room

Cash Bar

Open to all attendees and guests

**ANNUAL BUSINESS MEETING**

Wednesday, February 24, 1982

4:00 P.M.

Grand Ballroom

SOT Members Only

President Robert B. Forney, Presiding

**ISSUES SESSION**

Thursday, February 25, 1982

12 Noon - 1:15 P.M.

Grand Ballroom

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

Chaired by President Robert B. Forney

**ANNUAL BANQUET**

Thursday, February 25, 1982

7:00 P.M.

Grand Ballroom

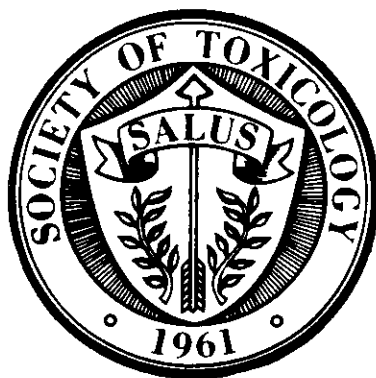
Open to all attendees and guests

Complimentary Wine

Courtesy, Charles River Breeding Laboratories, Inc.

# 21ST ANNUAL MEETING

sponsored by



Sheraton-Boston Hotel — Boston, MA

February 22-26, 1982

## REGISTRATION FEES

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

# SESSIONS SUMMARY

## Platform

<u>Day</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Tuesday 8:30 A.M.	Biochemical Toxicology I	Republic	15
Tuesday 8:30 A.M.	Metals I	Independence	17
Tuesday 8:30 A.M.	Renal-Cardiovascular	Room #200	18
Tuesday 8:30 A.M.	Inhalation I	Constitution	19
Tuesday 1:30 P.M.	Biotransformation/Disposition II	Republic	25
Tuesday 1:30 P.M.	General Toxicology I	Room #200	27
Tuesday 1:30 P.M.	Halogenated Hydrocarbons I	Independence	29
Tuesday 1:30 P.M.	Teratology/Reproduction I	Constitution	30
Wednesday 8:30 A.M.	Inhalation III	Republic	38
Wednesday 8:30 A.M.	Oncogenesis I	Constitution	39
Wednesday 8:30 A.M.	Biochemical Toxicology II	Room #200	40
Wednesday 1:00 P.M.	Environment III	Republic	49
Wednesday 1:00 P.M.	General Toxicology II	Room #200	50
Thursday 8:30 A.M.	Agrochemicals II	Constitution	58
Thursday 8:30 A.M.	General Toxicology III	Room #200	59
Thursday 8:30 A.M.	Neurotoxicology I	Republic	60

<u>Day</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Thursday 8:30 A.M.	Teratology/Reproduction III	Independence	61
Thursday 1:30 P.M.	General Toxicology IV	Grand Ballroom	69
Thursday 1:30 P.M.	Biotransformation/Disposition IV	Room #200	70
Thursday 1:30 P.M.	Halogenated Hydrocarbons III	Independence	71
Friday 8:30 A.M.	Biotransformation/Disposition V	Grand Ballroom	78
Friday 8:30 A.M.	Inhalation V	Republic	80
Friday 8:30 A.M.	Mutagenesis	Independence	84

### Symposia

<u>Day</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Tuesday 8:30 A.M.	Drugs-Noise: Auditory Insults	Grand Ballroom	16
Tuesday 1:30 P.M.	Peer Review and Scientific Decision Making	Grand Ballroom	28
Wednesday 8:30 A.M.	The Role of Cellular Redox Balance in Toxicity	Grand Ballroom	37
Thursday 8:30 A.M.	Combustion Toxicology	Grand Ballroom	60A
Friday 2:00 P.M.	Is There a Role Today for Mutagenicity Testing in the Safety Evaluation of Chemicals? (Jointly with Environ- mental Mutagen Society)	Grand Ballroom	88

## Poster

<u>Day</u>	<u>Topic</u>	<u>See Page</u>
<i>(All in rear of John B. Hynes Exhibition Area; Enter from 3rd Floor of Hotel)</i>		
Tuesday 8:30 A.M.	Biotransformation/Disposition I	20
Tuesday 8:30 A.M.	Environment I	25
Tuesday 1:30 P.M.	Environment II	31
Tuesday 1:30 P.M.	Inhalation II	32
Tuesday 1:30 P.M.	Metals II	34
Wednesday 8:30 A.M.	Teratology/Reproduction II	41
Wednesday 8:30 A.M.	Metals III	44
Wednesday 1:00 P.M.	Immunotoxicology	51
Wednesday 1:00 P.M.	Agrochemicals I	52
Wednesday 1:00 P.M.	Oncogenesis II	53
Thursday 8:30 A.M.	Biotransformation/Disposition III	63
Thursday 8:30 A.M.	Halogenated Hydrocarbons II	66
Thursday 1:30 P.M.	Neurotoxicology II	72
Thursday 1:30 P.M.	Inhalation IV	76
Friday 8:30 A.M.	General Toxicology V	82
Friday 8:30 A.M.	General Toxicology VI	85

## **GENERAL INFORMATION**

### **REGISTRATION — SHERATON-BOSTON HOTEL**

Constitution Room Foyer (2nd Floor, above Lobby) — Sunday, Feb. 21, 3:00 P.M. - 5:00 P.M.; Monday, Tuesday, Wednesday and Thursday, Feb. 22, 23, 24, 25, 7:30 A.M. - 4:00 P.M.

### **HOTEL ACCOMMODATIONS**

The Sheraton-Boston is Conference headquarters. The following guaranteed guest room rates apply when reservations are made on the hotel form enclosed with the program packet.

The hotel accepts major credit cards.

The Sheraton-Boston will act as Housing Bureau and once capacity is reached, they will process overflow reservations in nearby hotels as needed. All reservation requests must come through the hotel.

All sessions will be held in the Sheraton-Boston Hotel and the Hynes Auditorium (Entered from 3rd floor of Hotel).

### **AIRPORT LIMOUSINE SERVICE**

Direct limousine service is available from Boston's Logan Airport to the Sheraton-Boston hotel.

### **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 give the abstracts with their registration at the meeting. Additional copies available at the Conference Registration Desk (2nd Floor Foyer) at \$5 each.

### **SPOUSE HOSPITALITY**

Gardner A and B (3rd Floor), 9:00 A.M. - 4:00 P.M., Tuesday, Wednesday and Thursday; 9:00 A.M. - Noon, Friday.

### **PLACEMENT SERVICE**

Hampton A and B (3rd Floor, near escalator).  
10:00 A.M. - Noon, Monday, Tuesday, Wednesday  
2:00 P.M. - 4:00 P.M., Monday, Tuesday  
Co-Chairmen: W.E. Rinehart, R.F. Johannsen

### **PRESS ROOM**

Dalton A and B  
8:00 A.M. - 5:00 P.M., Monday, Tuesday, Wednesday  
8:00 A.M. - Noon, Thursday

### **CONFERENCE HEADQUARTERS**

Exeter A and B (3rd Floor, near escalator).  
7:30 A.M. - 5:00 P.M., Monday thru Thursday  
7:30 A.M. - Noon, Friday



# OFFICERS, COUNCILORS, EXECUTIVE SECRETARY

## OFFICERS (1981-1982)

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

## COUNCILORS

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John Doull (1981-1983)  
Ian C. Munro (1981-1983)  
Orville E. Paynter (1980-1982)  
Perry J. Gehring, 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 1981-1982

## ELECTED COMMITTEES

### Education Committee

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Anne P. Autor (1981-1983)  
A. Wallace Hayes (1981-1983)  
Roger P. Smith (1980-1982)

### Finance Committee

Richard S. Waritz, Chairman  
Robert M. Diener (1980-1982)  
Robert T. Drew (1981-1983)  
James E. Gibson (1980-1982)  
John F. Griffith (1981-1983)

### Membership Committee

Evelyn G. Burtis, Ex-officio Chairman  
Marion W. Anders (1981-1984)  
Clifford I. Chappel (1980-1983)  
Steven D. Cohen (1979-1982)  
Robert M. Hehir (1980-1983)  
Curtis D. Klaassen (1981-1984)  
Charles O. Ward (1980-1982)

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### **Awards Committee**

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Michael A. Evans

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

Tom S. Miya, Chairman  
Robert L. Dixon  
Harold J. Fallon  
Ernest Hodgson

### **Nominating Committee**

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Herbert H. Cornish  
Donald E. Gardner  
Paul B. Hammond  
John G. Keller

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J. Wesley Clayton, Jr., Secretary  
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John L. Emmerson (1981-1984)  
James E. Gibson (1979-1982)  
Jerry B. Hook (1980-1983)  
Richard J. Kociba (1979-1982)  
Joseph E. Manno (1981-1984)  
Roger O. McClellan (1980-1983)  
R. Craig Schnell (1979-1982)  
Mary Vore (1980-1983)

### **Board of Publications**

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Edward A. Smuckler (1980-1983)  
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Ralph C. Wands  
Anne M. Wolven-Garrett

### **Councilors for IUTOX**

Evelyn G. Burtis  
J. Wesley Clayton  
Perry J. Gehring  
Richard S. Waritz

## **APPOINTMENTS**

### **Historian**

Harry W. Hays

### **Placement**

William E. Rinehart, Director  
Frederick R. Johannsen, Co-Director

### **Representative to the Steering Committee of the International Congress of Toxicology**

Seymour L. Friess

### **Liaison with American College of Veterinary Pathology**

William W. Carlton

### **Liaison with American Society for Pharmacology and Experimental Therapeutics**

Frederick P. Guengerich, Chairman  
Paul B. Hammond  
Mary Vore

### **Liaison with European Society of Toxicology**

Bo Holmstedt

### **Liaison with American Industrial Hygiene Association**

J. Wesley Clayton, Jr.  
Robert T. Drew  
Perry J. Gehring

### **Liaison with Environmental Mutagen Society**

David J. Brusick

### **Liaison with The Teratology Society**

Raymond D. Harbison

### **Liaison with Society of Toxicologic Pathologists**

John R. McCoy

## FUTURE MEETINGS

Meeting	Year	Dates	Location
22	1983	March 6-10	Ceasar's Palace Las Vegas, NV
23	1984	March 11-15	Atlanta Hilton Atlanta, GA
24	1985	March 17-21	Town and Country Hotel San Diego, CA
25	1986	Feb. 28-March 7	Shamrock Hilton Houston, TX

## 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

# AWARDS

## Achievement

1967	G.L. Plaa
1968	A.H. Conney
1969	S.S. Epstein
1970	S.D. Murphy
1971	Y. Alarie
1972	R.L. Dixon
1973	No Award
1974	M.F. Cranmer
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

## Frank R. Blood

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

## Education

1975	H.C. Hodge
1976	T.A. Loomis
1977	R.B. Forney
1978	No Award
1979	S.D. Murphy
1980	H.H. Cornish
1981	F. Sperling

## Arnold J. Lehman

1980	A.H. Conney
1981	G.L. Plaa

## Merit

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

\*Deceased

### 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.	

## **REFRESHER COURSES**

### **Society of Toxicology Continuing Education Courses**

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

#### **1. Basic Concepts of Immunotoxicology**

Monday Morning, February 22, 1982

Independence Room

8:00 A.M. - Noon

\$25.00

This Course will present in a teaching form the very fundamental concepts of immunotoxicology. The intention is to start with an introduction to basic immunology followed by a description of host resistance and tumor susceptibility models, the application to humoral and cell-mediated immunity as well as macrophage activity and conclude with a "state of the art" and future approaches to immunotoxicology research. Speakers for this course will be: Drs. R.P. Sharma, J.H. Dean, L.D. Koller and A.E. Munson. All participants will receive a syllabus containing the manuscripts and graphics presented by the speakers.

#### **2. Current Status of Scientific Considerations in Conducting Toxicological Research**

Monday Afternoon, February 22, 1982

Independence Room

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

\$35.00 (including textbook)

This is the first of a series recommended by the SOT Committee on Professional Relations and Standards of Detailed Discussions of Textbooks. The text "Scientific Considerations in Monitoring and Evaluating Toxicological Research" edited by E.J. Gralla, will be used and will be provided to each attendee. Six of the authors of the text (Gralla, Jacoby, Loeb, Schwetz, Boorman and Salsburg) will lead discussions on individual chapters. The overall objective is to provide an intensely stimulating and instructive atmosphere wherein the experience and expertise of toxicologists can be exchanged, broadly disseminated and usefully applied.

**Mixer and Reception**

Monday, February 22, 1982

6:00 - 7:30 P.M.

Grand Ballroom and Independence Room

Cash Bar

Open to all attendees and guests



## PLATFORM SESSION 1: Biochemical Toxicology I

Tuesday Morning, February 23, 1982

Republic Ballroom

*Co-Chairs: J.A. Hinson, NCTR, Jefferson, AR*

*I.K. Ho, Univ. of Mississippi, Jackson, MS*

Paper No.	Time (A.M.)	
1	8:30	<b>Butylated Hydroxytoluene Does Not Inhibit Ciprofibrate and Di-(2-Ethylhexyl)Phthalate Induced Peroxisome Proliferation in Rat Liver.</b> N.D. Lalwani, H. Hayashi, M.K. Reddy, C. Moehle and J.K. Reddy, <i>Dept. Pathol., Northwestern Univ. Med. Sch., Chicago, IL.</i>
2	8:45	<b>A Mechanism for 6-Methylcoumarin Photoallergenicity.</b> M.W. Tabor, S. Kato, M. Ohno and R.R. Suskind, <i>Dept. of Environ. Hlth., Univ. of Cincinnati Med. Ctr., Cincinnati, OH.</i> Sponsor: C.C Smith.
3	9:00	<b>Alteration of Calcium-Dependent GABA Release and the Enzyme Activities of Glutamic Acid Decarboxylase (GAD) and GABA-<math>\gamma</math>-Ketoglutarate Transaminase (GABA-T) in Response to the Acute and Chronic Administration of Phencyclidine (PCP).</b> J.C. Norris, T. Nabeshima, S.P. Sivam and I.K. Ho, <i>Dept. Pharmacol. &amp; Tox., Univ. Mississippi Med. Ctr., Jackson, MS.</i>
4	9:15	<b>Drug Metabolizing Enzymes in C3H10T<math>\frac{1}{2}</math> Cells Exposed to Polychlorinated Biphenyls (PCBs).</b> H.P. Cihla, G. Reddy and D.H. Norback, <i>Depts. of Path., William S. Middleton Memorial Veterans' Hospital and the Univ. of Wisconsin, Madison, WI.</i>
5	9:30	<b>The Effect of Ascorbic Acid on Copper and Nitrite-Induced Oxidative Changes in Erythrocytes: Interspecies Differences.</b> E.J. Calabrese, G.S. Moore and M. McCarthy, <i>Div. of Public Hlth., Univ. of Massachusetts, Amherst, MA.</i>
6	9:45	<b>Biochemical Toxicity in Mice of Substances Produced by <i>Clostridium difficile</i>.</b> M. Ehrich, <i>Virginia-Maryland Regional College of Vet. Med., Blacksburg, VA.</i>
7	10:00	<b>Anaerobic Activation of Chloramphenicol by Rat Liver Microsomes.</b> P.L. Morris, T.R. Burke and L.R. Pohl, <i>NHLBI, Bethesda, MD.</i> Sponsor: J.R. Gillette.
8	10:15	<b>Hypermethylation in the MSO-Epileptogenic Brain. Reversal by Dilantin, Phenobarbital or Adenosine Plus Homocysteine.</b> R.A. Schatz, <i>Div. Tox. Northeastern Univ., Boston, MA;</i> T.E. Wilens, S.B. Tatter and O.Z. Sellinger, <i>MHRI Neurochem. Lab., Univ. of Michigan, Ann Arbor, MI.</i> Sponsor: D.R. Brown.
9	10:30	<b>Probenecid Alters the Renal Transport of Citrinin.</b> W.O. Berndt, <i>Dept. Pharmacol. &amp; Tox., Univ. Mississippi Med. Ctr., Jackson, MS.</i>

10	10:45	<b>Acetaminophen Nephrotoxicity and Metabolism in Fisher 344 and Sprague-Dawley Rats.</b> J.F. Newton, Jr., J.K. Howe-Baughman, D.E. Erickson, W.E. Braselton, Jr., M.W. Gemborys, G.H. Mudge and J.B. Hook, <i>Dept. of Pharmacol. and Tox., Center for Environ. Tox., Michigan State Univ., East Lansing, MI and Dept. of Pharmacol. and Tox., Dartmouth College, Hanover, NH.</i>
11	11:00	<b>Studies on the Inhibition by L-Ascorbic Acid (LAA) of the Covalent Binding of Acetaminophen Metabolites to Hepatic Microsomes <i>In Vitro</i>.</b> B.G. Lake, R.A. Harris, J.C. Phillips and S.D. Gangolli, <i>The British Industrial Biological Research Association, Carshalton, Surrey, SM5 4DS, U.K.</i>
12	11:15	<b>Acetaminophen-Induced Hepatic Glycogen Depletion.</b> J.A. Hinson, J.B. Mays and A.M. Cameron, <i>NCTR, Jefferson, AR.</i>

## SYMPOSIUM 1: Drugs-Noise:Auditory Insults

Tuesday Morning, February 23, 1982

Grand Ballroom

**Chairman: R. Don Brown, Louisiana State University, Shreveport, LA**

### Time (A.M.)

8:30	<b>Introduction.</b> R. Don Brown, <i>Louisiana State University, Shreveport, LA.</i>
8:35	<b>Auditory Insults Produced by Drugs.</b> Robert E. Brummett, <i>University of Oregon Health Sciences Center.</i>
9:25	<b>Questions and Discussion</b>
9:35	<b>Auditory Insults Produced by Noise.</b> W. Dixon Ward, <i>University of Minnesota Med. School.</i>
10:10	<b>Questions and Discussion.</b>
10:20	<b>Auditory Insults Produced by Interaction of Noise and Drugs.</b> R. Don Brown, <i>LSU School of Med. in Shreveport.</i>
10:55	<b>Questions and Discussion.</b>
11:05	<b>Tinnitus - A "Special" Response to Auditory Insult.</b> Jack A. Vernon, <i>University of Oregon Med. School.</i>
11:40	<b>Questions and Discussion.</b>
11:50	<b>Concluding Remarks.</b> R. Don Brown.

## PLATFORM SESSION 2: Metals I

Tuesday Morning, February 23, 1982

Independence Room

**Co-Chairs: K.L. Stemmer, Univ. of Cincinnati, Cincinnati, OH**  
**F.W. Sunderman, Jr., Univ. of Connecticut, Farmington, CT**

Paper No.	Time (A.M.)	
13	8:30	<b>Prevention of Testicular Damage by Dietary Aluminum in Rats with Dietary Zn and Cu Deficiency.</b> J. Liu and K.L. Stemmer, <i>Univ. of Cincinnati Med. Center, Kettering Lab., Cincinnati, OH.</i>
14	8:45	<b>Dispositional Differences of Cadmium and Mercury in Rat Hepatocyte Primary Cultures.</b> R.J. Gerson and Z.A. Shaikh, <i>Div. of Tox., Univ. of Rochester, Rochester, NY.</i>
15	9:00	<b>Flavor Aversions Induced by Cadmium: Importance of Route of Exposure.</b> R.C. MacPhail, <i>Neurotoxicology Div., U.S. Environmental Protection Agency, Research Triangle Park, NC.</i> Sponsor: L.W. Reiter.
16	9:15	<b>Alteration of Membrane Fluidity as a Possible Mechanism of Cadmium Toxicity,</b> M.A. Amoroso, G. Witz and B.D. Goldstein, <i>Dept. of Environmental and Community Med., CMDNJ-Rutgers Med. School/Rutgers Univ. Joint Graduate Program in Tox., Piscataway, NJ.</i>
17	9:30	<b>Cadmium Concentrations in Amniotic Fluids.</b> F.W. Fochtman, C.F. Kritko and C.L. Winek, <i>Dept. of Pharmacol.-Tox., Duquesne Univ. School of Pharm., Pittsburgh, PA.</i>
18	9:45	<b>The Effects of Methylmercury Binding to Microtubules.</b> D.G. Vogel, R.L. Margolis and N.K. Mottet, <i>Dept. of Pathology, Univ. of Wash. and Fred Hutchinson Cancer Research Center, Seattle, WA.</i> Sponsor: M.R. Juchau.
19	10:00	<b>Effect of Selenium on Distribution, Demethylation and Excretion of Methylmercury by the Guinea Pig.</b> Elzbieta Komsta-Szumaska, K.R. Reuhl and D.R. Miller, <i>Biological Sciences, National Res. Council of Canada, Ottawa, Ont. Canada K1A 0R6.</i> Sponsor: C.T. Miller.
20	10:15	<b>Induction of DNA Strand Breaks by Nickel Chloride and Crystalline Nickel Sulfide in Chinese Hamster Ovary Cells.</b> S.H. Robison and M. Costa, <i>Dept. of Pharmacol., Univ. of Texas Med. School, Houston, TX.</i>
21	10:30	<b>Time-Course, Dose-Response and Organ-Selectivity for Ni(II)-Induction of Microsomal Heme Oxygenase in Rats.</b> F.W. Sunderman, Jr., M.C. Reid, L.M. Bibeau and J. Linden, <i>Lab. Med. &amp; Pharmacol. Depts. Univ. of Conn. Med. School, Farmington, CT.</i>
22	10:45	<b>Neuropathological Lesions in Mice Following Neonatal Exposure to Trimethyltin.</b> K.R. Reuhl, B. Mackenzie and L.W. Chang, <i>Div. Biol., NRC Canada and Dept. Pathol., Univ. Arkansas, Little Rock, AR.</i> Sponsor: C.T. Miller
23	11:00	<b>Absorption and Transplacental Transfer of Tin Derived from Dimethyltin Dichloride and Stannous Chloride.</b> E.A. Noland, P.T. McCauley, R.J. Bull and K. Kelty, <i>Health Effects Research Lab., U.S.E.P.A., Cincinnati, OH.</i>

- 24 11:15 **The Effect of Zinc Status on the Synthesis of Metallothionein in Various Tissues of Rats.** S. Onosaka and M.G. Cherian, *Depts. of Path., Pharmacol. and Tox., Univ. of Western Ontario, London, Ont. Canada.*

### PLATFORM SESSION 3: Renal-Cardiovascular

Tuesday Morning, February 23, 1982

Room # 200 - John B. Hynes Auditorium

**Co-Chairs: F.J. Koschier, American Cyanamid Co., Wayne, NJ**  
**T. Balazs, U.S. Food & Drug Administration, Washington, DC**

Paper No.	Time (A.M.)	
25	8:30	<b>Absence of Urinary Bladder and Kidney Toxicity in Rats and Guinea Pigs Exposed to Inhaled Terephthalic Acid and Dimethyl Terephthalate.</b> T.R. Lewis, D.W. Lynch and R.L. Schuler, <i>National Inst. for Occupational Safety and Health, Div. of Biomed. and Behavioral Science, Cincinnati, OH.</i>
26	8:45	<b>Dose-Response Relationships in 2-Hexanone-Induced Potentiation of <math>\text{CHCl}_3</math> Nephrotoxicity.</b> W.R. Hewitt and E.M. Brown, <i>Dept. of Vet. Anatomy-Physiology, Univ. of Missouri-Columbia, Columbia, MO.</i> Sponsor: G.D. Osweiler.
27	9:00	<b>A Comparison of the Effects of Vanadate Administered <i>In Vivo</i> and <i>In Vitro</i> on Organic Ion Accumulation by Renal Cortical Slices.</b> J.H. Smith, W.E. Braselton, S.R. Tonsager and J.B. Hook, <i>Ctr. for Environ. Tox., Michigan State Univ., East Lansing, MI.</i>
28	9:15	<b>Effects of Aminoglycosides on Renal Reabsorption and Lysosomal Degradation of Low Molecular Weight Proteins.</b> C. Cojocel and J.B. Hook, <i>Ctr. for Environ. Tox., Michigan State Univ., East Lansing, MI.</i>
29	9:30	<b>Molecular Mechanisms Involved in the Bladder Toxicity of Sodium Orthophenylphenol (SOPP).</b> R.H. Reitz, T.R. Fox, J.F. Quast, E.A. Hermann and P.G. Watanabe, <i>Tox. Res. Lab., Dow Chemical U.S.A., Midland, MI.</i>
30	9:45	<b>Preclinical Toxicology of Nitrostat, A Stabilized Intravenous Nitroglycerin.</b> J.A. Anderson, E.J. McGuire, J.R. Watkins, J.E. Fitzgerald and F.A. de la Iglesia, <i>Dept. of Tox., Warner-Lambert/Parke-Davis Pharmaceutical Res. Div., Ann Arbor, MI.</i>
31	10:00	<b>Studies of the Interaction of Beta Blocking Drugs and Calcium Antagonists.</b> J.A. Vick, E.H. Herman and T. Balazs, <i>Food &amp; Drug Administration, Washington, DC.</i>
32	10:15	<b>The Effect of Exercise on Cardiotoxic Potential of Adriamycin in Rhesus Monkeys.</b> C.R. Hassler, D.C. Thake and P. Feder, <i>Battelle Columbus Laboratories, Columbus, OH;</i> R.I. Hamlin, <i>Ohio State Univ., College of Vet. Med., Columbus, OH.</i> Sponsor: G.L. Fisher.

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| 33 | 10:30 | <b>Isoproterenol-Induced Lethality in Male Mice Following Manganese, Selenium, and Cadmium Treatment.</b> <i>M.J. Deimling, J.B. Modrak and R.C. Schnell, Dept. of Pharmacodynamics and Tox., Univ. of Nebraska Med. Ctr., Omaha, NE.</i>   |
| 34 | 10:45 | <b>Electrocardiographic Findings in Dogs with Subclinical Parvovirus-Related Cardiomyopathy.</b> S.A. Kutz, P.S. Struve, D.K. Detweiler, R.E. Cimprich, J.L. Robertson, P.J. DeBaecke and C.S. Streett, <i>Stuart Pharmaceuticals, Biomedical Res. Dept., Wilmington, DE and the School of Vet. Med., Univ. of Pennsylvania, Philadelphia, PA.</i> Sponsor: L.E. Gongwer. |
| 35 | 11:00 | <b>Effect of Low Levels of n-Hexane on Isolated Perfused Rabbit Heart.</b> R.R. Raje, <i>Arnold &amp; Marie Schwartz College of Pharmacy &amp; Health Sciences, Long Island Univ., Brooklyn, NY.</i> Sponsor: W.H. Lawrence.  |
| 36 | 11:15 | <b>Fluorescence Polarization Studies of Human Erythrocyte Membranes Exposed to Ozone in Vitro.</b> G. Witz, B.D. Goldstein, L. Myers-Basting and M.A. Amoroso, <i>Dept. of Environ. &amp; Community Med., CMDNJ-Rutgers Med. School/Rutgers Univ. Joint Graduate Program in Tox., Piscataway, NJ.</i>   |

### PLATFORM SESSION 4: Inhalation I

Tuesday Morning, February 23, 1982

Constitution Room

**Co-Chairs: E.J. Calabrese, Univ. of Massachusetts, Amherst, MA**

**R.F. Henderson, Inh. Tox. Res. Inst., Albuquerque, NM**

- | Paper No. | Time (A.M.) |   |
|-----------|-------------|---|
| 37        | 8:30        | <b>Sensory Irritation Properties of Compounds Producing Nasal Tumors in the Rat.</b> G.L. Kennedy, Jr., B.A. Burgess, R.J. Gardner, J.R. Gibson and H.J. Trochimowicz, <i>E.I. du Pont de Nemours &amp; Co., Inc., Haskell Laboratory for Toxicology and Industrial Medicine, Newark, DE.</i> |
| 38        | 8:45        | <b>Dose Comparison Between B6C3F1 Mice and F-344 Rats Following Formaldehyde Inhalation.</b> J.C.F. Chang, E.A. Gross, J.A. Swenberg and C.S. Barrow, <i>Chem. Ind. Inst. of Tox., Research Triangle Park, NC.</i>  |
| 39        | 9:00        | <b>Subchronic Inhalation Toxicity Studies of n-Heptane (H) and Toluene (T) in the Rat.</b> S.C. Lewis, <i>Medicine and Environ. Hlth. Dept., Exxon Corporation, East Millstone, NJ;</i> C.E. Holdsworth, <i>American Petroleum Institute, Washington, DC.</i>                                 |
| 40        | 9:15        | <b>Ethylene Glycol Monomethyl Ether: A Subchronic Inhalation Study in Rats and Rabbits.</b> R.R. Miller, J.A. Ayres, J.T. Young and M.J. McKenna, <i>Tox. Res. Lab., H&amp;ES, Dow Chemical USA, Midland, MI.</i>   |
| 41        | 9:30        | <b>Chronic Inhalation Toxicity of Ethylene Oxide and Propylene Oxide in Rats and Monkeys — A Preliminary Report.</b> D.W. Lynch, T.R. Lewis and W.J. Moorman, <i>National Inst. for Occupational Safety and Health, Div. of Biomedical and Behavioral Science, Cincinnati, OH.</i>            |

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| 42 | 9:45  | <b>Ethylene Oxide Vapor Two-Year Inhalation Study on Rats.</b> W.M. Snellings, C.S. Weil and R.R. Maronpot, <i>Bushy Run Research Center, Export, PA.</i>  |
| 43 | 10:00 | <b>The Effect of Proposed Ozone Intermediates (<i>in Vitro</i>) on Normal and G-6-PD Deficient Erythrocytes in Humans and in Dorset Sheep, A Model with an Erythrocyte G-6-PD Deficiency.</b> E.J. Calabrese, G.S. Moore and P. Williams, <i>Div. of Pub. Hlth., Univ. of Massachusetts, Amherst, MA.</i>            |
| 44 | 10:15 | <b>The Effect of Low-Level Ozone Exposure Upon the Course of <i>p. berghei</i> Infection in Female A/J Strain Mice.</b> G.S. Moore, E.J. Calabrese and K.H. Mottent, <i>Div. Public Hlth., Univ. of Massachusetts, Amherst, MA.</i>  |
| 45 | 10:30 | <b>Alveolar Permeability to Serum Protein After Five Hours of 2 ppm Ozone Exposure in Rats Selectively Bred for Susceptibility or Resistance to Salt-Induced Hypertension.</b> S.N. Schafrank, D.L. Costa, R.W. Wehner and E. Jellet, <i>Medical Dept., Brookhaven National Lab., Upton, NY.</i> Sponsor: R.T. Drew. |
| 46 | 10:45 | <b>Acute Carbon Monoxide Toxicity in Restrained vs. Unrestrained Rats,</b> R.T. Drew, <i>Med. Dept., Brookhaven National Lab., Upton, NY.</i>  |
| 47 | 11:00 | <b>A Distributed Microprocessor Network for Control, Monitoring and Data Handling at an Inhalation Toxicology Facility.</b> D.G. Dimmler and D.M. Bernstein, <i>Brookhaven National Lab., Upton, NY.</i> Sponsor: R.T. Drew.   |
| 48 | 11:15 | <b>Requirements for Successful Implementation of a Control, Monitoring and Data Handling System at an Inhalation Toxicology Facility.</b> D.M. Bernstein and D.G. Dimmler, <i>Brookhaven National Lab., Upton, NY.</i> Sponsor: R.T. Drew.   |

## POSTER SESSION 1A: Biotransformation/Disposition I

Tuesday Morning, February 23, 1982

John B. Hynes Exhibition Area

**Organizers: G.P. Carlson, Purdue Univ., West Lafayette, IN**  
**I.G. Sipes, Univ. of Arizona, Tucson, AZ**

**Displayed: 8:30 A.M. — Noon**

**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.**

49

**Aspects of the *In Vitro* Metabolism of Dimethylnitrosamine (DMN) by Rat Liver Preparations.** B.G. Lake, M.A. Collins, R.A. Harris, R.C. Cottrell, J.C. Phillips and S.D. Gangolli, *The British Industrial Biological Research Association, Woodmansterne Road, Carshalton, Surrey, SM5 4DS, U.K.*

- 50 **Tissue Deposition of Acrylamide in Multiply-Dosed 5-week vs. 11-week Male Holtzman Rats.** L.A. Rylander Yueh and D.E. Carter. *Dept. of Pharmacol. and Tox., Univ., of Arizona, Tucson, AZ.*
- 51 **Biotransformation Enzymes (Cytochrome P-450 Dependent Mono-Oxygenases) in the Nasal Epithelial Membrane and Turbinates of Seven Species.** A.R. Dahl, W.M. Hadley and J.M. Benson, *Lovelace Inhalation Tox. Res. Inst., P.O. Box 5890, Albuquerque, NM.*
- 52 **Effect of Structure on the Metabolic Release of Cyanide from Nitriles.** T. Hasan, M. Hassan, S. Kuttub and E.H. Silver, *College of Pharmacy and Allied Health Professions, Northeastern Univ., Boston, MA.* Sponsor: D.R. Brown.
- 53 **Quantitative Precipitation of Formic Acid from Methanol.** G.G. Berg, *Dept. of Radiation Biol. and Biophysics, Univ. of Rochester Sch. of Med., Rochester, NY.*
- 54 **Metabolic Disposition of Dipyrithione.** C. Mitoma, T. Steeger, J. Rogers and D. Thomas, *SRI International, Menlo Park, CA;* J.H. Wedig, *Olin Corporation, New Haven, CT.*
- 55 **Metabolism of a Milkweed Cardenolide, Uscharidin, by Monarch Butterfly Larvae, *Danaus Plexippus*.** M.A. Marty and R.I. Krieger, *Dept. of Environ. Tox. Univ. of California, Davis, CA and Dept. of Vet. Science, Univ. of Idaho, Moscow, ID.*
- 56 **Disposition and Excretion of 1,3-Diphenylguanidine in Male Fischer Rat.** Y.M. Ioannou and H.B. Matthews, *Nat. Inst. Env. Hlth. Sci., Research Triangle Park, NC.*
- 57 **Metabolism of 5-Amino-1-Naphthol in the Rat.** P.M. Enriquez and G.D. DiVincenzo, *Health, Safety and Human Factors Lab., Eastman Kodak Co., Rochester, NY.*
- 58 **Sex Differences in the Metabolism of 2,6-Dinitrotoluene by Isolated Perfused Rat Livers.** R.M. Long and D.E. Rickert, *Chem. Ind. Inst. of Toxicology, Research Triangle Park, NC.*
- 59 **Metabolism of Nitrotoluenes by Rat Cecal Microflora.** S.R. Schnell, M.J. Turner, D.E. Rickert and J.G. Dent, *Chemical Ind. Inst. of Tox., Research Triangle Park, NC.*
- 60 **Metabolism of Toluene in Rat Isolated Hepatocytes.** D. Guest, P.J. Deisinger and G.D. DiVincenzo, *Health, Safety and Human Factors Lab., Eastman Kodak Co., Rochester, NY.*
- 61 **Paranitrotoluene: Distribution and Excretion in Male Fischer 344 Rats.** C.L. Dellefs, D.F. Perry, D.E. Carter and I.G. Sipes, *Tox. Program, Univ. of Arizona, Tucson, AZ.*
- 62 **Interactions of Nitrobenzene with Hepatic Microsomes: Evidence for Cytochrome P450 Uncoupling.** A.A. Levin, J.S. Bus and J.G. Dent, *Chemical Ind. Inst. of Tox., Research Triangle Park, NC.*
- 63 **A Comparative Study of Hepatic Mixed-Function Oxidases in 3 Rat Strains Fed Diets Containing 20% Cabbage (*Brassica Oleracea*).** K.W. Miller and G.S. Stoewsand, *Cornell Univ., Geneva, NY.*

- 64 **Dose Dependent Changes in Elimination and Tissue Distribution of  $^{14}\text{C}$  Dithiobiuret in the Rat.** W.D. Atchison, J. Dickins, W.R. Porter and R.E. Peterson, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.*
- 65 **Elimination, Tissue Distribution and Metabolism of  $^{14}\text{C}$  and  $^{35}\text{S}$  Dithiobiuret in the Rat: Evidence for Desulfuration.** K.D. Williams, W.R. Porter and R.E. Peterson, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.*
- 66 **Synthesis, Stability in Solution, and Separation of  $^{35}\text{S}$ -Dithiobiuret from Decomposition Products and Potential Metabolites.** W.R. Porter, K.D. Williams and R.E. Peterson, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.*
- 67 **Fate of  $^{14}\text{C}$ -Carbon Tetrachloride in Rats Following Inhalation During a Novel and Standard Workweek.** D.J. Paustenbach, G.P. Carlson, G.S. Born and J.E. Christian, *Schools of Health Science and Pharmacy and Pharmacal Science, Purdue Univ., West Lafayette, IN.*
- 68 **Fate of Dichlorobenzidine-Based Pigment Chlorodiane Blue and Pigment Yellow 12 *In Vivo* & *In Vitro*.** G.M. Decad, C. Snyder and F. Joachim, *International Business Machines Corp., San Jose, CA and C. Mitoma, SRI International, Menlo Park, CA.*
- 69 **Toxicokinetics and Metabolism of a Single Oral Dose of O-Ethyl O-4-Nitrophenyl Phenylphosphonothioate (EPN) in Chicks.** M.B. Abou-Donia, Y.M. Hernandez and N.S. Ahmed, *Dept. of Pharmacology, Duke Univ. Med. Ctr., Durham, NC.*
- 70 **Effects of Induction and of Solubilization on *In Vitro* Alteration of Microsomal Cytochrome P-450 By Allylic Toxicants.** J.M. Patel and K.C. Leibman, *Dept. of Pharmacol., Univ. of Florida, Gainesville, FL.*
- 71 **Comparison of Urinary Metabolites of  $^{14}\text{C}$  Di-N- and Mono-N-Butyl Phthalate in Hamster and Rat: Possible Relationship to Effects on Testicular Tissue.** P.M.D. Foster, M.W. Cook, L.V. Thomas, D.G. Walters and S.D. Gangolli, *The British Industrial Biological Research Association, Woodmansterne Rd., Carshalton, Surrey, SM5 4DS. U.K.*
- 72 **Disposition of [ $^{14}\text{C}$ ]Hexamethylenediamine in Fischer-344 Rats After Oral, Intraperitoneal and Intravenous Administration.** R.M. David and H.d'A. Heck, *Chemical Ind. Inst. of Tox., Research Triangle Park, NC.* Sponsor: J.E. Gibson.
- 73 **Measurement of 7-Methylguanine in Urine as an Estimate of DMN Formation from the Reaction of Aminopyrine and Nitrite *In Vivo*.** C.T. Gombar and P.N. Magee, *Fels Res. Inst., Temple Univ. Sch. of Med., Philadelphia, PA.*
- 74 **Metabolism of 4,4'-Dichlorobiphenyl (4,4'-DCB) by Human Liver Microsomes.** R.G. Schnellmann, T.J. Gillespie, C.W. Putnam and I.G. Sipes, *Depts. of Pharmacol. and Surgery, Arizona Hlth. Sci. Ctr., Tucson, AZ.*



- 75 **Disposition of 1,2,3-Trichloropropane in Rats.** R.F. Volp, D.E. Carter and I.G. Sipes. *Toxicol. Program, Univ. of Arizona, Tucson, AZ.*
- 76 **Effect of Senescence on the Bioactivation of Aliphatic Halides.** A.J. Gandolfi, A.B. DiRenzo, J.N. McDougal and I.G. Sipes, *Dept. of Anesthesiology and Pharmacol., Univ. of Arizona, Tucson, AZ.*
- 77 **Characterization of the Uptake of Estradiol-17 $\beta$ -D-Glucuronide and Taurocholic Acid in Isolated Rat Hepatocytes.** W.J. Brock and M. Vore, *Grad. Center for Toxicology and Dept. of Pharmacol., Univ. of Kentucky, Lexington, KY.*
- 78 **Indanol Dehydrogenase (ID): Some Properties of the Enzyme from Human Placenta.** A.P. Kulkarni, B. Strom and W. Houser. *Toxicology Program, Dept. of Environ. & Ind. Hlth., Univ. of Michigan, Ann Arbor, MI.*
- 79 **Functional Integrity of Isolated Rat Hepatocytes.** C.E. Green, J.E. Dabbs and C.A. Tyson, *SRI International, Menlo Park, CA.* Sponsor: D.C.L. Jones.
- 80 **Comparative Rates of Benzene Metabolism in Primary Hepatocyte Cultures.** S.A. Knadle, C.B. Salocks, J. Nakashima and J.L. Byard, *Dept. of Environ. Tox., Univ. of California, Davis, CA.*
- 81 **Placental and Milk Transfer of the Organophosphate Insecticide, Parathion, and its Disposition in Fetuses and Nursing Offspring.** S.D. Weitman, M.J. Vodicknik, A.A.R. Hamid and J.J. Lech, *Dept. of Pharmacol. & Tox., Med. College of Wisconsin, Milwaukee, WI.*
- 82 **Isolation of <sup>14</sup>C-Macrocyclic Pyrrolizidine Alkaloids.** C.H. Brown and H.J. Segall, *Dept. V.M. Physio. Sci., Univ. of California, Davis, CA.*
- 83 **The *In Vitro* Covalent Binding of Senecionine and Seneciphylline to Mouse Liver Microsomes and DNA.** D.F. Eastman and H.J. Segall, *Dept. of V.M. Physio. Sci., Univ. of California, Davis, CA.*
- 84 **Irreversible Binding of Isolated Pyrrolizidine Alkaloid (Senecionine) Metabolites to Mouse Liver Microsomal Proteins.** L.J. Willis, H.J. Segall and D.F. Eastman, *Dept. V.M. Physio. Sci., Univ. of California, Davis, CA.*
- 85 **Metabolism of Malondialdehyde by Rat Liver Aldehyde Dehydrogenase.** J.J. Hjelle, J.H. Grubbs and D.R. Petersen, *Dept. of Pharmacol., Univ. of Colorado, Boulder, CO.* Sponsor: C.D. Klaassen.
- 86 **Studies on Phenol-O-Methyltransferase and Thiol-S-Methyltransferase.** P.T. Lin and W.C. Dauterman, *Dept. Entomology, North Carolina State Univ., Raleigh, NC.*
- 87 **Sodium Azide: Bioavailability and Metabolism in Rats.** E.W. Lee, *Biomedical Science Dept., General Motors Research Laboratories, Warren, MI.*
- 88 **Disposition of Dimethylamine (DMA) in F-344 Rats After Inhalation Exposure.** M.J. McNulty and H. d'A. Heck, *Chem. Ind. Inst. of Tox., Research Triangle Park, NC.* Sponsor: D.E. Rickert.

- 89 **In Vivo Metabolism of 3-Methylcholanthrene (MC) in Pregnant C57BL/6 and DBA/2 Mice.** J.D. George, J.M. Manson, S. Vater and D. Warshawsky, *Dept. Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH.* Sponsor: P.B. Hammond.
- 90 **Effect of Increasing Levels of Dietary Protein on the Metabolic Activation and Covalent Binding of Aflatoxin B<sub>1</sub>.** J.R. Hayes, C.O. McCall, D.M. Bagley, *Dept. Pharmacol., Med. College of Virginia, Richmond, VA.*
- 91 **Is There a Low-Dose Threshold for Hepatic Macromolecular Binding of Aflatoxin B<sub>1</sub>?** B.S. Appleton, M.P. Goetchius and T.C. Campbell, *Div. of Nutritional Sciences, Cornell Univ., Ithaca, NY.*
- 92 **Subchronic Dietary Toxicity Studies on 2-Chloro-6-(2-Furanylmethoxy)-4-(Trichloromethyl)Pyridine, (Dowco\* 444), A Development Fungicide, in Rats and Dogs.** G.C. Jersey, S.J. Gorzinski, T. Barna-Lloyd, J.F. Quast, J.T. Tollett and B.A. Schwetz, *Health & Environ. Sciences, Dow Chemical, U.S.A., Midland, MI and Lake Jackson, TX.*
- 93 **Toxicologic and Carcinogenic Evaluation of Fenvalerate in the B6C3F1 Mouse.** C.M. Parker and C.B. McCullough, *Tox. Research, Shell Development Co., Houston, TX;* J.B.M. Gellatly, *Shell Tox. Lab., (Tunstall), Sittingbourne, Kent, UK;* C.D. Johnston, *Litton Bionetics, Inc., Kensington, MD.* Sponsor: G.A. Van Gelder.
- 94 **The Association of Orally-Administered Captan with Mouse Deoxyribonucleic Acid.** C.A. Selsky and D.W. Matheson, *Stauffer Chemical Co., Environ. Hlth. Ctr., Farmington, CT.* Sponsor: R.I. Freudenthal.
- 95 **A Derived Chronic Toxicity-Oncogenicity Study of Mycelial Monensin Sodium in the Rat.** L.C. Howard, M.N. Novilla and E.R. Adams, *Tox. Div., Lilly Research Lab., Greenfield, IN.* Sponsor: J.L. Emmerson.
- 96 **Oncogenic Bioassay of 3-Trichloromethyl-5-Ethoxy-1,2,4, Thiadiazole, Etridiazol, in CD-1® Mice.** E.F. Erker, L.J. Slaughter, F. Sperling and W.L. West, *Depts. of Pharmacol. & Pathol., Howard Univ. Med. Sch., Washington, DC;* J. Wedig, *Olin Corp., New Haven, CT.*
- 97 **The Role of Hydrogen Peroxide in Microsomal Lipid Peroxidation.** L.A. Morehouse, M. Tien, J.R. Bucher and S.D. Aust, *Dept. of Biochemistry, Michigan State Univ., East Lansing, MI.*
- 98 **The Cytochrome P-450 Dependent Monooxygenase System From the Liver of Uninduced Mice.** P. Levi, G. Bisette and E. Hodgson. *Dept. of Entomology, North Carolina State Univ., Raleigh, NC.*

## POSTER SESSION 1B: Environment I

Tuesday Morning, February 23, 1982

John B. Hynes Exhibition Area

**Organizers: J.V. Bruckner, Univ. of Texas Med. School, Houston, TX**  
**R.A. Roth, Michigan State Univ., East Lansing, MI**

Displayed: 8:30 A.M. — Noon

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.	
99	<b>A Comparative Kinetics Study of Monochloramine and Chlorine in Rat.</b> M.S. Abdel-Rahman, D.M. Waldron and R.J. Bull, <i>CMDNJ-New Jersey Medical School, Newark, NJ.</i>
100	<b>Influence of Ingestion of Monocrotaline by Rats on Lung, Liver and Kidney Function.</b> R.A. Roth, B. Barayni, C-H. Kuo, L.A. Dotzlaif and J.B. Hook, <i>Center for Environmental Tox., Michigan State Univ., East Lansing, MI.</i>
101	<b>Effects of Postnatal Triethyltin (TET) on Radial-Arm-Maze Behavior in the Juvenile Rat.</b> D.B. Miller and L.W. Reiter, <i>Neurotoxicology Div., U.S. Environmental Protection Agency, Research Triangle Park, NC.</i>
102	<b>Microwave Induced Changes in Canalicular Membrane Function of the Rat.</b> D.G. Lange, M.E. D'Antuono and J.M. Fujimoto, <i>Research Services, VA Medical Center, Wood, MI and Dept. of Pharmacol. and Tox., Medical College of Wisconsin, Milwaukee, WI.</i>
103	<b>Hepatorenal Toxicity of DBCP Ingested in Drinking Water.</b> G. Kyle, R. Luthra, J.V. Bruckner, A.S. Berkowitz and J.J. Heindel, <i>Dept. Pharmacol., Div. Tox. and Dept. Repro. Med. &amp; Biol., Univ. Texas Med. Sch., Houston, TX.</i>
104	<b>Comparison of the Metabolism and Binding of Dimethylphthalate in Skin and Liver.</b> W.J. Kozumbo, R.J. Rubin and R. Knoll, <i>Dept. Environ. Hlth. Sci., Johns Hopkins Univ., Baltimore, MD.</i>

## PLATFORM SESSION 5: Biotransformation/Disposition II

Tuesday Afternoon, February 23, 1982

Republic Ballroom

**Co-Chairs: C.C. Smith, Univ. of Cincinnati, Cincinnati, OH**  
**M.A. Evans, Univ. of Illinois Med. Center, Chicago, IL**

Paper No.	Time (P.M.)	
105	1:30	<b>Identification, Purification, and Characterization of Non-Selenium Gluthathione Peroxidase From Guinea Pig Liver Microsomes.</b> J.R. Burgess, C.C. Reddy, C.-P.D. Tu, C.Y. Ho, R.W. Scholz and E.J. Massaro, <i>Pennsylvania State Univ., University Park, PA.</i>

- 106 1:45 **Characterization of the Fluoroacetate Defluorination Activity in Mouse Liver.** A.I. Soiefer and P.J. Kostyniak, *Dept. of Pharmacol. and Therap., SUNY at Buffalo, School of Med., Buffalo, NY.* Sponsor: T.W. Clarkson.
- 107 2:00 **Interactions of Heme Proteins with Hydrogen Peroxide: Protein Polymerization and Covalent Binding of Benzo(A)Pyrene.** R.H. Rice, *Lab. of Tox., Harvard Sch. Pub. Hlth., Boston, MA.* Sponsor: J.L. Whittenberger.
- 108 2:15 **Xenobiotic-Induced Hypofunctional Pseudo-Hyper-trophic Rough Endoplasmic Reticulum in Rat Liver.** C. DiFonzo, R.A. Martin, G. Feuer, J.M. Sturgess and F.A. de la Iglesia, *Warner-Lambert/Parke-Davis Pharm. Res. Sheridan Park, Mississauga Ont. Canada, and Ann Arbor, MI; Dept. of Clin. Biochemistry, Univ. of Toronto, Toronto, Canada.*
- 109 2:30 **Metabolism Studies on WR-158, 122, an Antimalarial Drug. In Bile Duct-Cannulated Rats.** C.C. Smith, M.W. Tabor and G.J. Wolfe, *Dept. of Environ. Hlth., Univ. of Cincinnati Med. Ctr., Cincinnati, OH.*
- 110 2:45 **Disposition of Topical and Orally Administered Indomethacin in Patients Undergoing Cataract Extraction Surgery.** M.S. Bernstein, D.R. Sanders and M.A. Evans, *Interdisciplinary Tox. Program, Depts. of Pharmacol. and Ophthalmology, Univ. of Illinois Med. Ctr., Chicago, IL.*
- 111 3:00 **Metabolism of Radiotestosterone to 3 $\beta$ , 6 $\alpha$ -Dihydroxy 5 $\alpha$ -Steroids by Rat Ventral Prostate in Organ Culture.** R.L. Sousa, P. Ofner, R.L. Vena, P. Krinsky-Feibush and P.W. LeQuesne, *Lemuel Shattuck Hospital, Urol. Dept., Tufts Univ. Sch. Med., Lab. of Toxicol., Harvard Sch. Pub. Hlth., Chem. Dept., Northeastern University, Boston, MA.* Sponsor: G. Wogan.
- 112 3:15 **Allyl Chloride: Pharmacokinetics and Metabolism Following Administration to CDF-Fischer 344 Rats by Three Routes.** J.M. Waechter, Jr., J.C. Ramsey, B.E. Kropscott, J.F. Quast, T.D. Landry and W.H. Braun, *Hlth. & Environmental Sciences, USA, The Dow Chemical Company, Midland, MI.*
- 113 3:30 **Pharmacokinetics of Orally and Intravenously Administered 1,1-Dichloroethylene in the Rat.** L. Putcha and J.V. Bruckner, *Dept. Pharmacol., Div. Toxicol., Univ. Texas Med. Sch., Houston, TX;* S. Feldman, *Dept. Pharmaceutics, Univ. Houston, Houston, TX.*
- 114 3:45 **The Disposition of <sup>14</sup>C-Toxaphene in the Lactating Rat.** G.A. Pollock and J.F. Rogauskas, *Vet. and Comp. Anatomy, Pharmacology/Toxicology and Physiology, Univ. of Idaho, Moscow, ID.*
- 115 4:00 **Ring-Chain Tautomerism of the Anticoagulant Rodenticide Warfarin and its Aromatic Hydroxylated Metabolites.** A.O. Obaseki and W.R. Porter, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.* Sponsor: R.E. Peterson.
- 116 4:15 **Chromatographic Translobular Migration of Xenobiotics in Rat Liver.** S. Tsuda and T. Nakatsugawa, *Dept. of Environ. and Forest Biology, State Univ. of New York, Syracuse, NY.*

## PLATFORM SESSION 6: General Toxicology I

Tuesday Afternoon, February 23, 1982

Room #200 - John B. Hynes Auditorium

**Co-Chairs: B.S. Levine, Ortho Pharmaceutical Corp., Raritan, NJ**

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

Paper No.	Time (P.M.)	
117	1:30	<b>Response to Ethanol Containing Liquid Diets in the Fischer-344 (F-344) and Sprague-Dawley (SD) Rat.</b> N. Missibeck, D. Kim, I. Barbeau, T.C. Campbell and D.A. Roe, <i>Div. of Nutr. Sci., Cornell Univ., Ithaca, NY.</i>
118	1:45	<b>Effect of Metabolic Induction on Acute Toxicity of n-Hexane in Mice.</b> R.R. Raje, <i>Arnold &amp; Marie Schwartz College of Pharmacy &amp; Health Sciences, Long Island, Univ., Brooklyn, NY.</i> Sponsor: W.H. Lawrence.
119	2:00	<b>Butyl and Methyl Acrylate: 13-week Oral Toxicity Studies in CDF Fischer 344 Rats.</b> S.J. Gorzinski, G.C. Jersey, C.E. Wade, E.A. Hermann, S.B. McCollister and R.J. Kociba, <i>Tox. Research Lab., H&amp;ES, Dow Chemical U.S.A., Midland, MI.</i>
120	2:15	<b>Factors Influencing Acrylonitrile Toxicity.</b> R. Jaeger, I. Cote, A. Rogers, E. Silver and S. Szabo, <i>Inst. Env. Med., NYU, New York, NY; Dept. Nutr. &amp; Food Sci. MIT, Cambridge, MA; Dept. Pathol. Harvard Medical School, Boston, MA.</i>
121	2:30	<b>Acute and Subchronic Oral Toxicologic Studies of Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX) in Rats and Mice.</b> L.C.K. Wong, J.M. Cholakis, C.B. Hong, H.V. Ellis, III and J.C. Dacre, <i>Pharmacol./Tox. Dept., Midwest Res. Inst., Kansas City, MO and U.S. Army Med. Bioengineering R&amp;D Lab., Ft. Detrick, Frederick, MD.</i>
122	2:45	<b>Comparative Toxicity of TNT in Rats, Dogs and Mice.</b> B.S. Levine, E.M. Furedi, D.E. Gordon, J.M. Burns, J.H. Rust and P.M. Lish, <i>Life Sciences Div., IIT Research Inst., Chicago, IL; J.J. Barkley, U.S. Army Med. Bioengineering R&amp;D Lab., Fort Detrick, Frederick, MD.</i>
123	3:00	<b>Mutagenic and Reproductive Studies of Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX) in Rats and Rabbits.</b> J.L. Minor, R.D. Short, Jr., D.L. Van Goethm, L.C.K. Wong and J.C. Dacre, <i>Pharmacol./Tox. Dept., Midwest Res. Inst., Kansas City, MO and U.S. Army Med. Bioengineering R&amp;D Lab., Fort Detrick, Frederick, MD.</i>
124	3:15	<b>Toxicologic Assessment of Isopropyl Methylphosphonic Acid.</b> F.J. Mecler and J.C. Dacre, <i>Dept. of Tox., Litton Bionetics, Inc., Kensington, MD and U.S. Army Med. Bioengineering R&amp;D Lab., Fort Detrick, Frederick, MD.</i>
125	3:30	<b>Chronic Toxicity and Reproduction Studies on Amino-tri(Methylene Phosphonic Acid) [ATMP]</b> M.W. Stevens, <i>Dept. of Med. &amp; Environ. Hlth., Monsanto Co., St. Louis, MO.</i> Sponsor: G.J. Levinskas.

126	3:45	<b>The Comparative Toxicities and Carcinogenicities of Benzidine and Direct Blue 6 in Rats.</b> J.H. Mennear and B.N. Gupta, <i>National Tox. Program, NIEHS, Research Triangle Park, NC.</i>
127	4:00	<b>Evaluation of Immunologic and Hematologic Effects of Fusarium T-2 Toxin in the Bovine.</b> B. Hook, G.D. Osweiler and G.M. Buening, <i>College of Vet. Med., Univ. of Missouri, Columbia, MO.</i>
128	4:15	<b>Citrinin Mycotoxicosis in the Rabbit.</b> C. Hanika and W.W. Carlton, <i>Sch. of Vet. Med., Purdue Univ., West Lafayette, IN;</i> J. Tuite, <i>Dept. of Bot., Sch. of Agri., Purdue Univ., West Lafayette, IN.</i>

## **SYMPOSIUM 2: Peer Review and Scientific Decision Making**

Tuesday Afternoon, February 23, 1982

Grand Ballroom

**Chairman: James E. Gibson, Chem. Industry Inst. of Toxicology,  
Research Triangle Park, NC**

### Time (P.M.)

1:30	<b>Introduction.</b> James E. Gibson, <i>Chemical Industry Institute of Toxicology.</i>
1:35	<b>A Proposal to Establish a National Science Council for Peer Review of Decisions Reached by Regulatory Agencies.</b> Congressman William C. Wampler, <i>U.S. House of Representatives.</i>
2:00	<b>The FIFRA Scientific Advisory Panel as a Model for Peer Review of Scientific Regulatory Decisions.</b> Robert A. Neal, <i>Chemical Industry Institute of Toxicology.</i>
2:25	<b>An Industrial Scientist's Perspective on Scientific Peer Review.</b> James F. Mathis, <i>Exxon Corporation.</i>
2:50	<b>A Regulatory Scientist's Perspective on Scientific Peer Review.</b> Albert C. Kolbye, Jr., <i>Food and Drug Administration.</i>
3:15	<b>A Labor Representative's Perspective on Scientific Peer Review.</b> David Parkinson, <i>University of Pittsburgh and Consultant, United Steelworkers of America.</i>
3:40	<b>Scientific Peer Review; an Alternative Approach, Consensus Finding.</b> Milton R. Wessel, <i>Attorney, Parker, Chapin, Flatau, and Klimpl.</i>
4:05	<b>A Code of Ethics for Scientists Reporting and Reviewing Information on Chemicals which are Potentially Toxic to Man and/or His Environment.</b> Leon Golberg, <i>Duke University.</i>
4:30	<b>Panel Discussion — All Speakers and Audience.</b> James E. Gibson, <i>Moderator.</i>

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## SPECIALTY SECTION MEETING

### Mechanisms of Toxicity

Tuesday, February 23, 1982 — 5:15 P.M.

Republic Room

**Chairman: Robert Snyder, Jefferson Med. College, Philadelphia, PA**

Open to all current and prospective members  
of this specialty section.

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## PLATFORM SESSION 7: Halogenated Hydrocarbons I

Tuesday Afternoon, February 23, 1982

Independence Room

**Co-Chairs: H.M. Mehendale, Univ. Mississippi Medical  
Center, Jackson, MS**

**P.G. Watanabe, Dow Chemical Co., Midland, MI**

Paper No.	Time (P.M.)	
129	1:30	<b>The Fate of Inhaled Methyl Chloroform (1,1,1-Trichloroethane) Following Single or Repeated Exposure in Rats and Mice.</b> A.M. Schumann, T.R. Fox and P.G. Watanabe, <i>Tox. Research Lab., Dow Chemical USA, Midland, MI.</i>
130	1:45	<b>The Pharmacokinetics and Macromolecular Interactions of Trichloroethylene in Mice and Rats as Related to Oncogenicity.</b> W.T. Stott, J.F. Quast, and P.G. Watanabe, <i>Tox. Res. Lab., Dow Chemical USA, Midland, MI.</i>
131	2:00	<b>Effect of Chlordecone on the Hepatotoxicity of 1,1,2-Trichloroethylene and Bromobenzene.</b> H.M. Mehendale and V.G. Lockard, <i>Depts. Pharmacol. &amp; Tox. and Pathol., Univ. Mississippi Med. Ctr., Jackson, MS.</i>
132	2:15	<b>Time Course of the Chlordecone Treatment for the Potentiation of CCl<sub>4</sub> Hepatotoxicity.</b> J.S. Klingensmith and H.M. Mehendale, <i>Dept. Pharmacol. &amp; Tox., Univ. Mississippi Med. Ctr., Jackson, MS.</i>
133	2:30	<b>Potentiation of Chlorinated Hydrocarbon Toxicity by 2,5-Hexanedione in Primary Cultures of Adult Rat Liver Parenchymal Cells.</b> J.D. Jernigan, J.G. Pounds and R.D. Harbison, <i>Vanderbilt Univ., Nashville, TN and Univ. of Arkansas for Med. Sciences, Little Rock, AR.</i>

134	2:45	<b>Metabolism of Trichloroethylene by Isolated Rat Hepatocytes.</b> R.E. Miller and F.P. Guengerich, <i>Dept. of Pharmacol. and Biochem. and Ctr. in Environ. Tox., Vanderbilt Univ., Nashville, TN.</i>
135	3:00	<b>Relationship Between Trichloroethylene Metabolism and its Hepatotoxicity.</b> J.A. Buben and E.J. O'Flaherty, <i>Dept. of Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH.</i> Sponsor: P.B. Hammond.
136	3:15	<b>Stereochemistry of the Metabolism of 1,2-Dichloroethane to Ethylene.</b> J. Livesey and M. Anders, <i>Dept. of Pharmacol., Univ. of Minnesota, Minneapolis, MN;</i> P. Langvardt, C. Putzig and R. Reitz, <i>Health and Environ. Sciences, Dow Chemical Co., U.S.A., Midland, MI.</i>
137	3:30	<b>Effect of Hypoxia on CCl<sub>4</sub> Hepatotoxicity.</b> M.W. Anders and E.S. Shen, <i>Dept. of Pharmacol., Univ. of Minnesota, Minneapolis, MN.</i>
138	3:45	<b>Production of Electrophilic Chlorine During Rat Liver Microsomal Metabolism of Carbon Tetrachloride. Source of Electrophilic Chlorine.</b> B.A. Mico, J.W. George and L.R. Pohl, <i>NHLBI, Bethesda, MD.</i> Sponsor: J.R. Gillette.
139	4:00	<b>Ethanol Potentiation of CCl<sub>4</sub> Hepatotoxicity: A Possible Role of Acetaldehyde Dehydrogenase (ALDH) Inhibition.</b> M. Kenel and A. Kulkarni, <i>Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI.</i>
140	4:15	<b>Liver-Protective Activity of Aucubin Against Hepatic Damage Caused by CCl<sub>4</sub> Intoxication.</b> I-M. Chang and H.S. Yun, <i>Natural Prod. Res. Inst., Seoul National Univ., Seoul 110, Korea.</i> Sponsor: R.E. Peterson.

## PLATFORM SESSION 8: Teratology/Reproduction I

Tuesday Afternoon, February 23, 1982

Constitution Room

**Co-Chairs: K.S. Rao, Dow Chemical U.S.A., Midland, MI**

**R.J. Bull, U.S. Environmental Protection Agency, Cincinnati, OH**

Paper No.	Time (P.M.)	
141	1:30	<b>Assessment of the Embryotoxic and Teratogenic Potential of Nonoxynol-9 in Rats Upon Vaginal Administration.</b> H.S. Buttar, <i>Bureau of Drug Research, Health Protection Branch, Ottawa, Canada.</i>
142	1:45	<b>Teratogenic Potential of Suspensions of Trinitrofluorenone (TNF) Administered Orally to Sprague-Dawley Rats.</b> M.S. Christian and A.M. Hoberman, <i>Argus Research Labs., Inc., Horsham, PA;</i> T.H.F. Smith, <i>IBM Corp., White Plains, NY.</i>
143	2:00	<b>Dosage-Range Study of the Teratogenic Potential of Suspensions of Trinitrofluorenone (TNF) Administered Orally to New Zealand White Rabbits.</b> M.S. Christian and A.M. Hoberman, <i>Argus Research Laboratories, Inc., Horsham, PA;</i> T.H.F. Smith, <i>IBM Corp., White Plains, NY.</i>



- 144 2:15 **Microsomal Enzyme Induction and Reproduction in Three Lines of Japanese Quail Fed Polybrominated Biphenyls.** D. Polin, S. Bursian and L. Shull, *Dept. Ani. Sci., Michigan State Univ., East Lansing, MI.* Sponsor: S.D. Aust.
- 145 2:30 **The Reproductive Toxicity of Citrinin in Rats.** R.V. Reddy, A.W. Hayes and W.O. Berndt, *Dept. Pharmacol. & Tox., Univ. Mississippi Med. Ctr., Jackson, MS.*
- 146 2:45 **The Site of Ordram®'s Antifertility Effect in Male Rats.** J.M. Killinger, J.L. Minor, P.D. Royal, R.A. Williams, J.R. Downs and G.M. Zwicker, *Environ. Hlth. Ctr., Stauffer Chem. Co., Farmington, CT.* Sponsor: R.I. Freudenthal.
- 147 3:00 **Testicular Damage in the Rabbit Resulting from Simple Chemical Cutaneous Irritation.** Z.A. Wong, R. VonBurg, W.L. Spangler and J.A. MacGregor, *Chevron Environ. Health Center, Richmond, CA.* Sponsor: J.K. Kodama.
- 148 3:15 **Ethylene Glycol Monomethyl Ether (EGME): Inhalation Reproduction and Dominant Lethal Study in Rats.** K.S. Rao, S.R. Cobel-Geard, J.T. Young, T.R. Hanley, Jr., W.C. Hayes, J.A. John, J.H. Ouellette and R.R. Miller, *Tox. Res. Lab., H&ES, Dow Chemical U.S.A., Midland, MI.*
- 149 3:30 **Impact of Prenatal Lead Exposure on Biochemical Markers in Rat Liver and Heart.** K.L. Blackburn, R.J. Bull and M.K. Smith, *Health Effects Research Lab., USEPA, Cincinnati, OH.*
- 150 3:45 **Alterations of the Maternal Blood Supply to the Fetus by Toxic Materials.** B.J. Kelman, *Pacific Northwest Lab., Richland, WA.*
- 151 4:00 **Ontogeny of Cardiac Ornithine Decarboxylase (ODC) and its Responsiveness to  $\beta$ -Adrenergic ( $\beta$ -ADR) Stimulation in the Neonatal Rat.** S.P. Miska, J.R. Harmon, P. Webb and G.L. Kimmel, *Div. of Teratogenesis Res., Nat. Ctr. for Toxicol. Res., Jefferson, AR.* Sponsor: L. Fishbein.
- 152 4:15 **Evaluation of Behavioral Toxicity in Neonates.** R. Infurna and B. Weiss, *Div. of Tox. & Environ. Hlth. Sciences Center, Univ. of Rochester School of Med. & Dent., Rochester, NY.* Sponsor: G.G. Berg.

## POSTER SESSION 2A: Environment II

Tuesday Afternoon, February 23, 1982

John B. Hynes Exhibition Area

**Organizers: J.J. Lech, Medical College of Wisconsin, Milwaukee, WI**  
**R.A. Parent, Food & Drug Research Labs., Waverly, NY**

Displayed: 1:30 P.M. — 5:00 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.

153

**The Pathology of Sublethal Exposure of Fathead Minnows to Cadmium: A Model for Aquatic Toxicity Assessment.** P.C. Stromberg and J.G. Ferrante, *Battelle Columbus Labs., Columbus, OH.* Sponsor: G.L. Fisher.

- 154 **Aquatic Toxicity and Biodegradation of Caprolactam.** G. Loewengart, *Allied Corp., Morristown, NJ.*
- 155 **Tissue Distribution and Binding of Hexachlorocyclopentadiene to Proteins in Trout.** P. Sinhaseni and R. Hartung, *Dept. of Environ. & Ind. Hlth., Sch. of Pub. Hlth., Ann Arbor, MI;* G.W. Jourdian, *Rackham Arthritis Res. Unit, Univ. of Michigan, Ann Arbor, MI.*
- 156 **The Effect of  $\beta$ -Naphthoflavone (BNF) Treatment on  $^{35}\text{S}$ -Methionine Incorporation into Hepatic Microsomal Protein of Rainbow Trout.** M.J. Vodicnik, L.A. Rau and J.J. Lech, *Dept. of Pharmacol. and Tox., Med. Col. of Wisconsin, Milwaukee, WI.*
- 157 **Dose Determinations for Waterborne 2,5,2',5'-Tetrachlorobiphenyl in Two Species of Trout: A Mass-Balance Approach.** J.M. McKim and E.M. Heath, *U.S. EPA, Environ. Res. Lab., Duluth, MN.* Sponsor: W.H. Gingerich.
- 158 **A Comparison of the Acute Toxicity of Three Oximes to Aquatic Organisms.** R.J. Buccafusco, M.A. Palmieri and K.F. Pfeifer, *Dept. of Environ. Science, Allied Corp., Morristown, NJ.* Sponsor: G.V. Loewengart.
- 159 **An Accurate, Wide Range HPLC Method for the Determination of Toxicant Octanol: Water Partition Coefficients.** J.E. Garst and W.C. Wilson, *Dept. of Animal Sci., Univ. of Illinois, Urbana, IL.* Sponsor: B.J. Wilson.
- 160 **An Assay for Detecting Erythropoietic Damage in Rainbow Trout (*Salmo Gairdneri*) Using  $^{59}\text{Fe}$  Incorporation.** K. Cooper and R. Snyder, *Graduate Program in Tox., Rutgers Univ., Piscataway, NJ.*

## POSTER SESSION 2B: Inhalation II

Tuesday Afternoon, February 23, 1982

John B. Hynes Exhibition Area

**Organizers: D.B. Menzel, Duke University, Durham, NC**

**R.O. McClellan, Inhalation Tox. Res. Inst., Albuquerque, NM**

Displayed: 1:30 P.M. — 5:00 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.

161

**Dosage Levels Associated with the Induction of Respiratory Tract Inflammation by Acute Exposures to Titanium Tetrachloride Smokes.** B. Ballantyne, *Union Carbide Corp., Charleston, WV.*

162

**Hexamethylphosphoramide (HMPA) Nasal Carcinogenesis: Selective Retention of  $^{14}\text{C}$ -HMPA Radioactivity in Target Tissues and its Inhibition by Metyrapone.** R.W. Rickard and P.J. Gillies, *E.I. du Pont de Nemours and Co., Inc., Haskell Lab. for Tox. and Ind. Med., Newark, DE.* Sponsor: G.L. Kennedy, Jr.

## **LATE ANNOUNCEMENT**

**The Midwest Regional Chapter of the Society of Toxicology will be holding a meeting and cocktail hour at 5:30 p.m. in the Beacon Room of the Sheraton-Boston Hotel Wednesday, February 24, 1982. All members and prospective members are invited to attend.**

- 163 **The Kinetics of Urethane Metabolism in Swiss-Cox Mice.** S.P. Sichak and E.J. O'Flaherty, *Dept. of Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH.* Sponsor: P.B. Hammond.
- 164 **Experimental Lung Fibrosis in the Mouse: Long-term Morphologic and Biochemical Features.** W.M. Haschek, A.J.P. Klein-Szanto, S. Lock, W.E. Dalbey and H.P. Witschi, *Biology Div., Oak Ridge National Lab., Oak Ridge, TN;* J.A. Last and K.M. Rieser, *Dept. of Internal Med., Univ. of California, Davis, CA.*
- 165 **Studies on the Deposition and Distribution of Catechol from Whole Cigarette Smoke in BC3F1 /CUM Mice.** K.K. Hwang, O. Sonko, D.R. Dansie, R.E. Kouri and C.J. Henry, *Dept. of Exper. Oncology, Microbiological Associates, Bethesda, MD.*
- 166 **Autoradiographic Analysis of DNA Synthesis in Pulmonary Tissues of Mice Exposed to Whole Cigarette Smoke.** K.K. Kanagalingam, S.M. Reed, D.R. Dansie, W.C. Hall, R.E. Kouri and C.J. Henry, *Dept. of Exper. Oncology, Microbiological Associates, Bethesda, MD.*
- 167 **Pulmonary p-Nitroanisole o-Demethylase Activity in Rats Following Exposure to Heavy Metal Aerosols.** S. J. Williams and D.B. Menzel, *Haskell Lab., E.I. du Pont de Nemours & Co., Inc., Newark, DE and Depts. of Pharmacol. and Medicine, Duke Univ. Med. Ctr., Durham, NC;* J.A. Graham and F.J. Miller, *HERL, USEPA, Research Triangle Park, NC.*
- 168 **Effects of In Vivo and In Vitro Metal Exposures on Pulmonary Macrophages.** K.L. McNeill, C.J. Democko and G.L. Fisher, *Battelle Columbus Labs., Columbus, OH.*
- 169 **Potential of Phagocytic Uptake of Noncarcinogenic Amorphous Nickel Sulfide Particles Results in Morphological Transformation of She Cells.** J.D. Heck, M.P. Abbracchio and M. Costa, *Div. of Toxicol., Dept. Pharmacol., Univ. of Texas Med. School, Houston, TX.*
- 170 **Respiratory Tract Deposition and Retention of Inhaled Ultrafine Particle Associated Benzo(A)-Pyrene.** J.D. Sun, R.K. Wolff, G.M. Kanapilly and R.O. McClellan, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.*
- 171 **Toxicological and Chemical Characterization of the Process Stream of an Experimental Low BTU Coal Gasifier.** J.M. Benson, S.L. Gunsett, R.L. Hanson and G.J. Newton, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.* Sponsor: R.O. McClellan.
- 172 **Mutagenicity of Particulate Exhaust From Diesel and Spark Ignition Engine Cars.** C.R. Clark, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM;* D.E. Seizinger and T.M. Naman, *Bartlesville Energy Tech. Center, Bartlesville, OK.*
- 173 **Mutagenic Properties of Coke Oven Emissions and Diesel Particles.** J-S. Siak and T.C. Pederson, *Biomedical Science Dept., General Motors Research Labs., Warren, MI.* Sponsor: J.J. Vostal.

- 174 **Mutagenic Activation of Nitro-PAH by Microsomal and Cytosolic Enzymes.** T.C. Pederson and J-S. Siak, *Biomedical Science Dept., General Motors Research Labs., Warren, MI.* Sponsor: J.J. Vostal.
- 175 **The Late Sequelae of Chronic Inhalation of High Levels of Diluted Diesel Exhaust in the Rat Lung.** H.J. White, K.L. Smiler and B.D. Garg, *Biomedical Science Dept., General Motors Research Labs., Warren, MI.* Sponsor: J.J. Vostal.
- 176 **Effect of Prolonged Exposure to Diesel Exhaust on the Pulmonary Clearance of Inhaled Diesel Particles.** T.L. Chan, P.S. Lee and W.E. Hering, *Biomedical Science Dept., General Motors Research Labs., Warren, MI.* Sponsor: J.J. Vostal.
- 177 **Effects of Repeated Exposures to Aerosolized Diesel Fuel.** W. Dalbey, S. Lock and S. Garfinkel, *Biology Div., Oak Ridge National Lab., Oak Ridge, TN;* R. Jenkins, R. Holmberg and M. Guerin, *Analytical Chemistry Div., Oak Ridge National Lab., Oak Ridge, TN.*
- 178 **Effects of Single Exposures to Aerosolized Diesel Fuel.** W. Dalbey, S. Lock, R. Rice, T. Ross, S. Garfinkel and L. Balogh, *Bio. Div., Oak Ridge Nat'l. Lab., Oak Ridge, TN.*
- 179 **Pulmonary Response of Fischer 344 Rats and CD-1 Mice to Exposure to Diesel Exhaust.** R.F. Henderson, J.L. Mauderly, R.O. McClellan, B.V. Mokler and H.C. Redman, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.*
- 180 **Comparison of Tissue Burdens Following Whole-Body and Nose-Only Exposures of Fischer-344 Rats to Aerosols.** R.K. Wolff, L.C. Griffis, C.H. Hobbs and R.O. McClellan, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.*
- 181 **A Simple Computer Interfaced Inhalation Exposure System for Toxic Gases.** R.E. Gregory, L.R. Wilson and J.A. Pickrell, *Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.* Sponsor: R.O. McClellan.
- 182 **Carbon Monoxide — NaCl Interaction in the Development of Systemic Hypertension.** R.N. Shiotsuka and R.T. Drew, *Med. Dept., Brookhaven Nat'l. Lab., Upton, NY.*

## POSTER SESSION 2C: Metals II

Tuesday Afternoon, February 23, 1982

John B. Hynes, Exhibition Area

**Organizers: R.C. Schnell, Univ. of Nebraska, Med. Ctr., Omaha, NE**

**Z.A. Shaikh, Univ. of Rochester School Med., Rochester, NY**

Displayed: 1:30 P.M. — 5:00 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.

183

**Effects of Cadmium on the Hepatotoxicity of Bromobenzene in Rats.** S. Chakrabarti and J. Brodeur, *Dép. Méd. Travail et Hyg. Milieu, Fac. Méd., Univ. de Montreal, Québec, Canada.*

- 184 **Dexamethasone-Induced Alteration of the Disposition of Cd and Trace Metals in Developing Rats.** E.M.K. Lui, *Dept. of Pharmacol. and Tox., Univ. of Western Ontario, London, Ont., Canada.* Sponsor: G.M. Cherian.
- 185 **Effect of Subacute Exposures to Cadmium, Mercury, Lead, Copper and Zinc on the Plasma and Urinary Metallothionein Levels in Rats.** Y.H. Lee, C. Tohyama and Z.A. Shaikh, *Div. of Tox., Univ. of Rochester, Rochester, NY.*
- 186 **Effect of Chronic Exposure and Withdrawal of Cadmium on Hepatic and Renal Gluconeogenic Enzymes in Rats.** B. Rajanna, K.D. Chapatwala, M. Hobson and D. Desaiiah, *Div. Nat. Appl. Sci., Selma Univ., Selma, AL and Dept. Neurol. Univ. Mississippi Med. Ctr., Jackson, MS.*
- 187 **Hepatotoxicity After Acute Exposure of Rats to Cadmium.** R.E. Dudley and C.D. Klaassen, *Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS.*
- 188 **A Possible Difference in the Site of Metabolism of Arsenite and Arsenate in Rats.** S.A. Lerman and T.W. Clarkson, *Dept. of Rad. Biol. & Biophys., Univ. of Rochester, Rochester, NY.*
- 189 **Absorption, Circular Dichroism and Magnetic Circular Dichroism Studies of Bismuth Containing Metallothioneins.** M.J. Stillman and J.A. Szymanska, *Univ. of Western Ontario, Dept. of Chemistry, London, Ont., Canada.*
- 190 **Effect of Iron Chelators on the Mechanism of NADPH-Cytochrome P450 Reductase-Dependent Lipid Peroxidation.** J.R. Bucher, M. Tien, L.A. Morehouse, and S.D. Aust, *Dept. of Biochem., Michigan State Univ., East Lansing, MI.*
- 191 **Amelioration of Manganese-Induced Alterations of Drug Response and Metabolism by Pretreatment with Subthreshold Manganese.** M.J. Deimling and R.C. Schnell, *Dept. of Pharmacodynamics and Tox., Univ. of Nebraska Med. Ctr., Omaha, NE.*
- 192 **Organo-Manganese Induced Alterations in Brain Dopamine.** G. Gianutsos and M.T. Murray, *Sect. Pharmacol. & Toxicol., Univ. of Connecticut, Storrs, CT.* Sponsor: S.D. Cohen.
- 193 **Effects of Dietary Protein Content on Locomotor Activity During Chronic Lead Exposure in Male and Female Rats.** A.J. Verlangieri, J.J. Meyer, T.B. Barnes and J.C. Kapeghian, *Dept. of Pharmacol., Univ. of Mississippi, University, MS.* Sponsor: W.M. Davis.
- 194 **Lead Exposure and Renal Function in Rats: Is the Rat a Good Model for Lead Induced Nephropathy?** W.D. Adams, E.J. O'Flaherty and E. Taylor, *Dept. of Environ. Hlth., Univ. of Cincinnati, College of Med., Cincinnati, OH.* Sponsor: P.B. Hammond.
- 195 **Cellular Metabolism of Lead: A Kinetic Analysis in the Isolated Rat Hepatocyte.** J.G. Pounds and R. Wright, *National Ctr. for Toxicol. Res., Jefferson, AR.* Sponsor: L. Fishbein.

- 196 **The Effect of Lead on the Rabbit Retina.** D.M. Talsma and K.L. Stemmer, *Univ. of Cincinnati Medical Ctr., Kettering Lab., Cincinnati, OH.*
- 197 **Lead Uptake in Brush-Border Vesticles from Rat Kidney Cortex.** W. Victory and B.A. Fowler, *Lab. of Pharmacol., NIEHS, Research Triangle Park, NC.*
- 198 **Increased Neuron Specific Enolase (NSE) Levels in Rat Brainstem Following Perinatal Lead Treatment.** E.T. Roginski, F.C. Beuthin, R.T. Louis-Ferdinand and P.J. Marangos, *College of Pharmacy and Allied Health Professions, Wayne State Univ., Detroit, MI and Clinical Psychobiology Branch, NIMH, Bethesda, MD.*
- 199 **The Protective Role of Intranuclear Inclusion Bodies in Lead Toxicity in Rat Kidney Primary Cells.** T.A. Twarog and M.G. Cherian, *Dept. of Pathology, Univ. of Western Ontario, London, Ont., Canada.*
- 200 **Testosterone-Mediated Sexual Dimorphism in the Metabolism of Inorganic Mercury in Mice.** Z.A. Shaikh, *Div. of Tox., Univ. of Rochester, Rochester, NY.*
- 201 **Postnatal Ontogeny of the Nephrotoxic Response to Mercuric Chloride.** G.P. Daston and R.J. Kavlock, *HERL, USEPA, Research Triangle Park, NC.* Sponsor: N. Chernoff.
- 202 **Loss of Cutaneous Sensitivity, and Hyperactivity Following Acute Methyl Mercury Poisoning in the Rat.** M.F. Wu, J.R. Ison, J.R. Wecker and J.A. Foss, *Dept. of Psychology, Dept. of Radiation Bio. and Biophys. and Environ. Hlth. Sci. Ctr., Univ. of Rochester, Rochester, NY.* Sponsor: R.W. Wood.
- 203 **Methylmercury-Induced Neuromuscular Depression in the Rat.** W.D. Atchison and T. Narahashi, *Dept. of Pharmacol., Northwestern Univ. Med. Sch., Chicago, IL.*
- 204 **Calmodulin Inhibitors Protect Rats Against Mercuric Chloride-Induced Nephrotoxicity.** J.L. Cox and S.D. Harrison, Jr., *Graduate Ctr. for Tox., Univ. of Kentucky, Lexington, KY;* R.C. Giles, *Animal Disease Diagnostic Ctr., Univ. of Kentucky, Lexington, KY.*
- 205 **The Effect of Triethyltin on Specific Brain Proteins in the Developing Rat.** J.P. O'Callaghan, D.B. Miller and L.W. Reiter, *Neurotoxicology Div., Hlth. Effects Research Lab., USEPA, Research Triangle Park, NC.*
- 206 **Triethyltin Reduces the Resting Membrane Potential of Rat Soleus Muscle *In Situ*.** W.R. Millington and G.G. Bierkamper, *Lab. of Neuromuscular Tox., The Johns Hopkins Univ., Baltimore, MD.* Sponsor: L. Fechter.
- 207 **Effects of Organotins on Maximal Electroshock Seizure(Mes) Responsiveness in Mice.** S.V. Doctor and D.A. Fox, *Div. of Tox., Univ. of Texas Med. Sch., Houston, TX.*
- 208 **Behavioral Consequences of Trimethyltin Exposure in Grasshopper Mice.** K.L. Hulebak and Z. Annau, *Dept. Environ. Hlth. Science, Div. Tox., Johns Hopkins Univ., Baltimore, MD.*

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## SPECIALTY SECTION MEETING

### Metals

Tuesday, February 23, 1982 — 5:00 P.M.

Independence Room

***J. Bruce Kelman, Presiding***

#### Time (P.M.)

- 5:00 **Keynote Lecture "Analytical Advances in Metal Toxicology"**. F.W. Sunderman, Jr., *Univ. of Connecticut School of Medicine, Farmington, CT.*
- 5:45 **Business Meeting**
- 6:15 **Mixer (Cash Bar)**
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## SYMPOSIUM 3: The Role of Cellular Redox Balance in Toxicity

Wednesday Morning, February 24, 1982

Grand Ballroom

***Chairwoman: Anne P. Autor, Tox. Center, University of Iowa, Iowa City, IA***

***Discussants: Steve D. Aust, Michigan State Univ., East Lansing, MI***  
***Daniel B. Manzel, Duke Univ. Med. Center, Durham, NC***  
***Donald J. Reed, Oregon State Univ., Corvallis, OR***

#### Time (A.M.)

- 8:30 **Introduction.** Anne P. Autor, *Univ. of Iowa.*
- 8:40 **Cellular Redox Changes and Response to Drugs and Toxic Agents.** Helmut Sies, *Institute for Physiological Chemistry, Univ. of Dusseldorf.*
- 9:15 **Discussion.**
- 9:30 **Oxygen and Redox-Active Drugs: Shared Toxicity Sites.** Olen R. Brown, *John M. Dalton Research Center, University of Missouri-Columbia.*
- 10:05 **Discussion.**
- 10:20 **The Effect of Selenium Deficiency on Toxicity.** Raymond F. Burk, *Dept. of Medicine, Univ. of Texas, San Antonio.*
- 10:55 **Discussion.**



## PLATFORM SESSION 9: Inhalation III

Wednesday Morning, February 24, 1982

Republic Ballroom

**Co-Chairs: B.C. Levin, Nat'l. Bureau of Standards, Washington, DC  
M. Costa, Univ. of Texas Med. School, Houston, TX**

Paper No.	Time (A.M.)	
209	8:30	<b>The Pulmonary Response to Sized Glass Fibers in Rats.</b> D.M. Bernstein, R.T. Drew and M. Kuschner, <i>Med. Dept., Brookhaven National Lab., Upton, NY.</i>
210	8:45	<b>Deposition of Inhaled Fibers in the Beagle Dogs.</b> L.C. Griffis, S.J. McAllen and J.A. Pickrell, <i>Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.</i> Sponsor: R.O. McClellan.
211	9:00	<b>Acute Inhalation Studies With an Amorphous Silicon Dioxide Dust.</b> J.B. Scott, S.M. MacAskill, P.J. Belizi, B.O. Stuart and G.M. Zwicker, <i>Stauffer Chemical Co., Environ. Health Ctr., Farmington, CT.</i> Sponsor: R.I. Freudenthal.
212	9:15	<b>Pulmonary Function Measurements in Guinea Pigs After Exposure to Submicron Aerosols of Zinc Oxide and Sulfur Dioxide.</b> H.F. Lam, R. Peisch and M.O. Amdur, <i>Dept. of Nutr. and Food Sci., Massachusetts Inst. Tech., Cambridge, MA.</i>
213	9:30	<b>Prevention of CdO Induced Impaired Lung Clearance by Simultaneous ZnO Inhalation.</b> G. Oberdorster, D. Hochrainer and H. Oldiges, <i>Dept. RBB, Med. Ctr., Univ. of Rochester, Rochester, NY and Fraunhofer Inst. for Tox., and Aerosol Research, W. Germany.</i> Sponsor: P.E. Morrow.
214	9:45	<b>The Effects of Cadmium on Phagocytosis by Alveolar Macrophages and on TiO<sub>2</sub> Clearance from the Lungs of Rats.</b> B.J. Greenspan, <i>Bushy Run Research Ctr., Export, PA;</i> P.E. Morrow, <i>Dept. Rad. Biol. and Biophysics., Univ. Rochester, Rochester, NY.</i>
215	10:00	<b>Phagocytosis and Dissolution of Carcinogenic <math>\alpha</math>NiS Particles; Visualization by Video Intensification Microscopy.</b> R.M. Evans, P.J.A. Davies and M. Costa, <i>Div. of Tox., Dept. of Pharm., Univ. of Texas Med. School at Houston, Houston, TX.</i>
216	10:15	<b>Toxicity of Air Contaminants Determined by Lavagable Lung Cells.</b> G. Oberdorster, J. Ferin, F. Pott and B. Morehouse, <i>Dept. RBB, Med. Ctr., Univ. of Rochester, Rochester, NY and Med. Inst. for Air Hygiene and Silicosis Research, Univ. of Dusseldorf, W. Germany.</i> Sponsor: Z. Shaikh.
217	10:30	<b>Comparison of the Irritancy of Coal, Oil, Volcanic Ash and Ash Constituents.</b> G.E. Hatch, E. Boykin, F.J. Miller, J.A. Graham and D.E. Gardner, <i>Environ. Tox. Div., Health Effects Res. Lab., EPA, Research Triangle Park, NC.</i>

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| 218 | 10:45 | <b>Comparison of the Utility of Incapacitation Data Versus Lethality Data in the Determination of the Toxicity of Combustion Products of Materials.</b> B.C. Levin and M.M. Birky, <i>Center for Fire Research, National Bureau of Standards, Washington, DC</i> ; D. Malek, <i>Dept. of Physiology, George Washington Univ., Washington, DC.</i> |
| 219 | 11:00 | <b>Toxicity of Thermal Degradation Products of Polytetrafluoroethylene (PTFE).</b> D.E. Malek, R.A. Kenney, B.C. Zook and M.S. Lasser, <i>Dept. of Physiology, George Washington Univ., Washington, DC</i> ; M.M. Birky, <i>Center for Fire Research, NBS, Washington, DC.</i> Sponsor: B.C. Levin.   |
| 220 | 11:15 | <b>Inhalation Toxicology Studies with Boron Trifluoride Dihydrate.</b> G.M. Rusch, G.M. Hoffman and W.E. Rinehart, <i>Corporate Med. Affairs, Allied Corporation, Morristown, NJ.</i>   |

### PLATFORM SESSION 10: Oncogenesis I

Wednesday Morning, February 24, 1982

Constitution Room

*Co-Chairs: D.H. Norback, Veterans Administration Hospital,  
Madison, WI*

*P.D. Unger, Allied Corp., Morristown, NJ*

Paper No.	Time (A.M.)	
221		<b>Paper Cancelled</b>
222	8:30	<b>Carcinogenicity Study of the Pesticide Maleic Hydrazide in Mice.</b> J.R.P. Cabral, V. Ponomarkov and L. Tomatis, <i>International Agency for Research on Cancer, Lyon, France.</i>
223	8:45	<b>Results of a Chronic Toxicity and Oncogenicity Study in Rats Following 24 Hours of Acrylonitrile Inhalation Exposure.</b> J.F. Quast, T.S. Gushow, D.J. Schuetz, M.F. Balmer, C.N. Park and M.J. McKenna, <i>Health &amp; Environ. Sciences, USA, Dow Chemical, USA, Midland, MI.</i>
224	9:00	<b>Two-Stage Carcinogenesis on Skin and in Internal Organs of C57BL/B6 Mice.</b> H. Yamasaki, J.R.P. Cabral, D. Galendo and L. Tomatis, <i>International Agency for Research on Cancer, Lyon, France.</i>
225	9:15	<b>Dermal Carcinogenesis Bioassays of Diesel Particulates and Their Dichloromethane Extract.</b> L.R. DePass, L.G. Peterson and C.S. Weil, <i>Bushy Run Research Ctr., Export, PA</i> ; K.C. Chen, <i>Biomedical Science Dept., General Motors Research Labs., Warren, MI.</i>
226	9:30	<b>Promotion of Liver Tumors in B<sub>6</sub>C<sub>3</sub>F<sub>1</sub> Male Mice by Partial Hepatectomy or Dietary Choline Deficiency.</b> P.M. Newberne and A.J. Clark, <i>Dept. of Nutr. and Fd. Sci., M.I.T., Cambridge, MA.</i>

- 227 9:45 **Initiating and Promoting Effects of Methapyrilene Assessed by the Enzyme-Altered Foci Bioassay.** D. Couri, S.R. Wilt and M.M. Milks, *Div. of Tox., Dept. of Pharmacol., Ohio State Univ., Columbus, OH.*
- 228 10:00 **Cocarcinogenicity of Saccharin Toward n-Dibutyl-nitrosamine Carcinogenicity in Rat Liver and Urinary Bladder.** M.A. Pereira, *Health Effects Research Lab., USEPA, Cincinnati, OH;* A.L. Britt, *Dept. of Lab. Animal Med., Univ. of Cincinnati Med. Ctr., Cincinnati, OH.* Sponsor: R.J. Bull.
- 229 10:15 **Drug Metabolizing Enzymes in the Livers and Hepatic Tumors of Rats Treated with Polychlorinated Biphenyls.** G. Reddy, H.P. Cihla, R.H. Weltman and D.H. Norback, *Wm. S. Middleton Mem. VA Hospital, Univ. of Wisconsin, Madison, WI.*
- 230 10:30 **Hepatic Effects of  $\alpha$ -Hexachlorocyclohexane in the Mouse.** F. Iverson, L. Tryphonas, C. Miller, *Tox. Research Div., Foods Directorate, Hlth. Protection Br., Tunney's Pasture, Ottawa, Canada.*
- 231 10:45 **Binding of 2,4-Toluenediamine to Rat Liver DNA, RNA, and Protein.** A.J. Salerno, P.D. Unger, F.J. McMahon and C.S. Aaron, *Allied Corp., Morristown, NJ.*
- 232 11:00 **Phorbol Esters Modulate the Binding of Several Peptide Hormones to Pituitary Cells.** R. Osborne and A.H. Tashjian, Jr., *Lab. of Toxicol., Harvard Sch. Pub. Hlth. and Dept. of Pharmacol., Harvard Med. Sch., Boston, MA.* Sponsor: J.L. Whittenberger.

## PLATFORM SESSION 11: Biochemical Toxicology II

Wednesday Morning, February 24, 1982

Room #200 - John B. Hynes Auditorium

**Co-Chairs: M.D. Faiman, Univ. of Kansas School of Pharmacy,  
Lawrence, KS**

**D. Acosta, Univ. of Texas College of Pharmacy, Austin, TX**

- | Paper No. | Time (A.M.) |   |
|-----------|-------------|---|
| 233       | 8:30        | <b>Biochemical Toxicology of Propylene.</b> T.G. Osimitz and R.B. Conolly, <i>Tox. Program, Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI.</i> Sponsor: H.H. Cornish.  |
| 234       | 8:45        | <b>Effect of Fluoride on Microsomal Benzene Metabolism.</b> G. Post and R. Snyder, <i>Dept. of Pharmacol., Thomas Jefferson Univ., Philadelphia, PA and Graduate Program in Tox., Rutgers Univ., Piscataway, NJ.</i>  |
| 235       | 9:00        | <b>Altered Hepatic <math>\delta</math> Aminolevulinic Acid Dehydratase (ALAD) and Sulfhydryl (SH) Content Due to Presumed Benzene Metabolites.</b> B.S. Lallian, G.S. Rao, G. Witz and B.D. Goldstein, <i>Dept. of Environ. and Community Med., CMDNJ-Rutgers Med. School/Rutgers Univ. Joint Graduate Program in Tox., Piscataway, NJ.</i> |

- 236 9:15 **Stimulation of Lipid Peroxidation by Ferrous Iron Induced Decomposition of Linoleic Acid Hydroperoxide.** H.W. Leung, M.J. Vang and R.D. Mavis, *Environ. Secretariat, National Research Council, Ottawa, Ont., and Dept. of Radiation Biol. & Biophysics, Univ. of Rochester, Rochester, NY.* Sponsor: P.E. Morrow.
- 237 9:30 **Free Radical Formation, Lipid Peroxidation, Energy Metabolism and Intracellular Ca<sup>2+</sup>, Na<sup>+</sup> and K<sup>+</sup> in Rat Cerebral Cortex Slices Exposed to Oxygen at High Pressure.** R.C. Dirks and M.D. Faiman, *Dept. of Pharmacol. and Tox., Univ. of Kansas, Lawrence, KS.*
- 238 9:45 **Inhibition of Lipid Peroxidation by Reduced Glutathione: Evidence for the Enzymatic Regeneration of Vitamin E in Liver Microsome.** C.E. Thomas, C.C. Reddy, C-Y. Ho, R.W. Scholz and E.J. Massaro, *Pennsylvania State Univ., University Park, PA.*
- 239 10:00 **In Vitro Hepatotoxicity of the Glutathione Depletors Diethylmaleate, Iodoacetamide, and Acetaminophen.** D.B. Mitchell and D. Acosta, *College of Pharmacy, Univ. of Texas, Austin, TX.*
- 240 10:15 **Mechanistic Studies on the In Vitro Metabolism of Thioacetamide-S-Oxide by Rat Liver Microsomes.** M. C. Dyroff and R.A. Neal, *Center in Tox., Dept. of Biochemistry, Vanderbilt Univ., Nashville, TN and Chem. Ind. Inst. Tox., Research Triangle Park, NC.*
- 241 10:30 **7-Methylguanine and O<sup>6</sup>-Methylguanine Formation in Liver DNA of Rats, Mice, and Hamsters Treated with Hepatotoxins.** R.A. Becker and R.C. Shank, *Dept. Comm. and Environ. Med., Univ. of California, Irvine, CA.*
- 242 10:45 **Evidence for a Putative n-Nitrosopyrrolidine-Derived DNA Adduct.** E.J. Hunt and R.C. Shank, *Dept. Comm. & Env. Med., Univ. of California, Irvine, CA.*
- 243 11:00 **D[+]Galactosamine Cytotoxicity in Primary Cultures of Postnatal Rat Hepatocytes.** K.S. Santone and D. Acosta, *College of Pharmacy, Univ. of Texas, Austin, TX.*
- 244 11:15 **Decreased Response to Phorbol Esters Involves a Two-Step Process Including Receptor Modulation.** S. Jaken, M. Phillips and A.H. Tashjian, Jr., *Interdisciplinary Prog. in Hlth. and Lab. of Toxicol., Harvard Sch. Pub. Hlth., Boston, MA.* Sponsor: J.L. Whittenberger

## POSTER SESSION 3A: Teratology/Reproduction II

Wednesday Morning, February 24, 1982

John B. Hynes Exhibition Area

**Organizers: C.A. Kimmel, Nat'l. Center for Tox. Res., Jefferson, AR**  
**G.R. Thompson, Int'l. Flavors and Fragrances, Union Beach, NJ**

Displayed: 8:30 A.M. — Noon

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.

245

**Teratogenicity of Thalidomide by Direct Injection into Fetal Rats.** L. Rossi, M. Ferro, A. Verardi, O. Barbieri and A. Mondino, *1st. Ricerche Biomed. 'RMD', Ivrea, and 1st. Scientifico per lo Studio e la Cura dei Tumori, Genova, Italy.* Sponsor: J.R.P. Cabral.

- 246 **The Teratogenicity of the Aminophenols (AP) in Syrian Golden Hamster (SGH).** J.V. Rutkowski and V.H. Ferm, *Dept. of Pharmacol./Tox. and Dept. of Anat./Cytol., Dartmouth Med. Sch., Hanover, NH.* Sponsor: B.D. Roebuck.
- 247 **A Computerized Test Form Generation System for Behavioral Teratology Studies with Rats.** S.A. Kutz, N.J. Troise, P.D. Sweigart, A.J. George, P.J. Rugen, P.J. DeBaecke and R. Teichman, *Stuart Pharmaceuticals, Biomedical and Clinical Research Dept., Wilmington, DE.* Sponsor: L.E. Gongwer.
- 248 **Evaluation of the Design and Scoring Method of Several Behavioral Teratology Tests for Rats.** N.J. Troise, S.A. Kutz, P.J. Rugen, P.D. Sweigart, A.J. George, P.J. DeBaecke and R. Teichman, *Stuart Pharmaceuticals, Biomedical and Clinical Research Dept., Wilmington, DE.* Sponsor: L.E. Gongwer.
- 249 **Fetal Development in New Zealand White (NZW) Rabbits Treated IV with Ethylene Oxide (ETO) During Pregnancy.** C.A. Kimmel, J.B. LaBorde, C. Jones-Price, T.A. Ledoux and T.A. Marks, *Div. of Teratogenesis Research, NCTR, Jefferson, AR and Research Triangle Inst., Research Triangle Park, NC.*
- 250 **Effect of a Single Oral Dose of Caffeine During Pregnancy on Blood Flow and Subsequent Embryo/Fetal Development in the Rat.** C.A. Kimmel, C.G. White, T.F. Grafton, C.J. Nelson and G.L. Kimmel, *Div. of Teratogenesis Research and Div. of Biometry, NCTR, Jefferson, AR.*
- 251 **Teratogenic Evaluation of Ethylene Chlorohydrin (ECH) in Mice and Rabbits.** J.B. LaBorde, C.A. Kimmel, C. Jones-Price, T.A. Marks and T.A. Ledoux, *Div. of Teratogenesis Research, NCTR, Jefferson, AR and Research Triangle Inst., Research Triangle Park, NC.*
- 252 **Further Studies on the Effects of the Phthalate Acid Esters (PAE) on Rat Male Reproductive Organs.** K.A. Curto, R.E. McCafferty, M.P. Donovan and J.A. Thomas, *Dept. Pharmacol. & Tox., West Virginia Univ., Med. Ctr., Morgantown, WV.*
- 253 **Failure of Phthalate Acid Esters (PAE) to Stimulate Lipid Peroxidation in Rat Reproductive Organs.** W.C. Brogan, III, K.A. Curto and J.A. Thomas, *Dept. Pharmacol. and Tox., West Virginia Univ. Med. Ctr., Morgantown, WV.*
- 254 **Acute or Chronic Dietary Exposure to Polychlorinated Biphenyls (PCBs): Effects on Maternal Metabolic Homeostasis and on Embryotoxicity Caused by 5-Fluorodeoxyuridine (FUDR) in Mice.** F. Welsch, K.S. Hardyniec and D.B. Stedman, *Dept. Pharmacol./Tox. and Ctr. Environ. Tox., Michigan State Univ., East Lansing, MI.* Sponsor: J.I. Goodman.
- 255 **Methylmercury Effect on Transplacental Toxicity Induced by Nitrite and Ethylurea in Rats.** J.E. Nixon and J.P. Luebke, *Dept. of Food Sci. and Tech. and Environ. Hlth. Sci. Ctr., Oregon State Univ., Corvallis, OR.*

- 256 **Early Postnatal Development of Prenatally Irradiated Rats.** M.B. Newby-Schmidt, J.A. Donoso, L.A. Neighbors and S. Norton, *Dept. of Pharmacol., Univ. of Kansas College of Health Sciences, Kansas City, KS.*
- 257 **Assessment of Perinatally Induced Renal Dysfunction.** R.J. Kavlock and J.A. Gray, *HERL, USEPA, Research Triangle Park, NC.* Sponsor: N. Chernoff.
- 258 **Teratology Studies on Benzothiazolesulfenamides.** M. W. Stevens, *Dept. of Med. and Environ. Hlth., Monsanto Co., St. Louis, MO.* Sponsor: G.J. Levinskas.
- 259 **The Effects of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin on Fetal Development in the Ferret.** D. Muscarella, D. Dennett, J.G. Babish and D. Noden, *Depts. of Preventive Med. and Anatomy, NYS College of Vet. Med., Cornell Univ., Ithaca, NY.*
- 260 **Distribution of Methanol and Metabolites in Maternal and Fetal Tissues.** R. Infurna and G.G. Berg, *Dept. of Radiation Biol. and Biophysics, Univ. of Rochester Sch. of Med. and Dent., Rochester, NY.*
- 261 **Transplacental Toxicity Associated with Genetic Differences at the Murine AH Locus.** R.G. York and J.M. Manson, *Kettering Lab., Univ. of Cincinnati, Cincinnati, OH.* Sponsor: P.B. Hammond.
- 262 **Triamcinolone Acetonide (Aristocort®) Administered Topically to Rats as a Positive Teratogen.** D.E. Rodwell, K.M. Werchowski and G.B. Briggs, *WIL Research Labs., Inc., Cincinnati, OH.* Sponsor: G.N. Mir.
- 263 **Teratogenicity of Ochratoxin A in Rats.** K. Mayura, A.W. Hayes and W.O. Berndt, *Dept. Pharmacol. & Tox., Univ. of Mississippi Med. Ctr., Jackson, MS.*
- 264 **The Effect of Uranium on the Female Reproductive System in the Rat.** H.K. Gardner, F.A. Smith and R.B. Baggs, *Depts. of Radiation Biol. and Biophysics, and Lab. Animal Med., Univ. of Rochester, Rochester, NY.*
- 265 **Absorption, Distribution, Excretion and Covalent Binding of <sup>14</sup>C-Trifluoroethanol.** R.M. Wilkenfeld and F.A. Smith, *Dept. Rad. Biol. and Biophysics., Univ. of Rochester, Rochester, NY.*
- 266 **Reproductive Toxicology of Omadine MDS.** D.E. Johnson and F.X. Wazeter, *International Research and Development Corp., Mattawan, MI;* J.H. Wedig, *Olin Corp., New Haven, CT.*
- 267 **A Reproductive Assessment of Male and Female Hamsters and Rats Exposed to Toxic Chemicals During Critical Developmental Periods.** L.E. Gray, Jr., J.W. Laskey, J. Ostby, J. Ferrell and J. McLamb, *Health Effects Research Lab., USEPA, Research Triangle Park, NC.* Sponsor: R.W. Chadwick.
- 268 **Evaluation of the Male Reproduction System in Young and Adult Rats After Exposure to Benomyl.** S.D. Carter, J.F. Hein and J.W. Laskey, *Health Effects Res. Lab., USEPA, Research Triangle Park, NC.* Sponsor: R.W. Chadwick.

- 269 **Effects of Low Acute Doses of Cadmium Chloride on the Reproductive System of Male Rats.** J.W. Laskey, G.L. Rehnberg, S.D. Carter and J. Hein, *Health Effects Research Lab., USEPA, Research Triangle Park, NC.* Sponsor: R.W. Chadwick.
- 270 **The Effect of ORDRAM® on the Fertility of Male Mice and Rabbits.** J.M. Killinger, P.D. Royal and G.M. Zwicker, *Environ. Hlth. Ctr., Stauffer Chem. Co., Farmington, CT.* Sponsor: R.I. Freudenthal.
- 271 **Reproductive Toxicity of Methyl-(1-Butylcarbamoyl)-2-Benzimidazole Carbamate (Benomyl) in Male Rats.** T.B. Barnes, K.M. Hayward, A.J. Verlangieri and M.C. Wilson, *Dept. of Pharmacol., Univ. of Mississippi, University, MS.* Sponsor: W.M. Davis.
- 272 **Assessment of Male Reproductive Toxicity Due to Carbon Disulfide: Use of a New Technique.** S.J. Tepe and H. Zenick, *Dept. of Environ. Hlth. Col. of Med., Univ. of Cincinnati, Cincinnati, OH.* Sponsor: P.B. Hammond.
- 273 **The Role of Gut Microflora in Nitrobenzene-Induced Testicular Necrosis.** A.A. Levin, J.A. Popp and J.G. Dent, *Chemical Ind. Inst. of Tox., Research Triangle Park, NC.*
- 274 **Effects of 2,5-Hexanedione on Reproductive Hormones and Testicular Enzyme Activities in the F-344 Rat.** R.E. Chapin, R.M. Norton, J.A. Popp and J.S. Bus, *Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.*
- 275 **Morphological Maturation of Rat Testis.** R.H. Matter and H.W. Tvedten, *Dept. of Path., Michigan State Univ., East Lansing, MI.* Sponsor: J.B. Hook.
- 276 **Effects of Phthalate Esters on Rat Testicular Cell Cultures and on Sertoli Cell Function in the Intact Testis.** T.J.B. Gray, J.A. Beaman and S.D. Gangolli, *British Industrial Biological Research Association, Woodmansterne Rd., Carshalton, Surrey SM5 4DS. U.K.*
- 277 **Behavior of Offspring of Dams Given Ethanol During Gestation.** C. Kruger-McDermott and I. Rosenblum, *I.E.P.T., Albany Med. College, Albany, NY.*
- 278 **Theobromine Metabolism and Pharmacokinetics in Pregnant and Non-Pregnant Female Rats.** S.M. Tarka, Jr., and C.A. Shively, *Hershey Foods Corp., Hershey, PA.* Sponsor: J.F. Borzelleca.

### POSTER SESSION 3B: Metals III

Wednesday Morning, February 24, 1982

John B. Hynes Exhibition Area

**Organizers: C.D. Klaassen, Univ. Kansas Med. Ctr., Kansas City, KS  
D.A. Fox, Univ. of Texas Med. School, Houston, TX**

Displayed: 8:30 A.M. — Noon

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.

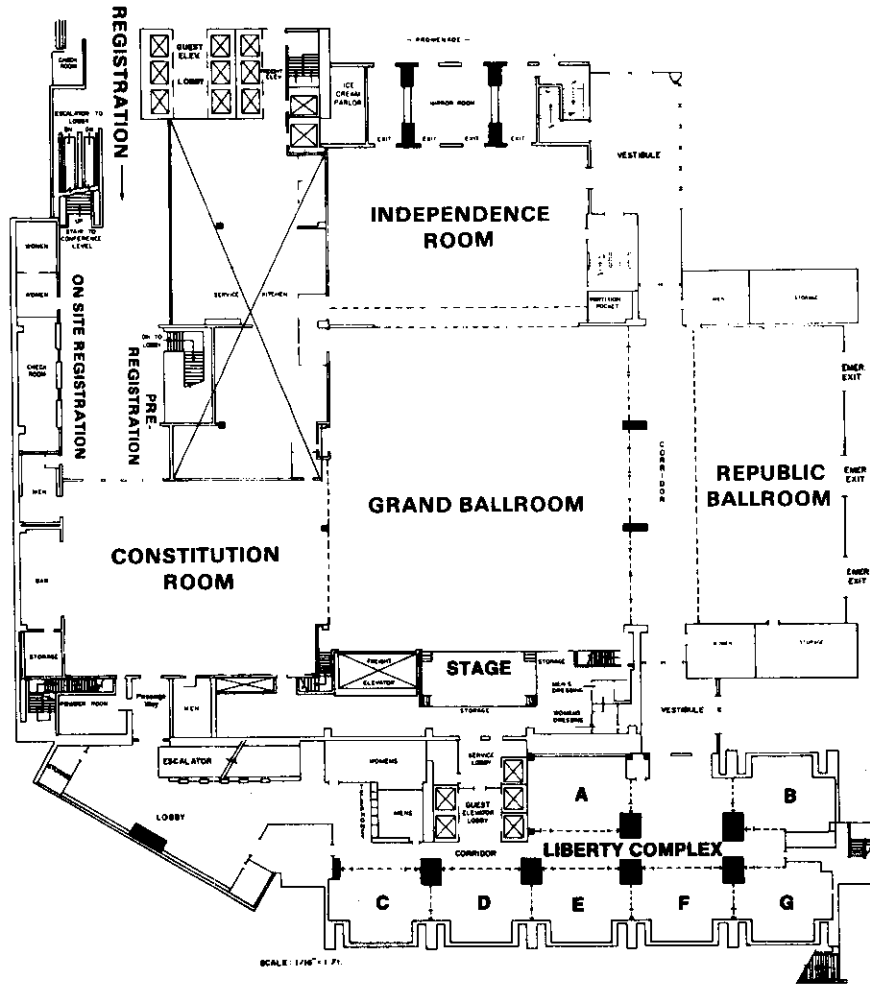
279

**Effects of Beryllium in the Presence and Absence of Magnesium in Rats.** K. Chetty, M. Alam, E. Johnson, S. Henry, E. Mann and E. Beteet, *Div. of Natural Science and Mathematics, LeMoyne-Owen College, Memphis, TN.* Sponsor: J. Autian.

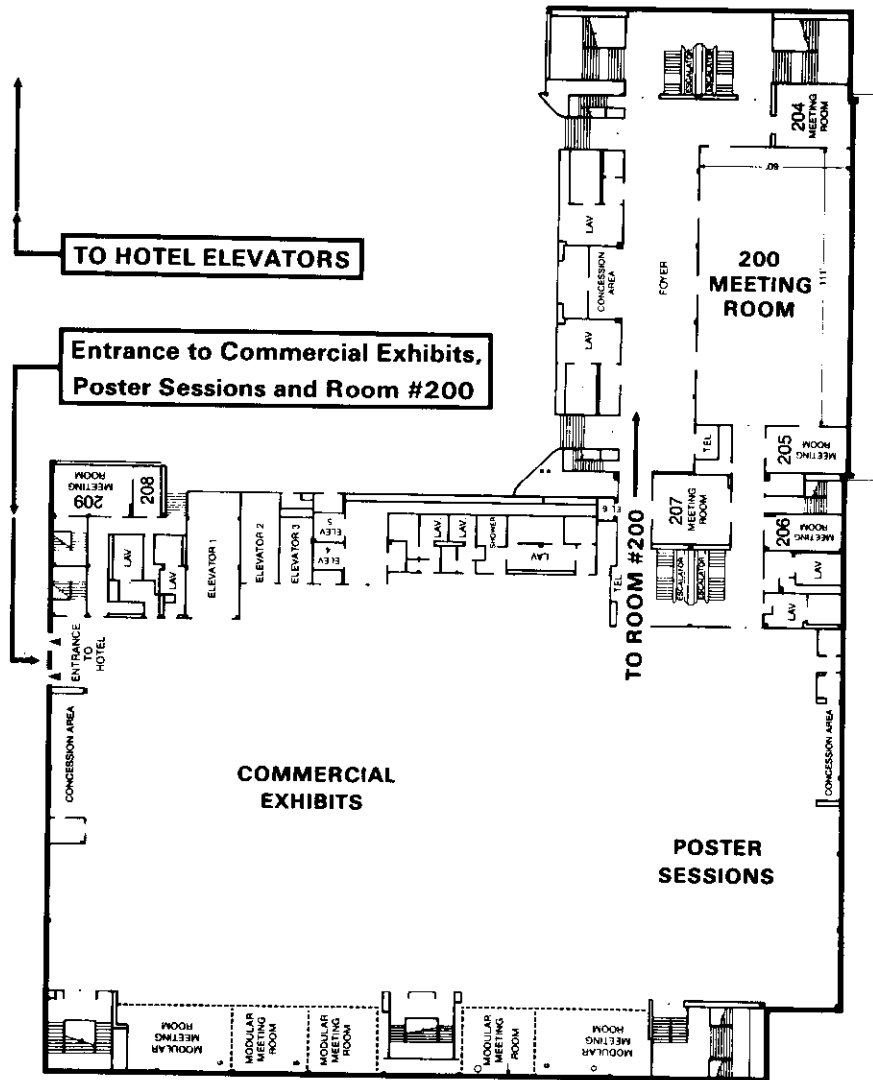
- 280 **Studies on the Mechanism of Tolerance to Cadmium Toxicity.** P.L. Goering and C.D. Klaassen, *Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS.*
- 281 **Effects of Cadmium and Zinc in Vitro on Testicular and Hepatic Microsomal Benzo(A)Pyrene and Steroid Metabolism.** L.T. Wetzel and H.D. Colby, *West Virginia Univ. Med. Ctr., Morgantown, WV.*
- 282 **Mucosal Uptake of Cadmium in Jejunum of Immature Rats.** K.K. Gibson and D.R. Johnson, *Depts. Environ. Hlth. & Physiol., Univ. of Cincinnati Med. Ctr., Cincinnati, OH.* Sponsor: P.B. Hammond.
- 283 **Efficacy/Toxicity Screening with Fe-Loaded Hepatocyte Systems.** C.A. Tyson and S. LeValley, *SRI International, Menlo Park, CA.* Sponsor: D.C.L. Jones.
- 284 **Accumulation of Manganese in Brains of Rats Following Prenatal or Neonatal Exposure.** P. Kontur and L.D. Fechter, *Dept. Environ. Hlth. Sci., The Johns Hopkins Univ., Baltimore, MD.*
- 285 **The Influence of Chronic Manganese Administration and EDTA Treatment on the Tissue Levels and Urinary Excretion of Mn, Zn, Fe, and Cu in Rats.** A.M. Scheuhammer and M.G. Cherian, *Dept. of Pathology, Univ. of Western Ontario, London, Ont., Canada.*
- 286 **Tissue Distribution of Lead in Neonatal Rats.** G.D. Miller, C.C. Reddy, T.F. Massaro and E.J. Massaro, *Pennsylvania State Univ., University Park, PA.*
- 287 **Delayed Behavioral Toxicity of Lead with Increasing Exposure Concentration: A Systematic Replication.** D.A. Cory-Slechta and B. Weiss, *Dept. of Rad. Biol. & Biophys., Univ. of Rochester Sch. of Med., Rochester, NY.* Sponsor: R.W. Wood.
- 288 **The Effects of Dietary Lactose on the Absorption and Retention of Inorganic Lead in Suckling and Weanling Rats.** P.J. Bushnell and H.F. DeLuca, *Dept. Biochem., Univ. of Wisconsin, Madison, WI.* Sponsor: H.L. Evans.
- 289 **Characterization of Neonatal Triethyl Lead Neurotoxicity in Rat Pups.** R.M. Booze, C.F. Mactutus, H.A. Tilson and Z. Annau, *Lab. Behavior. Neurol. Toxicol., NIEHS, Research Triangle Park, NC and Johns Hopkins Univ., Baltimore, MD.*
- 290 **Altered Lead Distribution in Thiamine-Treated Rodents.** R.T. Louis-Ferdinand, L. Glass, R. Sharp and F.C. Beuthin, *College of Pharmacy and Allied Health Professions, Wayne State Univ., Detroit, MI.*
- 291 **Crop Dysfunction and Motor Coordination in Pigeons Exposed to Lead Intramuscularly.** I.J. Boyer, D.A. Cory-Slechta and R.B. Baggs, *Dept. of Rad. Biol. & Biophys., Univ. Rochester Sch. Med., Rochester, NY.* Sponsor: G.G. Berg.
- 292 **Effects of Inorganic Lead on Carbonic Anhydrase Activity and Regional Brain Lead and Zinc Levels.** D.A. Fox and R. Ku, *Div. of Tox., Dept. of Pharm., Univ. of Texas Med. Sch., Houston, TX.*



SECOND FLOOR



THIRD FLOOR



- 293 **Demethylation of Methylmercury by Mouse Gut Flora In Vitro — Effect of Age and Diet.** I.R. Rowland, *BIBRA, Woodmansterne Rd. Carshalton, Surrey, U.K.*; R.D. Robinson and R.A. Doherty, *Environ. Hlth. Sciences Ctr., Univ. of Rochester, Rochester, NY.*
- 294 **Distribution and Demethylation of Methylmercury in Neonatal Rats.** D.J. Thomas, *Sch. Hyg. Johns Hopkins Univ., Baltimore, MD*; H.L. Fisher and L.L. Hall, *USEPA/HERL, Research Triangle Park, NC*; P. Mushak, *UNC Sch. Med., Chapel Hill, NC*; M. Sumler, *NSI, Research Triangle Park, NC.*
- 295 **Sex Differences in Mercury Distribution and Excretion by Methylmercury Treated Rats.** H.L. Fisher and L.L. Hall, *USEPA/HERL, Research Triangle Park, NC*; D.J. Thomas, *Sch. Hyg., Johns Hopkins Univ., Baltimore, MD*; P. Mushak, *UNC Sch. Med., Chapel Hill, NC*; M. Sumler, *NSI, Research Triangle Park, NC.*
- 296 **Role of Gut Flora in Mercury Excretion After Methylmercury Administration in the Mouse.** I.R. Rowland, *BIBRA, Woodmansterne Rd., Carshalton Surrey, U.K.*; R.D. Robinson and R.A. Doherty, *Environ. Hlth. Sciences Ctr., Univ. of Rochester, Rochester, NY.* Sponsor: T.W. Clarkson.
- 297 **Effects of Disodium Tetrachloropalladate on Isolated Rat Liver Mitochondria.** R.E. Biagini and W.J. Moorman, *National Inst. for Occupational Safety and Health, Div. of Biomedical and Behavioral Science, Cincinnati, OH*; G.W. Winston, *Mt. Sinai School of Medicine, Dept. of Biochemistry, New York, NY.* Sponsor: T.R. Lewis.
- 298 **Factors Affecting Nickel Subsulfide Toxicity.** D.A. McNeill, C.L. Chrisp and G.L. Fisher, *Battelle Columbus Labs., Columbus, OH.*
- 299 **Effect of Inadequate Vitamin E and/or Selenium Nutrition on Arachidonic Acid Metabolism in Rat Tissues.** T.L. Grasso, T.J. Labosh, C.E. Thomas, C.C. Reddy, R.W. Scholz and E.J. Massaro, *Pennsylvania State Univ., University Park, PA.*
- 300 **Metal Ion Toxicity in Drosophila.** N.T. Christie and K.B. Jacobson, *Univ. of Tennessee, -Oak Ridge Grad. Sch. of Biomed. Sci., Biol. Div., ORNL, Oak Ridge, TN.* Sponsor: H.P. Witschi.
- 301 **Neuropharmacological Analysis of the Anticonvulsant Effects of Triethyltin (TET) in Adult Mice.** D.A. Fox, *Dept. of Pharm., Univ. of Texas Med. Sch., Houston, TX.*
- 302 **Effects of Triethyltin on the Postnatal Development of the Cerebral Pentose Phosphate Pathway.** R.M. Rocco, J.B. Blumber and D.R. Brown, *Program in Tox., Northeastern Univ., Boston, MA.*
- 303 **Studies on the Neurotoxicity of Trimethyltin (TMT).** S.V. Doctor, L.G. Costa, D. Kendall, S.J. Enna and S.D. Murphy, *Div. of Tox. and Dept. of Neurobiology and Anatomy, Univ. of Texas Med. Sch., Houston, TX.*

**Effects of Trimethyl Tin Injections in Pigeons.** D.E. McMillan, M. Brocco, G.R. Wenger and L.W. Chang, *Dept. of Pharmacol. and Interdisciplinary Tox. and Dept. of Path., Univ. of Arkansas for Med. Sciences, Little Rock, AR.*

## PLATFORM SESSION 12: Environment III

Wednesday Afternoon, February 24, 1982

Republic Ballroom

**Co-Chairs: L.S. Kaminsky, N.Y. State Health Dept., Albany, NY**

**G.V. Lovewengart, Allied Chemical Co., Morristown, NJ**

Paper No.	Time (P.M.)	
305	1:00	<b>Two Acute Human Poisoning Cases Due to Exposure to Diazinon Transformation Products in Egypt.</b> S.A. Soliman, G.W. Sovocool, A. Curley, N.S. Ahmed, S. El-Fiki and A. El-Sebae, <i>U.S.E.P.A., Research Triangle Park, NC and Alexandria Univ., Alexandria, Egypt.</i>
306	1:15	<b>Trimethyltin Induced Pathological Changes in the Brain Stem Neurons.</b> L.W. Chang, T.M. Tiemeyer, D.E. McMillan and G.R. Wenger, <i>Depts. of Path. and Pharmacol., Univ. of Arkansas for Medical Sciences, Little Rock, AR; K.R. Reuhl, Research Council of Canada, Ottawa, Ont. Canada.</i>
307	1:30	<b>Manganese Chloride Exposure Alters High Affinity Receptor Binding and Drug-Induced Activity in Male Rats.</b> J.M. Gerhart and H.A. Tilson, <i>Lab. of Behavioral and Neurological Tox., National Inst. of Environ. Health Sciences, Research Triangle Park, NC.</i> Sponsor: R. Mailman.
308	1:45	<b>Co-Mutagenic Effects of Diesel Exhaust Particle Extracts in Cultured Mammalian Cells.</b> A.P. Li, R.E. Royer, A.L. Brooks and R.O. McClellan, <i>Lovelace Inhal. Tox. Res. Inst., Albuquerque, NM.</i>
309	2:00	<b>Binding of Cacadylic Acid to Macromolecules in Rat Tissues.</b> J.T. Stevens, <i>Ciba-Geigy Corp., Greensboro, NC; J.D. Farmer, U.S.E.P.A., Research Triangle Park, NC.</i>
310	2:15	<b>Comparison of the Mutagenic and Carcinogenic Activities of Asphalt and Coal Tar Paints Used in Contact With Potable Water.</b> M. Robinson, R.J. Bull, D. Cmehil, R. Slater and J.R. Meier, <i>Health Effects Research Lab., U.S.E.P.A., Cincinnati, OH.</i>
311	2:30	<b>Decreased Time of Onset and Increased Brain Disposition of Phenobarbital (PB) After Microwave Irradiation (MWR).</b> E.B. Benson, J.M. Fujimoto and D.G. Lange, <i>Research Services, V.A. Center, Wood, WI, and Dept. of Pharmacol. and Tox., Med. College of Wisconsin, Milwaukee, WI.</i>

- 312 2:45 **Bioavailability Studies of Soot Contaminated with Polychlorinated Dibenzo Dioxins (PCDD) and Dibenzofurans (PCDF) Formed in a Fire in a PCB-Filled Transformer.** J.B. Silkworth, L. Kaminsky, P. O'Keefe, D. McMartin and R. Smith, *Div. of Labs. and Res., New York State Dept. of Health, Albany, NY.*
- 313 3:00 **Technical Pentachlorophenol (PCP-T)-Induced Suppression of Murine Humoral Immune Response.** N.I. Kerkvliet, *Sch. of Vet. Med., Oregon State Univ., Corvallis, OR.*

### PLATFORM SESSION 13: General Toxicology II

Wednesday Afternoon, February 24, 1982

Room #200 - John B. Hynes Auditorium

**Co-Chairs: L. Fishbein, Nat'l. Ctr. Tox. Research, Jefferson, AR**  
**M.A. Gallo, Rutgers Univ. Med. Sch., Piscataway, NJ**

Paper No.	Time (P.M.)	
314	1:00	<b>Comparative Hazards of Methanol, Ethanol, Isopropanol and Gasoline Alone and in Mixture as Fuels for Vehicles.</b> H.S. Posner, <i>NIHES, Research Triangle Park, NC.</i> Sponsor: J.A. Moore.
315	1:15	<b>Radiosensitization of <math>\phi</math>X-174 Replicative Form DNA by Misonidazole (Ro-07-0582).</b> D.W. Brewster and R.C. Christensen, <i>Graduate Center for Tox., Univ. of Kentucky, Lexington, KY.</i> Sponsor: H.W. Dorough.
316	1:30	<b>Detection of Short-Patch DNA Repair in Suspension Cultures of Hepatocytes.</b> M.J. Olson, D.A. Casciano and J.G. Pounds, <i>Nat'l. Ctr. for Toxicol. Res., Jefferson, AR.</i> Sponsor: L. Fishbein.
317	1:45	<b>A Simple, Sensitive and Quantitative Assay for Metallothioneins.</b> D.L. Eaton and B. Toal, <i>Dept. of Environ. Hlth. and Inst. for Environ. Studies, Univ. Washington, Seattle, WA.</i> Sponsor: J.S. Woods.
318	2:00	<b>Assessing the Reversibility of Thyroid Lesions that Result from Feeding ETU.</b> D.L. Arnold, M.G. Bickis, E.A. Nera, P.F. McGuire and I.C. Munro, <i>Food Directorate, Health Protection Branch, Ottawa, Ont. Canada.</i>
319	2:15	<b>Neonatal Exposure to Sterol Analogs, U18,666A and AY9944, Induces Spontaneous Epileptiform Activity in Adult Rats.</b> G.C. Bierkamper, <i>Dept. Environ. Hlth. Sci., The Johns Hopkins Univ., Baltimore, MD;</i> C.P. Sarkar and R.J. Cenedella, <i>Dept. Biochemistry, Kirksville College of Osteopathic Med., Kirksville, MO.</i> Sponsor: L. Fechter.
320	2:30	<b>3-Methylcholanthrene-Iron Dextran Interactions.</b> L. Brooks and M.A. Gallo, <i>Dept. of Environmental and Community Med., CMDNJ-Rutgers Med. Sch./Rutgers Univ. Joint Graduate Program in Tox., Piscataway, NJ.</i>

- 321            2:45    **Cross-Linked Envelope Formation in Cultured Human Keratinocytes: Modulation by Hydrocortisone and Vitamin A.** P.R. Cline, J.G. Rheinwald and R.H. Rice, *Lab. of Toxicol., Harvard School Pub. Hlth. and Sidney Farber Cancer Inst., Boston, MA.* Sponsor: J.L. Whittenberger.

## **POSTER SESSION 4A: Immunotoxicology**

Wednesday Afternoon, February 24, 1982

John B. Hynes Exhibition Area

**Organizers: S. Cohen, Univ. of Connecticut, Storrs, CT**

**L.D. Koller, Univ. of Idaho, Moscow, ID**

**Displayed: 1:00 P.M. — 5:00 P.M.**

**Attended: 1:00 P.M. — 2:30 P.M. (Even Paper Numbers)**

**2:30 P.M. — 4:00 P.M. (Odd Paper Numbers)**

### **Paper No.**

- 322            **Stimulation of Murine Splenic Lymphocytes After Skin Painting with a Tumor Promoter.** R.A. Schoof and C.S. Baxter, *Dept. of Environ. Hlth., Univ. of Cincinnati Med. Ctr., Cincinnati, OH.* Sponsor: P.B. Hammond.
- 323            **Effects of Chlorinated Phenols on Immunity in Rats.** J.H. Exon and L.D. Koller, *Vet. Science, Univ. of Idaho, Moscow, ID.*
- 324            **Effects of Monoethylhexyl Phthalate (MEHP) on Mouse Antibody-Producing Cells *In Vitro*.** Daniel Wierda, *Dept. Pharmacol. & Tox., West Virginia Univ. Med. Ctr., Morgantown, WV.* Sponsor: J.A. Thomas.
- 325            **Methods for Inducing and Eliciting Delayed Contact Hypersensitivity by Vaginal or Skin Exposures in Female Guinea Pigs.** E.A. Newmann and E.V. Buehler, *Procter & Gamble Co., Miami Valley Labs., Cincinnati, OH.*
- 326            **Immunotoxicity of Mercuric Chloride in B6C3F<sub>1</sub> Mice.** M.P. Dieter, M.I. Luster, J.H. Dean, G.A. Boorman and C.W. Jameson, *NIEHS/NTP, Research Triangle Park, NC.* Sponsor: J.H. Mennear.
- 327            **Alterations in the Natural Killer (NK) Cell Activity of Mice Following Exposure to Nickel, Cadmium or Manganese.** R.J. Smialowicz, R.R. Rogers, R.J. Garner and M.M. Riddle, *Hlth. Effects Research Lab., Research Triangle Park, NC.* Sponsor: N. Chernoff.
- 328            **The Elisa: Approach to Assess Humoral Immunity for Immunotoxicology.** L.D. Koller and J.H. Exxon, *Vet. Med., Univ. of Idaho, Moscow, ID.*
- 329            **A Proinflammatory Effect of TCDD on Carrageenan-Induced Inflammation in the Rat Paw.** H.M. Theobald, R.W. Moore and R.E. Peterson, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.*

- 330 **The Effect of 12-O-Tetradecanoyl Phorbol-13-Acetate (TPA) on the Antibody Producing Capabilities of *In Vitro* Sensitized Spleen Cells.** G. Shopp, K. White and A. Munson, *Dept. of Pharmacol., Med. College of Virginia, Richmond, VA.*
- 331 **Fat Quality and Quantity, Dimethylhydrazine (DMH) and Immune Function.** M. Locniskar, K.M. Nauss and P.M. Newberne, *Dept. of Nutr. and Fd. Sci., M.I.T., Cambridge, MA.*
- 332 **The Effects of Nickel Chloride on Cellular and Humoral Immunity.** R.J. Smialowicz, R.R. Rogers, M.M. Riddle, G.A. Stott, *Hlth. Effects Res. Lab., Research Triangle Park, NC.* Sponsor: N. Chernoff.
- 333 **Organophosphate (OP) Poisoning and Suppression of the Primary IgM Response to Sheep Red Cells (SRC) in C57B1/6 Mice.** G.P. Casale, S.D. Cohen and R.A. DiCapua, *Sch. Pharmacy, Univ. Connecticut, Storrs, CT.*
- 334 **Effects of Parathion on the IgM and IgG Responses to Sheep Red Cells (SRC) in Two Mouse Strains.** G.P. Casale, R.A. DiCapua and S.D. Cohen, *Sch. of Pharmacy, Univ. Connecticut, Storrs, CT.*
- 335 **Immunosuppressant and Antiinflammatory Effects of Diethylstilbestrol (DES).** M.P. Hoisapple, P. Morahan, P. Bick and A.E. Munson, *Med. College of Virginia, Richmond, VA.*
- 336 ***In Vitro* Inhibition of Human Lymphocyte Transformation by Nabilone.** G.A.W. Waterhouse, L.D. Brandt, S.B. Leapman and R.B. Forney, *Dept. of Pharmacol. and Tox. and Dept. of Surgery, Indiana Univ. School of Med., Indianapolis, IN.*

## POSTER SESSION 4B: Agrochemicals I

Wednesday Afternoon, February 24, 1982

John B. Hynes Exhibition Area

**Organizers: M.B. Abou-Donia, Duke Univ. Med. Ctr., Durham, NC**  
**R.I. Krieger, Univ. of Idaho, Moscow, ID**

**Displayed: 1:00 P.M. — 5:00 P.M.**

**Attended: 1:00 P.M. — 2:30 P.M. (Even Paper Numbers)**

**2:30 P.M. — 4:00 P.M. (Odd Paper Numbers)**

**Paper No.**

337

**A Quantitative *in Situ* Oxidation Method for Organophosphono- and Phosphorothioates.** S.A. Soliman and R.D. Zehr, *Neurotoxicology Div., USEPA, Research Triangle Park, NC.*

- 338 **Heinz Body Production and Hematological Changes in the Hen After Administration of a Single Oral Dose of N-Butyl Mercaptan and N-Butyl Disulfide.** K.M. Abo, P.R. Timmons and M.B. Abou-Donia, *Dept. of Pharmacol., Duke Univ. Med. Ctr., Durham, NC and National Tox. Program, NIEHS, Research Triangle Park, NC.*
- 339 **The Effects of Deltamethrin, A Synthetic Pyrethroid Insecticide on Locomotor Activity in Rats.** K.M. Crofton and L.W. Reiter, *Curriculum in Tox., Univ. of North Carolina, Chapel Hill, NC and Neurotoxicology Div., Health Effects Research Lab., USEPA, Research Triangle Park, NC.*
- 340 **Allergic Hypersensitivity to the Insecticide Malathion in Mice.** J.R. Cushman and J.C. Street, *Tox. Program, Utah State Univ., Logan, UT.*
- 341 **Disposition and Toxicity of Paraquat Delivered Subcutaneously by Injection and Osmotic Pump in the Rat.** M.S. Dey, R.A. Dey, R.I. Krieger, L.J. Naser and B.E. Renzi, *Dept. Vet. Science, Univ. of Idaho, Moscow, ID; R.G. Breeze, College of Vet. Med., Washington State Univ., Pullman, WA.*
- 342 **Subchronic Toxicity of Ethylenethiourea in Mice and Rats.** P. Kurtz, A. Peters, D. Donofrio and R. Chhabra, *Battelle Columbus Labs., Columbus, OH and National Inst. of Environ. Hlth. Sciences, Research Triangle Park, NC.*
- 343 **Subacute Dermal Toxicity of Lannate® in the Rabbit.** G.L. Kennedy, Jr. and D.F. Edwards, *E.I. du Pont de Nemours and Co., Inc., Haskell Lab. for Tox. and Ind. Med., Newark, DE.*

## POSTER SESSION 4C: Oncogenesis II

Wednesday Afternoon, February 24, 1982

John B. Hynes Exhibition Area

**Organizers: J.P. Gibson, Merrill Dow Pharmaceuticals,  
Cincinnati, OH**

**N.P. Page, NIOSH, Rockville, MD**

Displayed: 1:00 P.M. — 5:00 P.M.

Attended: 1:00 P.M. — 2:30 P.M. (Even Paper Numbers)

2:30 P.M. — 4:00 P.M. (Odd Paper Numbers)

### Paper No.

- 344 **Transplantation Studies with Spontaneous and Induced Mouse Hepatic Nodules.** E.M. Essigmann and P.M. Newberne, *Toxicol-Sisa, Inc., Cambridge, MA.*
- 345 **The Gamma-Glutamyl Transpeptidase (GGT) Activity of Liver Lesions in Rats Exposed to Aroclor 1260.** H.P. Cihla, R.H. Weltman and D.H. Norback, *Wm. S. Middleton Mem. VA Hospital, Madison, WI; H.C. Pitot, McArdle Lab. for Cancer Res. and the Univ. of Wisconsin, Madison, WI.*



- 346 **Iron Exclusion From Aflatoxin B<sub>1</sub>-Induced Hepatocellular Carcinoma in Rats.** M.A. Gallo, L. Brooks, J. McCoy and I. Clark, *Dept. Environmental and Community Med., Dept. of Pathology, Dept. of Surgery, CMDNJ-Rutgers Med. School/Rutgers Univ. Joint Graduate Program in Tox., Piscataway, NJ.*
- 347 **Method and Algorithm for Rapid Quantitation and Mass-Archival of Hepatic Foci Using a Minicomputer Coupled Digitizer and Projecting Microscope.** J.P. Bercz, *Hlth. Effects Research Lab., U.S.E.P.A., Cincinnati, OH.* Sponsor: R.J. Bull.
- 348 **Enhancement of Aflatoxin B<sub>1</sub> Induced Elevation of Blood  $\alpha$ -Fetoprotein and Emergence of  $\gamma$ -Glutamyl Transpeptidase Hepatic Foci by Dietary Vegetables.** J.N. Boyd, N. Misslbeck and T.C. Campbell, *Div. of Nutritional Sciences, Cornell Univ., Ithaca, NY;* G.S. Stoewsand, *Dept. of Food Science, Geneva, NY.*
- 349 **Dose-Related Induction of Plasma  $\alpha$ -Fetoprotein Elevation and Emergence of  $\gamma$ -Glutamyl Transpeptidase-Positive Hepatic Foci in Rats Fed Aflatoxin B<sub>1</sub>.** N. Misslbeck and J.N. Boyd, *Div. of Nutritional Sciences, Ithaca, NY;* G.S. Stoewsand, *Dept. of Food Science, Cornell Univ., Geneva, NY.*
- 350 **An Evaluation of Dimethylnitrosamine (DMN) — Induced Hepatocellular Alterations in the Newborn Mouse Model Using Histochemical and Histoenzymatic Markers.** K.C. Carter, A.J. Gandolfi and I.G. Sipes, *Tox. Program, Univ. of Arizona, Tucson, AZ.*
- 351 **Assessment of the Capacity of 3,3',4,4',5,5'-Hexabromobiphenyl to Serve as a Promoter of Hepatocarcinogenesis.** R.K. Jensen, S.D. Sleight, J.I. Goodman, C.D. Millis, S.D. Aust and J.E. Trosko, *Depts. of Path., Pharmacol. & Tox., Biochemistry and Pediatrics & Human Development, Michigan State Univ., East Lansing, MI.*
- 352 **Assessment of the Capacity of Polybrominated Biphenyls to Serve as Promoters of Hepatocarcinogenesis.** R.K. Jensen, S.D. Sleight, J.I. Goodman, S.D. Aust and J.E. Trosko, *Depts. of Path., Pharmacol. & Tox., Biochem. and Ped. & Hum. Devel., Michigan State Univ., East Lansing, MI.*
- 353 **The Pathogenesis of Coumarin Induced Cholangiofibrosis in the Rat.** E.J. Evans, B.G. Lake and D.M. Conning, *The British Industrial Biological Research Association, Woodmansterne Rd., Carshalton, Surrey, SM5 4DS. U.K.*
- 354 **The Significance of Cholangiofibrosis as a "Preneoplastic Lesion".** J.G. Evans, D.M. Conning and E.C. Applebey, *The British Industrial Biological Research Association, Woodmansterne Road, Carshalton, Surrey, SM5 4DS. U.K.*

- 355 **The Light and Electron Microscopic Evaluation of Cholangiocellular Neoplasms in the Rat Liver Following Chronic Aroclor 1260 Exposure.** R.H. Weltman and D.H. Norback, *Wm. S. Middleton, Mem. VA Hosp. Univ. of Wisconsin, Dept. of Path., Madison, WI.*
- 356 **Dinitrotoluene Promotion of Diethylnitrosamine (DEN) Initiated Hepatocytes *In Vivo*.** T.B. Leonard and J.A. Popp, *Chem. Ind. Inst. of Tox., Research Triangle Park, NC.* Sponsor: J.A. Swenberg.
- 357 **DNA Alkylation During Chronic DMN Exposure of Male and Female C3H Mice.** C. Lindamood III, K.C. Billings, M.A. Bedell and J.A. Swenberg, *Chem. Ind. Inst. Tox., Research Triangle Park, NC.*
- 358 **2-Acetylaminofluorene (AAF) Dependent Increases in Epoxide Hydrolase: Species, Strain and Sex Differences.** M.E. Graichen and J.G. Dent, *Chem. Ind. Inst. of Tox., Research Triangle Park, NC.*
- 359 **Effects of Alpha-Naphthylisothiocyanate, Lithocholic Acid and Selected Hepatocarcinogens on Epoxide Hydrolase, DT-Diaphorase and Serum Indicators of Cholestasis.** B.M. Thompson, J.G. Dent, M.E. Graichen, D.A. Neptun, B.H. Scortichini and J.A. Popp, *Chem. Ind. Inst. of Tox., Research Triangle Park, NC.*
- 360 **Variation in Genotoxic Response to 3,2'-Dimethyl-4-Aminobiphenyl (DMAB) in Hepatocyte Primary Cultures (HPC) Derived from Four Mammalian Species.** C.J. Maslansky and G.M. Williams, *American Health Foundation and New York Med. College, Valhalla, NY.*
- 361 **The Use of Mouse and Hamster Cells in the Hepatocyte Primary Culture (HPC)/DNA Repair Test.** C.A. McQueen, D.M. Kreiser and G.M. Williams, *American Health Foundation, Valhalla, NY.*
- 362 **Inhibition of Aflatoxin B<sub>1</sub> Carcinogenesis in Rainbow Trout by Dietary  $\beta$ -Naphthoflavone ( $\beta$ -NF), and Indole-3-Carbinol (I-3-C).** J.D. Hendricks, J.E. Nixon, G.S. Bailey and R.O. Sinnhuber, *Dept. of Food Sci. & Tech., Oregon State Univ., Corvallis, OR.*
- 363 **Damage to Rat Liver DNA From *In Vivo* Exposure to Monocrotaline, A Pyrrolizidine Alkaloid.** T.W. Petry, G.T. Bowden, R.J. Huxatable and I.G. Sipes, *Depts. of Pharmacol. and Radiation Oncology, Univ. of Arizona College of Med., Tucson, AZ.*
- 364 **Quantitative Assessment of Carcinogen-modified DNA in Specific Liver Cell Populations Following a Single Dose of N-2-Acetylaminofluorene (AAF) or its N-Hydroxy Derivative (N-OH-AAF).** B.L. Baranyi, J.A. Swenberg and J.I. Goodman, *Dept. of Pharmacol. and Tox., Michigan State Univ., East Lansing, MI and Chem. Ind. Inst. of Tox., Research Triangle Park, NC.*
- 365 **Acrylamide as a Tumor Initiator in the Mouse Skin.** R.J. Bull, M. Robinson and D. Cmehil, *Health Effects Research Lab., USEPA, Cincinnati, OH.*

- 366 **Dermal Carcinogenesis Bioassays of Pyrolysis Fuel Oil (PFO) and Pyrolysis Gasolines (PG) in C3H Mice.** L.R. DePass, L.G. Peterson and C.S. Weil, *Bushy Run Research Ctr., Export, PA.*
- 367 **Initiation-Promotion Studies with Coal Liquefaction Materials.** D.D. Mahlum, *Pacific Northwest Lab., Richland, WA.*
- 368 **Mouse Epidermal Ornithine Decarboxylase Induction by Solvent Refined Coal Materials.** D.L. Springer, D. Swanger and D.D. Mahlum, *Pacific Northwest Lab., Richland, WA.*
- 369 **A New Syrian Golden Hamster (SGH) Hybrid Uniquely Suitable for Lifetime Toxicity and Carcinogenesis Studies.** R.A. Adams, P. Bernfeld, F. Homburger, E. Soto and C.G. Van Dongen, *Bio-Research Inst., Cambridge, MA.*
- 370 **Time to Induction by Diethylstilbestrol (DES) of Palpable Mammary Tumors in C3H Mice.** D.L. Greenman and J.H. Farmer, *NCTR, Jefferson, AR;* B. Highman, *Univ. Arkansas Med. Sci., Little Rock, AR.*
- 371 **Zinc Deficiency, Methyl Benzyl Nitrosamine Carcinogenesis and DNA Synthesis in Esophageal Mucosa of the Rat.** T. Scharger and P.M. Newberne, *Dept. Nutr. and Food Sci., M.I.T. Cambridge, MA.*
- 372 **Testicular Mesotheliomas in Rats Exposed to N-2-Fluorenylacetylamide (FAA).** J.R.P. Cabral and G.E. Neal, *Int'l. Agency for Research on Cancer, Lyon, France, and Med. Research Council, Tox. Unit, Carshalton, U.K.*
- 373 **Phorbol Diester Receptors on HL-60 Human Promyelocytic Leukemia Cells.** R.W. Lane, R.B. Coles, R.A. Carchman J.F. Borzelleca, *Dept. Pharmacol., Med. College of Virginia, Richmond, VA.*
- 374 **Carcinogenicity of Fluorocarbons: Assessment by Short-Term *In Vitro* Tests and Chronic Exposure in Rats.** E. Longstaff, M. Robinson, C. Bradbrook, J.A. Styles and I.F.H. Purchase, *ICI, Central Tox. Lab., Alderley Park, Nr. Macclesfield, Cheshire. SK10 4TJ, U.K.*
- 375 **Phorbol Esters Increase Prostaglandin Production in Human Osteosarcoma Cells.** M.A. Shupnik and A.H. Tashjian, Jr., *Lab. of Toxicol., Harvard Sch. Pub. Hlth. and Dept. of Pharmacol., Harvard Med. Sch., Boston, MA.*  
Sponsor: J.L. Whittenberger.

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## ANNUAL BUSINESS MEETING

Wednesday, February 24, 1982

4:00 P.M.

Grand Ballroom

SOT (Active and Retired) Members Only

**President Robert B. Forney, Presiding**

**American Board of Toxicology**

Open Forum

Wednesday, February 24, 1982 — 5:00 P.M.

Grand Ballroom

***Seymour L. Friess, Presiding***

The officers of ABT will be available to discuss  
certification procedures and objectives.

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**SPECIALTY SECTION MEETING**

**Reproduction Toxicology**

Wednesday, February 24, 1982 — 5:30 P.M.

Republic Room

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

Cash Bar

Open to all present and prospective members  
of this specialty section.

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**Mid Atlantic Regional Section**

Wednesday, February 24, 1982 — 5:30 P.M.

Constitution Room

***Chairman: Gary L. Lage***

Open to all members and prospective members of the section.

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**SPECIALTY SECTION MEETING**

**Neurotoxicology**

Wednesday, February 24, 1982 — 5:30 P.M.

Independence Room

***Mohamed Abou-Donia, Presiding***

Cash Bar

Open to all present and prospective members  
of this specialty section.

## PLATFORM SESSION 14: Agrochemicals II

Thursday Morning, February 25, 1982

Constitution Room

**Co-Chairs: R. W. Chadwick, U.S. Environ. Protection Agency,  
Research Triangle Park, NC**

**M.R. Montgomery, Veterans Admin., Tampa, FL**

Paper No.	Time (A.M.)	
376	8:30	<b>The Toxicity of Methyl Carbamate in Fischer 344 Rats and B6C3F1 Mice.</b> W.C. Hall, K.K. Hwang and M. Dinowitz, <i>Microbiological Associates, Bethesda, MD</i> ; R.M. Kovatch, <i>Tracor Jitco, Inc., Rockville, MD</i> . Sponsor: R.E. Kouri.
377	8:45	<b>A Three Month Subchronic Dietary Study with Tert-Butylphenyl Diphenyl Phosphate (TBP) in Rats.</b> S.E. Hastings, R.W. Thomassen, M.W. Sauerhoff and G.M. Zwicker, <i>Stauffer Chemical Co., Environ. Hlth. Ctr., Farmington, CT</i> .
378	9:00	<b>SR-3018, A New Non-Quaternary Thiohydroximate Cholinesterase Reactivator.</b> R. Howd, R. Kenley and C. Mosher, <i>SRI International, Menlo Park, CA</i> . Sponsor: D.C.L. Jones.
379	9:15	<b>Kinetic Analysis of Species Difference in Acetylcholinesterase Sensitivity to Organophosphate Insecticides.</b> C. Wang and S.D. Murphy, <i>Div. of Tox., Univ. of Texas Med. Sch., Houston, TX</i> .
380	9:30	<b>Effects of Chlordecone and its Metabolic and Photodegradation Products on Isolated Rat Liver Mitochondria.</b> S.D. Soileau and D.E. Moreland, <i>Toxicol. Prog., North Carolina State Univ., Raleigh, NC</i> . Sponsor: E. Hodgson.
381	9:45	<b>Ascorbic Acid and Paraquat: Oxygen Depletion with Concurrent Oxygen Activation.</b> M.R. Montgomery, J. Furry, S.J. Gee and R.I. Krieger, <i>VA Hospital and Depts. of Pharm. and Comprehensive Med., Univ. of S. Florida, Tampa, FL and Dept. of Veterinary Med., Univ. of Idaho, Moscow, ID</i> .
382	10:00	<b>The Metabolism of Bromethalin and its Effects on Oxidative Phosphorylation and Cerebrospinal Fluid Pressure.</b> L.D. Cherry, M.D. Gunnoe and R.B.L. van Lier, <i>Tox. Div., Lilly Research Labs., Eli Lilly and Co., Greenfield, IN</i> . Sponsor: D.G. Hoffman.
383	10:15	<b>Differential Toxic Responses of Rats and Gerbils to the Insecticide Carbaryl.</b> I.S. Silver and H.W. Dorough, <i>Graduate Center for Tox., Univ. of Kentucky, Lexington, KY</i> .
384	10:30	<b>The Influence of Dietary Fiber on the Absorption and Disposition of Mirex.</b> J.D. deBethizy and J.C. Street, <i>Tox. Graduate Program, Utah State Univ., Logan, UT</i> .

385	10:45	<b>The Effect of Phenotypic Differences and Subchronic Pretreatment on the Metabolism of Lindane by Inbred Mice.</b> R.W. Chadwick, M.F. Copeland, R. Froehlich, J.D. Perry and G.L. Wolff, <i>HERL, USEPA, Research Triangle Park, NC.</i>
386	11:00	<b>Correlation of the Estrogenic Activity of o,p'-DDT with Nuclear Levels of Estrogen Receptor.</b> A.K. Robinson, V.R. Mukku, J.S. Ireland and G.M. Stancel, <i>Dept. of Pharmacol., Univ. Texas Med. School, Houston, TX.</i> Sponsor: S.D. Murphy.
387	11:15	<b>Organophosphorus - Induced Neurite Degeneration in Human Neuroblastoma Cells.</b> D.G. Graham and M.B. Abou-Donia, <i>Depts. of Path. and Pharmacol., Duke Univ. Med. Center, Durham, NC.</i>

### PLATFORM SESSION 15: General Toxicology III

Thursday Morning, February 25, 1982

Room #200 - John B. Hynes Auditorium

**Co-Chairs: F.R. Alleva, U.S. Food & Drug Admin., Washington, DC**  
**S. Kacew, Univ. of Ottawa, Ottawa, Ontario, Canada**

Paper No.	Time (A.M.)	
388	8:30	<b>The Subacute Oral Toxicity of a 5:1 Combination of Sulfadimethoxine and Ormethoprim in the Dog.</b> T.J. Hayes, R.M. McClain and H. Western, <i>Dept. of Tox. and Path., Hoffmann-La Roche, Inc., Nutley, NJ.</i>
389	8:45	<b>Systemic Toxicity Study of Nucleotide Analog Antiviral Agents in Neonatal Rats.</b> A. Gough, N. Barsoum, S. Gracon and J.M. Sturgess, <i>Warner-Lambert/Parke-Davis Res. Inst., Sheridan Park, Mississauga, Canada.</i> Sponsor: F. de La Iglesia.
390	9:00	<b>Intravenous Toxicity of WR-2721 (NSC-296961) in CDF<sub>1</sub> Mice and Beagle Dogs.</b> G.W. Thompson, G.N. Rao, B.G. Boysen, M.W. Balk, A.E. Fekete, B.C. Dickie and S.M. Glaza, <i>Raltech Scientific Services, Madison, WI;</i> K.S. Greenspun, <i>Battelle Tox. Program Office, Vienna, VA.</i> Sponsor: D.D. Dietz.
391	9:15	<b>Differential Toxicity of N-(2-Carboxyphenyl) Retinamide and N-(4-Carboxyphenyl) Retinamide in Rats.</b> D. Emmerling and P. Kurtz, <i>Battelle Memorial Inst., Columbus, OH.</i> Sponsor: G. Fisher.
392	9:30	<b>Tiamulin: One-Year Oral Toxicologic and Pathologic Study in Young Dogs.</b> A.C. Stevens, Y.H. Yoon, P.L. Sibley and G.R. Keim, <i>Depts. of Tox. and Path., The Squibb Inst. for Med. Res., New Brunswick, NJ.</i> Sponsor: J.S. Kulesza.
393	9:45	<b>Toxicological Evaluation of Marcellomycin — An Antineoplastic Anthracycline Antibiotic.</b> R.A. Buroker, D.F. Johnson, C.R. Comereski, G.H. Hottendorf and H. Madissoon, <i>Dept. of Tox., Bristol Labs., Syracuse, NY.</i>

394	10:00	<b>Species Differences in Anemia Caused by Phthalazine Derivative Antihypertensive Drugs.</b> S. Takayama, Y. Akiyama, T. Onodera and T. Akimoto, <i>Res. Inst. of Daiichi Seiyaku, Tokyo, Japan.</i>
395	10:15	<b>Further Studies on Muscular Degeneration in Rats After Postnatal Treatment with 6-Mercaptopurine.</b> F.R. Alleva, T. Balazs and L.J. Slaughter, <i>Food and Drug Admin., and Howard Univ., Washington, DC.</i>
396	10:30	<b>The Effect of Adriamycin Cardiotoxicity on Essential Trace Metal Metabolism in the Rat Heart.</b> B.C. Lee and K.L. Stemmer, <i>Univ. Cincinnati Med. Ctr., Kettering Lab., Cincinnati, OH.</i>
397	10:45	<b>Pulmonary Responsiveness to Chlorcyclizine: Comparison Between Newborn and Adult Rats.</b> S. Kacew, M.R. Parulekar and R. Narbaitz, <i>Depts. of Pharmacol. and Anatomy, Univ. of Ottawa, Ottawa, Ont.</i>
398	11:00	<b>Comparative Response to Nabilone and Delta-9-Tetrahydrocannabinol in the Assessment of Abuse Liability.</b> P.J. Pence, L. Lemberger, B.J. Cerimele and R.B. Forney, <i>Dept. of Pharmacol. and Tox., Indiana Univ., School of Med. and the Lilly Lab. for Clinical Research, Indianapolis, IN.</i>
399	11:15	<b>The Effects of Drugs and Chemicals Upon the Structure of the Adrenal Gland.</b> W.E. Ribelin, <i>Monsanto Co., Environ. Hlth. Lab., St. Louis, MO.</i>

## PLATFORM SESSION 16: Neurotoxicology I

Thursday Morning, February 25, 1982

Republic Room

**Co-Chairs: J.S. Bus, Chemical Industry Institute of Toxicology,  
Research Triangle Park, NC**

**L.R. Weiss, U.S. Food and Drug Administration, Washington, DC**

Paper No.	Time (A.M.)	
400	8:30	<b>Inhibition of Retrograde Axoplasmic Transport by Acrylamide.</b> M.S. Miller, T.F. Burks and I.G. Sipes, <i>Program in Pharmacol. and Tox., Arizona Hlth. Sciences Ctr., Tucson, AZ.</i>
401	8:45	<b>Visual Indices of Acrylamide Neurotoxicity in Primates.</b> W.H. Merigan, E. Barkdoll and J.P.J. Maurissen, <i>Dept. of Rad. Biology and Biophysics, Univ. of Rochester Med. Ctr., Rochester, NY.</i> Sponsor: R. Wood.
402	9:00	<b>Effects of Acrylamide Monomer on Sensory Thresholds in Monkeys.</b> J.P.J. Maurissen and B. Weiss, <i>Dept. of Rad. Biol. &amp; Biophys., Univ. of Rochester School of Medicine and Dentistry, Rochester, NY.</i> Sponsor: G.G. Berg.
403	9:15	<b>Comparative Effects of Phenylpropanolamine with Ephedrine and Dextroamphetamine on Spontaneous Motor Activity in Hamsters.</b> L.R. Weiss and S. Joynes, <i>Div. of Drug Biology, Food and Drug Admin., Washington, DC.</i>

## **SYMPOSIUM 4: Combustion Toxicology**

Thursday Morning, February 25, 1982

Grand Ballroom

**Chairman: Charles F. Reinhardt, Haskell Laboratories,  
E.I. du Pont de Nemours and Co., Newark, DE**

### **Time (A.M.)**

- 8:30 **Introduction.** C.F. Reinhardt, *Haskell Labs.*
- 8:45 **Generation of Combustion Atmospheres in the Laboratory for Purposes of Toxicological Assessment.** G.E. Hartzell, *Southwest Research Institute, San Antonio.*
- 9:15 **Fundamental Theory of Time-Dependent End-points in Combustion Toxicology.** S.C. Packham, *BETR Science, Salt Lake City.*
- 9:45 **Break.**
- 10:00 **Assessment of the Acute Toxicity of Thermal Decomposition Products of Polymeric Materials.** Yves Alarie, *Univ. of Pittsburgh.*
- 10:30 **Time-to-effect Studies: Toxic Gases, Hyperthermia and Rat-Man Relationships.** C.R. Crane, *Federal Aviation Administration, Oklahoma City.*
- 11:00 **Fire Experience and Combustion Toxicity Testing: A European Viewpoint.** W. David Woolley, *Building Research Establishment, Fire Research Station, United Kingdom.*
- 11:30 **Discussion.**



## NOTES

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404	9:30	<b>Time-Course and Dose-Response Assessment of Chlordecone (C)-Induced Tremor in Rats.</b> H.A. Tilson and J.M. Gerhart, <i>Lab. of Behavioral and Neurological Tox., National Inst. of Environ. Hlth. Sciences, Research Triangle Park, NC.</i> Sponsor: R.B. Mailman.
405	9:45	<b>Hypothalamic Neurotoxic Potential of Oral Monosodium L Glutamate in the Water Deprived Young Mouse.</b> R.F. Mankes, K.-F. Benitz, I. Rosenblum, R. LeFevre, N. Wilson-Martino, V. Shah and R. Abraham, <i>Inst. of Experimental Path. and Tox., Albany Medical College, Albany, NY;</i> K. Barron, <i>Dept. of Neurology, Albany Medical College, Albany, NY.</i>
406	10:00	<b>Roto-Rod Performancy Evaluation of Pentobarbital-Ethanol Interaction in Chronically Ethanol Treated Rats.</b> P.E. Kish and I. Rosenblum, <i>Inst. of Exp. Path. and Tox., Albany Medical College, Albany, NY.</i>
407	10:15	<b>Neurotoxic Evaluation of Tetrakis Hydroxymethyl Phosphonium Chloride in Fischer 344 Rats.</b> D. Thake, P. Kurtz and S. Carter, <i>Battelle Columbus Labs., Columbus, OH.</i> Sponsor: G.L. Fisher.
408	10:30	<b>Modification of Central Nervous System Endogenous Phosphorylation in Organophosphorus Delayed Neuropathy.</b> D.J. Huggins and R.J. Richardson, <i>Sch. of Pub. Hlth., The Univ. of Michigan, Ann Arbor, MI.</i>
409	10:45	<b>Six Month Daily Treatments of Sheep with Neurotoxic Organophosphorus Compounds.</b> S.A. Soliman, J. Farmer, A. Curley and W.F. Durham, <i>Health Effects Research Lab., U.S.E.P.A., Research Triangle Park, NC.</i>
410	11:00	<b>Morphometric Analysis of the Effect of Methyl Mercury on Developing Mouse Cerebellar Cortex.</b> P.R. Sager and R.A. Doherty, <i>Div. of Toxicol., Univ. of Rochester Med. Ctr., Rochester, NY;</i> P.M. Rodier, <i>Dept. Anatomy, Univ. of Rochester Med. Ctr., Rochester, NY.</i> Sponsor: F.A. Smith.
411	11:15	<b>Identification of Neurotoxic Esterase in Human Placenta.</b> P.E. Gurba and R.J. Richardson, <i>Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI.</i>

### PLATFORM SESSION 17: Teratology/Reproduction III

Thursday Morning, February 25, 1982

Independence Room

**Co-Chairs: J.S. Cranmer, Univ. of Arkansas for Med. Science,  
Little Rock, AR**

**S.B. Harris, Science Applications, Inc., La Jolla, CA**

Paper No.	Time (A.M.)	
412	8:30	<b>Solvent Toxicity and Water Insoluble Compound Delivery System for <i>in Vitro</i> Whole Embryo Culture.</b> K.T. Kitchin and M.T. Ebron, <i>ETD, U.S.E.P.A., Research Triangle Park, NC.</i> Sponsor: W.F. Durham.

- 413 8:45 **Embryotoxicity of Laetrile.** C.C. Willhite, *Tox. Research Unit, USDA, Western Regional Research Ctr., Berkeley, CA.* Sponsor: J.C. Smith.
- 414 9:00 **Inhalation Teratology Study on Monochlorobenzene in Rats and Rabbits.** J.A. John, W.C. Hayes, T.R. Hanley, Jr., K.A. Johnson, T.S. Gushow and K.S. Rao, *Tox. Research Lab., Health and Environmental Sciences, USA, Dow Chemical U.S.A., Midland, MI.*
- 415 9:15 **Teratogenic Effects of Azaserine in the Syrian Golden Hamster.** B.D. Roebuck and S.J. Carpenter, *Dept. of Pharmacol. and Tox., Dept. of Anatomy, Dartmouth Med. Sch., Hanover, NH.*
- 416 9:30 **Lack of Teratogenicity in Rats with Amsacrine.** J.A. Anderson, J.R. Watkins, J. Petrere, J.E. Fitzgerald and F.A. de la Iglesia, *Dept. of Tox., Warner-Lamber/Parke-Davis Pharmaceutical Res. Div., Ann Arbor, MI.*
- 417 9:45 **Teratogenic Evaluation of Aliphatic Nitriles in Rats.** P.E. Berteau, G.J. Levinskas and D.E. Rodwell, *Monsanto Co., St. Louis, MO and International Research and Development Corp., Mattawan, MI.*
- 418 10:00 **Embryolethality and Malformation Caused by Paternal Ethanol in Male Long Evans Rats.** R.F. Mankes, R. Lefevre, G. Rockwood, H. Bates, K.F. Benitz, T. Hoffman, A.I.T. Walker and R. Abraham, *Inst. of Experimental Path. and Tox., Albany Med. College, Albany, NY; W.P. Rockwood, Russell Sage College, Troy, NY.*
- 419 10:15 **Combined Oral Administration of Ethanol and Acetaminophen in Pregnant Mice: Possible Antagonism in Teratogenesis?** A. Loeb, R. Mankes, R. LeFevre and H. Bates, *Inst. of Experimental Path. and Tox., Albany Med. College, Albany, NY.* Sponsor: R. Abraham.
- 420 10:30 **Adrenal Function and Hepatic Metabolism in Adult Mice Exposed *in Utero* to Carbofuran or Diazinon: A Longitudinal Evaluation.** J.S. Cranmer, D.L. Avery and M.F. Cranmer, *Div. of Interdisciplinary Toxicology, Univ. of Arkansas for Medical Sciences and Jefferson Professional Services, Little Rock, AR.*
- 421 10:45 **Immunological Effects of Complex Chemicals on the Developing Immune System of Rats Exposed *in Utero*.** J.E. Morris and T.M. Graham, *Battelle, Biology Dept., Pacific Northwest Lab., Richland, WA; F.D. Andrew, Syntex Research, Palo Alto, CA.*
- 422 11:00 **Immunoteratology of Chlordane. I: Cell-mediated and Humoral Immune Responses.** J.S. Cranmer, J.B. Barnett, D.L. Avery and M.F. Cranmer, *Div. of Interdisip. Tox., Univ. of Arkansas Med. Sci. and Jefferson Professional Services, Little Rock, AR.*
- 423 11:15 **A Teratogenic Evaluation of Diazinon® in the Rabbit.** W.R. Campbell, S.B. Harris and J.E. Holson, *CIBA-GEIGY Corp., Greensboro, NC and Science Applications, Inc., LaJolla, CA.*

**POSTER SESSION 5A:  
Biotransformation/Disposition III**

Thursday Morning, February 25, 1982

John B. Hynes Exhibition Area

**Organizers: D.R. Brown, Northeastern Univ., Boston, MA**

**M.A. Evans, Univ. of Illinois Med. Ctr., Chicago, IL**

Displayed: 8:30 A.M. — Noon

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.
- 424 **Effect of Progesterone Metabolites on Fatty Acid Content and Composition of Phospholipids from the Endoplasmic Reticulum of Rat Liver.** M.S.I. Dhami and G. Feuer, *Dept. of Clin. Biochem., Univ. of Toronto and Can. Mem. Chirop. Coll., Toronto, Ont., Canada.*
- 425 **The Influence of Captan on Levels of Reduced Sulfhydryls in the Duodenum of Mice.** M.W. Sauerhoff, J. DeBaun, J.B. Miaullis and R.I. Freudenthal, *Stauffer Chemical Co., Environmental Hlth. Ctr., Farmington, CT and Mt. View Research Lab., Mt. View, CA.*
- 426 **The Interaction of Anthraquinone Derivatives with DNA and Protein in Vitro. II. Covalent Binding.** B.M. Elliott and J. Ashby, *ICI, Central Tox. Lab., Alderley Park, Nr. Macclesfield, Cheshire, UK.* Sponsor: I.F.H. Purchase.
- 427 **A Comparison of the Action of Benzene and Cyclophosphamide on the Erythroid System of the Rat.** A.F. Wright, *ICI, Central Tox. Lab., Alderley Park, Nr. Macclesfield, Cheshire, UK;* M.S. Rose, *ICI Corporate Biosciences Group, Runcorn Health, Cheshire, UK.* Sponsor: I.H.F. Purchase.
- 428 **Effects of Benzene and Other Chemicals on 72 HR <sup>59</sup>FE Utilization in Swiss Albino Mice.** R. Snyder and B.N. Engelsberg, *Dept. of Pharmacol., Thomas Jefferson Univ., Philadelphia, PA and Graduate Program in Tox., Rutgers Univ., Piscataway, NJ.*
- 429 **Relative Toxicity of Five Benzene Metabolites on CFU-GM Cultures.** R. Boyd, J. Caro and A. Erslev, *Cardeza Fnd., Thomas Jefferson Univ., Philadelphia, PA;* J. Griffiths, V. Kindt and R. Snyder, *Graduate Program in Tox., Rutgers Univ., Piscataway, NJ.*
- 430 **The Reactivity of Trans, Trans-Muconaldehyde, A Possible Toxic Metabolite of Benzene Towards Glutathione.** G.S. Rao, G. Witz and B.D. Goldstein, *Dept. of Environ. and Community Medicine, CMDNJ-Rutgers Med. School/Rutgers Univ. Joint Graduate Program in Tox., Piscataway, NJ.*
- 431 **Toxicology of Retinoids: Metabolism of Arachidonic Acid by Platelets After 14-day Retinoic Acid Treatment in Rats.** S.D. Harrison, Jr. and C.J. Viau, *Graduate Center for Tox., Univ. of Kentucky, Lexington, KY.*

- 432 **Evaluation of Exposure Levels to Phthalate Acid Esters During Blood Transfusion.** R. Kardish and M. Tocchi, *Canadian Red Cross, B.T.S., Ottawa*; G. Posen, *Renal Dialysis Unit, Ottawa Civic Hospital*; R.K. Smiley, *Dept. of Medicine, Ottawa General Hospital*; J.M. Bowman and G. Rock, *Canadian Red Cross, B.T.S., Winnipeg, Manitoba*. Sponsor: J.S. Woods.
- 433 **Promutagen Activation by *Schistosoma Mansoni* Infected Mice.** S.A. Lacey, J.G. Babish and J.R. Georgi, *Dept. of Preventive Med., New York State College of Vet. Med., Cornell Univ., Ithaca, NY*.
- 434 **Comparative Metabolic Activation of Promutagens by Ferret and Rat Hepatic S-9 Fractions.** K.A. Frederick, J.G. Babish and B.E. Johnson, *Dept. of Preventive Med., New York State College of Vet. Med., Cornell Univ., Ithaca, NY*.
- 435 **L-Azaserine Induction of  $\lambda$  Prophage: Enhancing Activity of Tissue Extracts from Normal and Dietary Methyl Group Deficient Rats.** J.L. Suit, B. Cruz, B.D. Roebuck and A.E. Rogers, *Depts. Biol. and Nutr. and Food Sci., M.I.T. Cambridge, MA and Dept. Pharm. and Tox., Dartmouth Med. Sch., Hanover, NH*.
- 436 **Determination of Cytochrome P-450 Subpopulations in Control and Phenobarbital Induced Rat Liver Microsomes.** J.R. Gumbrecht and M.R. Franklin, *Dept. of Biochem. Pharmacol. and Tox., Univ. of Utah, Salt Lake City, UT*.
- 437 **The Disposition and Metabolism of Diphenylhydantoin in Maternal, Fetal and Neonatal Tissues After Perinatal Exposure of Rat Dams.** A.E. Chin, P.J. Kurtz, B.D. Carlton, A.C. Peters and R.S. Chhabra, *Battelle Memorial Inst., Columbus, OH and National Inst. of Environ. Health Sciences, Research Triangle Park, NC*.
- 438 **Effect of Dose on Caffeine Metabolism by the Isolated Perfused Rat Liver.** S.M. Somani, *Dept. Pharmacol., Southern Illinois Univ. School of Med., Springfield, IL*.
- 439 **Drug Metabolism in Rodents Infected with Trypanosomes or Treated with Trypanocides.** H.G. Shertzer, *Kettering Lab., Univ. of Cincinnati, Cincinnati, OH*; J. Ed. Hall and J.R. Seed, *Dept. Parasit., Sch. Pub. Hlth., Univ. North Carolina, Chapel Hill, NC*. Sponsor: P.B. Hammond.
- 440 **The Effect of Pregnancy and Estradiol-17 $\beta$  Treatment on the Biliary Transport Maximum of Organic Anions in the Isolated Perfused Rat Liver.** A.C. Auansakul and M. Vore, *Grad. Center for Tox. and Dept. of Pharmacol., Univ. of Kentucky, Lexington, KY*.
- 441 **Induction of Hepatic Phase II Biotransformation in the Rat.** T.N. Thompson, J.B. Watkins, Z. Gregus and C.D. Klaassen, *Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS*.
- 442 **Alcohol-Stress Inhibition of Mixed Function Oxidase Metabolism in the Rat.** D. Brown, J. Ning, M. Bogdanffy, I. Krull, S. Kuttub and L. Shargel, *Tox. Program, College Pharm. & Allied Hlth. Prof., Northeastern Univ., Boston, MA*.

- 443 **Influence of Chronic Ethanol Consumption on Cocaine-Induced Hepatotoxicity and Metabolism.** F.J. Peterson, N.J. Lindemann and P.H. Duquette, D.A.M.C. Research Service, Minneapolis, MN. Sponsor: M.W. Anders.
- 444 **Fenitrothion Depletion of Glutathione and Inhibition of Tissue Esterases and Hepatic Mixed Function Oxidases.** G.L. Ginsberg and S.D. Cohen, Sect. Pharmacol. & Toxicol., Sch. Pharmacy, Univ. Conn., Storrs, CT.
- 445 **Effect of Fenitrothion (FEN) Exposure on Acetaminophen (APAP)-Induced Hepatotoxicity.** G.L. Ginsberg, M. Placke and S.D. Cohen, Sect. Pharmacol. & Toxicol., Sch. Pharmacy and Dept. Pathobiol., Coll. Agric., Univ. of Connecticut, Storrs, CT.
- 446 **Scanning Electron Microscopy of Acetaminophen-Induced Hepatotoxicity in Mice.** R.M. Walker, W.J. Racz and T.F. McElligott, Dept. of Path. and Pharmacol., Hotel Dieu Hospital and Queen's Univ., Kingston, Ont., Canada. Sponsor: G.C. Becking.
- 447 **The Nephrotoxicity of 1,2-Dichloroethane and 1,1-Dichloroethylene in Male Sprague-Dawley Rats.** N.M. Jackson, W.J. Al-Hassan and R.B. Conolly, Tox. Program, Sch. of Pub. Hlth., The Univ. of Michigan, Ann Arbor, MI. Sponsor: H.H. Cornish.
- 448 **The Effect of Ubiquinone-10 Antagonism Upon the Acute Toxicity of Doxorubicin.** A.B. Combs and E. Lewandowski, Dept. of Pharmacol. of the College of Pharmacy; K. Folkers, Inst. for Biomedical Research, Univ. of Texas, Austin, TX.
- 449 **Effect of a Low-Protein Diet on Contraceptive Steroid-Induced Cholestasis in Female Rats.** A. Idris, U.A. Boelsterli, H. Kotik and T. Balazs, Div. of Drug Biology, Food and Drug Administration, Washington, DC.
- 450 **Feasibility of Using Hepatocytes in a Cytotoxic Pre-screen.** D.L. Story, S.J. Gee, K. Hawk-Prather and C.A. Tyson, SRI International, Menlo Park, CA; D.H. Gould, USEPA, Washington, DC. Sponsor: D.C.L. Jones.
- 451 **Assessment of the Mutagenic Potential of Ethylenediamine: *In Vitro* and *In Vivo* Studies.** R.S. Slesinski, P.J. Guzzie, W.C. Hengler, M.D. Woodside, R.S.H. Yang and P.G. Watanabe, Bushy Run Research Ctr., Mellon Inst.-Union Carbide Corp., Export, PA and Tox. Research Lab., Dow Chemical Co., Midland, MI.
- 452 **Mutagenic Activity of Cocaine Nitroxide Radical in the Ames Salmonella Test System.** M.A. Evans and J. Jankauskis, Interdisciplinary Tox. Program, Dept. Pharmacol., Univ. of Illinois Med. Ctr., Chicago, IL.
- 453 **Mutation Promoted by Activated Oxygen Species.** H.P. Misra and C.I. Wei, Lab. for Energy-Rel. Hlth. Res., Univ. of California, Davis, CA. Sponsor: S.N. Giri.
- 454 ***In Vivo* Genotoxic Effect of 1,2-Dichloroethane in Male B6C3F1 Mice.** R.D. Storer, P.A. Bank and R.B. Conolly, Tox. Program, Sch. of Pub. Hlth., The Univ. of Michigan, Ann Arbor, MI. Sponsor: H.H. Cornish.

- 455 **Phenobarbital Alteration of 1-Nitronaphthalene Levels in Target Organs of Toxicity.** D. Dankovic and H.H. Cornish, *Tox. Programs, Sch. of Pub. Hlth., The Univ. of Michigan, Ann Arbor, MI.*
- 456 **Spectroscopic Studies of Cd, Zn-Metallothionein.** A.Y.C. Law and M.J. Stillman, *Dept. of Chem., Univ. of Western Ontario, London, Ontario, Canada N6A 5B7.*

## POSTER SESSION 5B: Halogenated Hydrocarbons II

Thursday Morning, February 25, 1982

John B. Hynes Exhibition Area

**Organizers: J.J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA  
J.A. Moore, Nat'l. Inst. Environ. Hlth. Sciences, Research  
Triangle Park, NC**

**Displayed: 8:30 A.M. — Noon**

**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.

- 457 **Resistance of Diploid Hepatocytes in the Neonatal Rat to Halogenated Hydrocarbons.** J. Carlson and R. Abraham, *Inst. of Experimental Path. and Tox., Albany Med. College, Albany, NY.*
- 458 **Depletion of Glutathione by Methyl Chloride and Relationship to Lipid Peroxidation.** D.J. Kornbrust and J.S. Bus, *Chemical Industry Inst. of Tox., Research Triangle Park, NC.*
- 459 **Trihalomethanes and Rat Renal and Hepatic Ornithine Decarboxylase Activity.** R.E. Savage, Jr., P. Wiehl, C. Guion and M.A. Pereira, *Health Effects Research Lab., U.S.E.P.A., Cincinnati, OH and Ohio Univ. College of Osteopathic Medicine, Athens, OH.* Sponsor: R.J. Bull.
- 460 **Effect of TCDD on the Response of Rat Liver to Partial Hepatectomy.** B.J. Christian and R.E. Peterson, *Univ. of Wisconsin, Madison, WI.*
- 461 **Comparison of Body Weight Loss and Oxygen Consumption in Rats Treated with 2,3,7,8-Tetrachloro-Dibenzo-p-Dioxin (TCDD) and Pair-Fed Control Rats.** M.D. Seefeld, S.W. Corbett, R.E. Keeseey and R.E. Peterson, *Univ. of Wisconsin, Madison, WI.*
- 462 **Effect of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) on Food Intake, Body Weight and Energy Expenditure in the Rat.** M.D. Seefeld, S.W. Corbett, R.E. Keeseey and R.E. Peterson, *Univ. of Wisconsin, Madison, WI.*

- 463 **Induction of 7-Ethoxycoumarin o-Deethylase Activity in Human Epithelial Cells in Culture: Evidence for Dioxin Receptor.** L.G. Hudson and W.F. Greenlee, *Lab. of Toxicol., Harvard Sch. Pub. Hlth., Boston, MA.* Sponsor: J.G. Dent.
- 464 **Effects of Chlordecone and its Structural Analogs on K<sup>+</sup>-p-Nitrophenyl Phosphatase in Rat Brain Synaptosomes.** S.K. Bansal and D. Desai, *Dept. Neurology, Veterans Admin. Med. Ctr. and Univ. Miss. Med. Ctr., Jackson, MS.*
- 465 **Relationship of Tissue Non-Protein Sulfhydryl Groups (NPS) to the Toxic Effects of 1,2-Dibromo-3-Chloropropane (DBCP).** W.M. Kluwe, A. Greenwell and F. Harrington, *National Tox. Program, Research Triangle Park, NC.* Sponsor: J.A. Moore.
- 466 **Effect of Chlordecone on CCl<sub>4</sub> Mediated Destruction of Cytochrome P-450 and Associated Parameters.** J.S. Klingensmith and H.M. Mehendale, *Univ. Mississippi Med. Ctr., Jackson, MS.*
- 467 **Effect of Chloroform and Drinking Water Concentrates on Mouse Renal Cortical Slice Uptake of p-Aminohippurate.** L.W. Condie and C.L. Smallwood, *Hlth. Effects Research Lab., USEPA, Cincinnati, OH.* Sponsor: R.J. Bull.
- 468 **Protective Effect of *Aucuba Japonica* Against Carbon Tetrachloride-Induced Damage.** K.H. Yang, T.J. Kwon and I.M. Chang, *Dept. of Biological Science and Engineering, Korea Advanced Inst. of Science and Tech., and Natural Products Res. Inst., Seoul National Univ., Seoul, Korea.* Sponsor: R.E. Peterson.
- 469 **The Effect of CC1<sub>4</sub> Exposure on Mitochondrial Membrane Phospholipids.** A. Wisner-Gebhart, R.A. Head and M.J. Brabec, *Tox. Program, Sch. of Pub. Hlth., The Univ. of Michigan, Ann Arbor, MI.*
- 470 **The Effect of 1,3-Butanediol on the Hepatotoxic Action of CC1<sub>4</sub> in Rats.** L.A. Hewitt, W.R. Hewitt and G.L. Plaa, *Dept. de Pharmacologie, Universite de Montreal, Montreal, Quebec, Canada.*
- 471 **Effect of Calcium Antagonists on Carbon Tetrachloride-Induced Liver Necrosis.** L.D. Schuman and M.A. Evans, *Interdisciplinary Tox. Program, Environmental and Occupational Hlth. Sciences, School of Pub. Hlth. and Dept. of Pharmacol., College of Medicine, Univ. of Illinois Med. Ctr., Chicago, IL.*
- 472 **Role of Hepatic Microtubule System in Chlorinated Hydrocarbon Induced Hepatic Steatosis.** F.M. Selan and M.A. Evans, *Interdisciplinary Tox. Program, Dept. Pharmacol., Univ. of Illinois Med. Ctr., Chicago, IL.*
- 473 **PCBs: Effects of Structure on the Induction of Cytochrome P-448 Dependent Monooxygenases in Hepatoma Cells.** T. Sawyer and S. Safe, *Guelph Waterloo Centre for Graduate Work in Chemistry, Univ. of Guelph, Guelph, Ont., College of Vet. Med., Texas A&M Univ., College Station, TX.* Sponsor: L.W. Robertson.



- 474 **Effects of Structure on the Activity of Polybrominated BiPhenyls (PBBs) as Microsomal Enzyme Inducers.** L.W. Robertson, A. Parkinson and S. Safe, *College of Vet. Medicine, Texas A&M Univ., College Station, TX and Dept. of Chemistry, Univ. of Guelph, Guelph, Ont., Canada.*
- 475 **2,3,4,4'-Pentachlorobiphenyl: Segregation of Activity with the Ah Locus.** A. Parkinson, L.W. Robertson, M.A. Campbell, L. Uhlig, S. Bandiera and S. Safe, *Guelph-Waterloo Centre for Graduate Work in Chemistry, Univ. of Guelph, Guelph, Ontario and College of Vet. Med., Texas A&M Univ., College Station, TX.*
- 476 **Hepta- and Octachloronaphthalene Congeners are Potent Inducers of Rat Hepatic Microsomal Benzo(a) Pyrene Hydroxylase.** M.A. Campbell, L. Safe, S. Bandiera, L.W. Robertson and S. Safe, *Dept. of Chemistry, Univ. of Guelph, Guelph, Ont., Canada and College of Vet. Med., Texas A&M Univ., College Station, TX.*
- 477 **Inhibition of Rat Liver Aldehyde Dehydrogenase by Carbon Tetrachloride.** J.J. Hjelle, J.H. Grubbs, D.G. Beer and D.R. Petersen, *Dept. of Pharmacol., School of Pharmacy, Univ. of Colorado, Boulder, CO. Sponsor: C.D. Klaassen.*
- 478 **Elevation of Hepatic Conjugated Dienes in the Absence of Cellular Injury in 1 Day-Old Rats After Carbon Tetrachloride (CCl<sub>4</sub>) Treatment.** A.T. Shehata and M. Hitchcock, *Yale Univ. and John B. Pierce Foundation, New Haven, CT.*
- 479 **The Transfer of 3,4,5,3',4',5'-Hexachlorobiphenyl (6-CB) from Mothers to Fetuses and Nursing Offspring.** M.J. Vodcnik and J.J. Lech, *Dept. of Pharm. & Tox., Med. College of Wisconsin, Milwaukee, WI.*
- 480 **Quantitation of 1,1- and 1,2-Dichloroethylene in Tissues by Purge and Trap Gas Chromatography.** S.-N. Lin, F.W.Y. Fu and J.V. Bruckner, *Anal. Chem. Center and Div. Toxicol., Univ. Texas Med. Sch., Houston, TX.*
- 481 **Cholestyramine Enhances Fecal Excretion of Pentachlorophenol.** K. Rozman, L. Ballhorn, T. Rozman, C. Klaassen and H. Greim, *Gesellschaft fur Strahlen-und Umweltforschung mbH Muenchen, 8042-Neuherberg, FRG and Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS.*

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#### ISSUES SESSION

Thursday, February 25, 1982

12 Noon - 1:15 P.M.

Grand Ballroom

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

Chaired by President Robert B. Forney

## PLATFORM SESSION 18: General Toxicology IV

Thursday Afternoon, February 25, 1982

Grand Ballroom

*Co-Chairs: D. Graham, Duke Univ. Med. Ctr., Durham, NC*

*J.H. Mennear, NIEHS, Research Triangle Park, NC*

Paper No.	Time (P.M.)	
482	1:30	<b>In Vitro Ocular Toxicity Testing.</b> S.D. Spilman and W.H.J. Douglas, <i>Dept. of Anatomy and Cellular Biology, Tufts Univ. Sch. of Med., Boston, MA.</i> Sponsor: D.R. Brown.
483	1:45	<b>Evaluation of Eye Irritation Testing.</b> K.J. Falahee, C.S. Rose, S.S. Olin and H.E. Seifried, <i>Tracor Jitco, Inc., Rockville, MD</i> ; N.P. Page, <i>National Library of Med., Bethesda, MD</i> ; D. Sawhney, <i>U.S.E.P.A., Washington, DC.</i>
484	2:00	<b>Ocular Manifestation Produced by 6-Aminonicotinine.</b> J.A. Render and W.W. Carlton, <i>Dept. of Vet. Microbiol. and Pathol., Purdue Univ., West Lafayette, IN.</i>
485	2:15	<b>Pulmonary and Sensory Irritation in Mice During Inhalation of Polymeric Isocyanates.</b> D. Weyel and Y. Alarie, <i>Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.</i>
486	2:30	<b>Concentration-Dependent Induction of the Pulmonary Hypersensitivity Response to Toluene Diisocyanate.</b> M.H. Karol, <i>Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.</i>
487	2:45	<b>Evaluation of Benoxaprofen Phototoxicity in an Animal Model.</b> G.T. Brophy, <i>Tox. Div., Lilly Research Labs., Greenfield, IN.</i> Sponsor: D.G. Hoffman.
488	3:00	<b>Dermal Sensitization by Toluene Diisocyanate (TDI).</b> F.J. Koschier, E.J. Burden, C.S. Brunkhorst and M.A. Friedman, <i>American Cyanamid, Wayne, NJ.</i>
489	3:15	<b>Initial Results of the Dermal Effects of Oil from Coal Gasification.</b> R.E. Jones, F.R. Kirchner, F.J. Tremmel and C.A. Reilly, Jr., <i>Div. Bio. Med. Res., Argonne Nat'l. Lab., Argonne, IL.</i>
490	3:30	<b>Short-Latency Somatosensory Evoked Potentials in Primates Intoxicated with Acrylamide: Implications for Toxic Neuropathies in Man.</b> H. Schaumburg, J. Arezzo and P.S. Spencer, <i>Inst. of Neurotoxicology, Albert Einstein College of Med., Bronx, NY.</i>
491	3:45	<b>Evidence for Pyrrole Formation in the Pathogenesis of Hexane Neuropathy.</b> D.C. Anthony and D.G. Graham, <i>Dept. of Path., Duke Univ. Med. Ctr., Durham, NC.</i>
492	4:00	<b>Immunologic Evaluation of Patients with Polychlorinated Biphenyl Poisoning.</b> K.J. Chang, <i>Dept. of Surg., Coll. of Med., National Taiwan Univ. Taipei, Taiwan, R.O.C.</i> ; K.H. Hsieh, <i>Dept. of Ped., College of Med., National Taiwan Univ. Taipei, Taiwan, R.O.C.</i> ; T.P. Lee, <i>Dept. of Ped., Children's Hosp., State Univ., of New York, Buffalo, NY</i> ; S.Y. Tang and T.C. Tung, <i>Dept. of Biochem., College of Med., National Taiwan Univ. Taipei, Taiwan, R.O.C.</i>

493 4:15 **Mutation, DNA Labeling and Induction of Growth in Soft Agar of BHK-21/CL 13 Cells by MNNG, DMN, and Nitrosocimetidine.** L.R. Barrows, C.T. Gombar and P.N. Magee, *Fels Research Inst., Temple Univ. School of Medicine, Philadelphia, PA.*

**PLATFORM SESSION 19:  
Biotransformation/Disposition IV**

Thursday Afternoon, February 25, 1982

Room #200 - John B. Hynes Auditorium

**Co-Chairs: M-T.S. Hsia, Univ. of Wisconsin, Madison, WI**

**R.E. Talcott, San Francisco General Hospital, San Francisco, CA**

Paper No.	Time (P.M.)	
494	1:30	<b>The Pharmacokinetics of Styrene in the B6C3F1 Mouse.</b> F.A. Smith, J.C. Ramsey, P.E. Kastl, K.D. Nitschke, J.F. Quast, E.A. Hermann and W.H. Braun, <i>Tox. Research Lab., The Dow Chemical Company, Midland, MI.</i>
495	1:45	<b>Kinetic Analyses of Chlorpyrifos and Parathion Metabolism by Mouse Hepatic Microsomes.</b> L.G. Sultatos and S.D. Murphy, <i>Div. of Tox., Univ. of Texas Med. Sch. at Houston, Houston, TX.</i>
496	2:00	<b>Pharmacokinetics and Metabolism of Diethylenetriamine in the Rat.</b> T.R. Tyler, J.W. Lento, J.A. McKelvey, M.J. Tallant and R.S.H. Yang, <i>Bushy Run Research Ctr., Union Carbide Corp., Export, PA.</i>
497	2:15	<b>Meperidine Carboxylesterase Activity in Mouse Liver and Human Liver.</b> M. Lotti, A. Ketterman and R.E. Talcott, <i>Northern California Occupational Hlth. Ctr., Univ. of California, San Francisco, CA.</i>
498	2:30	<b>Pharmacokinetic Studies of 3,3',4,4'-Tetrachloroazobenzene and 3,3',4,4'-Tetrachloroazoxybenzene in Rat.</b> M-T.S. Hsia and C.F. Burant, <i>Environ. Tox. Ctr. and Dept. of Entomology, Univ. of Wisconsin, Madison, WI.</i>
499	2:45	<b>Species Differences in the Metabolism and Disposition of Morpholine.</b> O.S. Sohn, E.S. Fiala and J.H. Weisburger, <i>Naylor Dana Inst. for Disease Prevention, American Hlth. Foundation, Valhalla, NY;</i> C.C. Conaway, <i>Texaco Inc., Beacon, NY.</i>
500	3:00	<b>Pharmacokinetics of Inhaled Methyl Chloride (CH<sub>3</sub>Cl) in Human Volunteers,</b> R.J. Nolan, T.D. Landry, D.L. Rick, L.P. McCarty, G.L. Agin and J.H. Saunders, <i>Biomedical Research Lab., The Dow Chemical Co., Midland, MI.</i> Sponsor: M.B. Chenoweth.
501	3:15	<b>Metabolism of Acrylonitrile by Isolated Fischer 344 Rat Hepatocytes.</b> L.E. Geiger, L.L. Hogy, F.P. Guengerich and R.A. Neal, <i>Center in Tox., Vanderbilt Univ., School of Med., Nashville, TN and Chemical Ind. Inst. of Tox., Research Triangle Park, NC.</i>

502	3:30	<b>Pentachlorophenol (PCP) in Blood and Urine of Occupationally-Exposed Men.</b> J.H. Saunders, D.L. Rick and R.J. Nolan, <i>Biomedical Research Lab., The Dow Chemical Co., Midland, MI.</i> Sponsor: M.B. Chenoweth.
503	3:45	<b>Comparison of the Acute Toxicity of Tetramethylsuccinonitrile (TMSN) and Succinonitrile (SN).</b> P.A. Doherty, R.P. Smith and V.H. Ferm, <i>Dept. of Pharmacol./Toxicol. and Dept. of Anat./Cytol., Dartmouth Med. Sch., Hanover, NH.</i>
504	4:00	<b>Chemical Alteration of Rat Liver UDP-Glucuronic Acid (UDPGA) Content.</b> J.B. Watkins and C.D. Klaassen, <i>Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS.</i>
505	4:15	<b>Presystemic Elimination of Diethylstilbestrol by Rat Liver.</b> T.N. Thompson and C.D. Klaassen, <i>Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS.</i>

## PLATFORM SESSION 20: Halogenated Hydrocarbons III

Thursday Afternoon, February 25, 1982

Independence Room

**Co-Chairs: D.J. Ecobichon, McGill Univ., Montreal, P.Q., Canada**

**W.F. Durham, U.S. Environmental Protection Agency, Research Triangle Park, NC**

Paper No.	Time (P.M.)	
506	1:30	<b>Hepatic Effects of 1,2,4,5-Tetrachlorobenzene in the Pregnant Rat.</b> K.T. Kitchin, <i>ETD, USEPA, Research Triangle Park, NC.</i> Sponsor: W.F. Durham.
507	1:45	<b>Free Radical Activity Increase in Subcellular Fractions From PCB Induced Rat Liver.</b> D. Havkin—Frenkel, J.D. Rosen and M.A. Gallo, <i>Dept. of Food Science, Cook College, Rutgers Univ., Dept. of Environ. and Community Med. CMDNJ-Rutgers Med. School, Rutgers Univ./Rutgers Med. School Joint Tox. Graduate Program, Piscataway, NJ.</i>
508	2:00	<b>The Effects of Prenatal Exposure of Hexachlorobenzene on Mixed Function Oxidases and Renal Function in the Mink.</b> G.F. Rush, V. Adler, M. Bleavins, R. Aulerich and J.B. Hook, <i>Dept. of Pharmacol. and Toxicology, Ctr. for Environmental Tox. and Dept. of Animal Science, Michigan State Univ., East Lansing, MI.</i>
509	2:15	<b>Dose-Dependent Biochemical Response to and Metabolic Excretion of Bromobenzene in Rats.</b> S. Chakrabarti and J. Brodeur, <i>Dép. Méd. Trav. et Hyg. Mil., Fac. Méd., Univ. Montréal, Montréal, Qué., Canada.</i>
510	2:30	<b>Comparison of the Binding Properties of Cytosolic Receptors for 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) in Various Mammalian Species.</b> T.A. Gasiewicz and G. Rucci, <i>Env. Hlth. Sci. Ctr., Univ. of Rochester, Rochester, NY.</i> Sponsor: T.W. Clarkson.

- 511 2:45 **Effect of Zinc on Bromobenzene-Induced Acute Hepatotoxicity in Rats.** S. Chakrabarti and J. Brodeur, *Dép. Méd. du Travail et Hyg. du Milieu, Fac. Méd., Univ. de Montréal, Montréal, Qué.*
- 512 3:00 **Hexachlorobutadiene Nephrotoxicity in Piperonyl Butoxide Treated Rats.** M.E. Davis, *Dept of Pharmacol. and Toxicol., West Virginia Univ., Med. Ctr., Morgantown, WV.* Sponsor: M.J. Reasor.
- 513 3:15 **Hexachlorocyclopentadiene (Hex) Disposition and Metabolism in Rats.** C.C. Yu and Y.H. Atallah, *Res. and Development Dept., Velsicol Chemical Corp., Chicago, IL.*
- 514 3:30 **Effects of Chronic Treatments with Mercury or Selenium on Bromobenzene-Induced Acute Hepatotoxicity in Rats.** S. Chakrabarti and J. Brodeur, *Dép. Méd. du Travail et Hyg. du Milieu, Fac. Méd. Univ. de Montréal, Montréal, Qué., Canada.*
- 515 3:45 **Effects of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin on RNA Polymerase I Induction in Rat Liver.** C.L. Potter, I.G. Sipes and D.H. Russell, *Toxicol. Prog. and Depts. of Pharmacol. and Anesthesiol., Univ. of Arizona, Tucson, AZ.*
- 516 4:00 **Effects of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin on Cultured Human Epithelial Target Cells: Modulation by Hydrocortisone.** R.H. Rice and W.F. Greenlee, *Lab. of Toxicol., Harvard Sch. Pub. Hlth., Boston, MA.* Sponsor: J.L. Whittenberger
- 517 4:15 **The Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin and Perfluorodecanoic Acid in L5178Y Mouse Lymphoma Cells.** A.M. Rogers, M.E. Andersen and K.C. Back, *AFAMRL/THT, Wright-Patterson AFB, OH.*

## POSTER SESSION 6A: Neurotoxicology II

Thursday Afternoon, February 25, 1982

John B. Hynes Exhibition Area

**Organizers: D. Desaiyah, Univ. of Mississippi, Med. Ctr., Jackson, MS**

**H.E. Lowndes, New Jersey Medical School, Newark, NJ**

Displayed: 1:30 P.M. — 5:00 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.

518

**Cochlear Damage Produced by Ototoxic Interaction of Chloramphenicol (CHL) and Noise.** J.E. Penny, K. Hodges, S. Kupetz, C.M. Henley, R.D. Brown and P.C. Jobe, *Depts. of Anat., Pharmacol. and Psych., L.S.U. Med. School, Shreveport, LA.*

519

**Impairment in Cochlear Function Produced by Ototoxic Interaction of Chloramphenicol (CHL) and Noise.** C.M. Henley, R.D. Brown, S. Kupetz, J.E. Penny, K. Hodges and P.C. Jobe, *Depts. of Pharmacol., Anat., and Psych., L.S.U. Med. School, Schreveport, LA.*

- 520 **A Mathematical Model to Study the Time Course and Dose-Dependent *In Vivo* Effect of TOCP on Chicken Brain Neurotoxic Esterase Activity.** S.A. Soliman, D. Svendsgaard and L.W. Reiter, *Health Effects Research Lab., U.S.E.P.A., Research Triangle Park, NC.*
- 521 **Neurobehavioral Effects of Repeated Exposure of Mice to Organophosphate Insecticides.** R.C. MacPhail and S.A. Soliman, *Neurotoxicology Div., U.S.E.P.A., Research Triangle Park, NC.*
- 522 **Plasma Acetylcholinesterase Activity — A Potential Marker of Peripheral Neurotoxicity.** B.F. Bass and A.M. Goldberg, *Div. of Tox., The Johns Hopkins Univ., Baltimore, MD.*
- 523 **Anticholinesterase Activity of Carbofuran and its Di-butylaminosulfonyl Derivative, Carbosulfan in Rats.** R.I. Krieger, M.S. Dey, L.J. Naser and B.E. Renzi, *Dept. of Vet. Science, Univ. of Idaho, Moscow, ID; N. Umetsu, Otsuka Chemical Co. Ltd., Naruto, Japan.*
- 524 **Distribution of Neurotoxic Esterase Activity in Rat and Hen Nervous System.** P.J. Hollingsworth, B.R. Dudek, C.B. Smith and R.J. Richardson, *Dept. of Environ. & Ind. Hlth. and Dept. of Pharmacol., Univ. of Michigan, Ann Arbor, MI.*
- 525 **Acute and Chronic Tolerance to Organophosphorus Insecticides.** L.G. Costa, B.W. Schwab and S.D. Murphy, *Univ. of Texas Med. School, Houston, TX.*
- 526 **Evidence for Leptophos-Induced Neuropathy in Chicks Exposed on Incubation Day 14.** L.P. Sheets and S. Norton, *Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS.*
- 527 **Alteration of Tissue Coenzyme-A Levels During Acrylamide Intoxication.** M.J. Miller, M.S. Miller, I.G. Sipes and D.E. Carter, *Tox. Program and Dept. of Pharmacol., Univ. of Arizona, Tucson, AZ.*
- 528 **Delayed Neuropathy in Hen by the Insecticide Synergist NIA-16388 (O-n-Propyl O-(2-Propynyl) Phenylphosphonate).** S.A. Soliman, *Neurotoxicology Div., U.S.E.P.A., Research Triangle Park, NC and Dept. of Pesticide Chemistry, Alexandria Univ., Alexandria, Egypt.*
- 529 **A Method for Measuring *In Vitro* Neurotoxic Esterase Activity with Metabolic Activation.** G.L. Sprague and M.J. Hendricks, *Stauffer Chemical Co., Tox. Dept., Richmond, CA.* Sponsor: T.R. Castles.
- 530 **Assessment of Fenitrothion Neurotoxicity in the Hen.** H.D. Durham and D.J. Ecobichon, *Dept. of Pharmacol. Ther., McGill Univ., Montréal, Canada.*
- 531 **Neurobehavioral Effects of Subchronic Exposure of Weanling Rats to Toluene or Hexane.** G. Pryor, J. Dickinson, R. Howd and C. Rebert, *SRI Int'l., Menlo Park, CA.* Sponsor: D.C.L. Jones.

- 532 **Startle Reflex and Gap Detection Following Acute Exposure to Ethyl Alcohol in Control and Methyl Mercury Poisoned Rats.** J.R. Wecker, J.R. Ison, J.A. Foss and M.F. Wu, *Dept. of Psychology, Dept. of Radiation Biology and Biophysics, and Environ. Hlth. Sci. Ctr., Univ. of Rochester, Rochester, NY.* Sponsor: R.W. Wood.
- 533 ***In Vivo* Potentiation of Heroin's Analgetic Action and *In Vitro* Inhibition of Heroin Binding to Opiate Receptors Following Esterase Inhibition.** G.M. Carlson, G. Gianutsos, S.D. Cohen and R. Heyman, *Sect. Pharmacol. & Toxicol., Storrs, CT;* P. Salva, G. Hite, *Sect. Med. Chem., Sch. Pharmacy, Univ. Connecticut, Storrs, CT.*
- 534 **Conduction Velocities of Sensory and Motor Nerves in Galactose Neurotoxicity.** D.A. Delio and H.E. Lowndes, *Dept. Pharmacol., CMDNJ, New Jersey Med. Sch., Newark, NJ.*
- 535 **Impairment of Visual System Development Following Organotin Exposure.** W.E. Howell, D. Miller and R.S. Dyer, *USEPA, Neurotoxicology Div., Research Triangle Park, NC.* Sponsor: L.W. Reiter.
- 536 **Effect of Cyclodiene Pesticides on Beef Heart and Rat Brain ATPase Activities.** B.D. Mehrotra, S.K. Bansal and D. Desai, *Chem. Dept., Tougaloo College, and Dept. Neurol., V.A. and Univ. Mississippi Med. Ctr., Jackson, MS.*
- 537 **Prewaning Evaluation of Kepone Neurotoxicity.** C.F. Mactutus, K.L. Unger and H.A. Tilson, *Lab. Behav. Neurol. Toxicol., NIEHS, Research Triangle Park, NC.* Sponsor: H.B. Matthews.
- 538 **Chlordecone (Kepone<sup>R</sup>) Exposure Altered Rat Brain Peptides.** S.F. Ali and J.S. Hong, *Lab. of Behavioral and Neurological Tox., NIEHS, Research Triangle Park, NC.*
- 539 **Nitroimidazole Neurotoxicity in the Mouse: Clinical Relevance and Possible Mechanism(s).** P.J. Conroy and T.H. McNeill, *Univ. of Rochester Cancer Ctr., Div. of Exptl. Therapeutics, Depts. of Radiology and Neurology, Rochester, NY.* Sponsor: T.W. Clarkson.
- 540 **Neurotoxicity Produced by Subchronic (90 Days) Simultaneous Inhalation of n-Hexane and Methyl Iso-Butyl Ketone in Hens.** M.B. Abou-Donia, D.G. Graham and P.R. Timmons, *Dept. of Pharmacol. and Path., Duke Univ. Med. Ctr., Durham, NC.*
- 541 **Interaction Between Subchronic (90 days) Dermal Application of o-Ethyl o-4-Nitrophenyl Phenylphosphonothioate (EPN) and Continuous Inhalation of Technical Grade Methyl Butyl Ketone (MBK) in Producing Neurotoxicity in Hens.** M.B. Abou-Donia, D.G. Graham, P.R. Timmons and K.M. Abdo, *Dept. of Pharmacol. and Path., Duke Univ. Med. Ctr., Durham, NC.*

- 542 **A Comparison of Hexane Neurotoxic Potential in Weanling and Adult Rats.** R. Howd, T. Steeger, J. Dickinson and G. Pryor, *SRI International, Menlo Park, CA*. Sponsor: D.C.L. Jones.
- 543 **Evoked Potentials in Rats Exposed as Weanlings to Toluene or Hexane.** C.S. Rebert, G.T. Pryor and S.S. Sorenson, *SRI International, Menlo Park, CA*. Sponsor: D.C.L. Jones.
- 544 **The Effect of Trace Halothane on 2' 3' Cyclic Nucleotide 3' Phosphodiesterase (CNPASE) in the Developing Rat Brain.** J.J. Nagelhout, F.C. Beuthin, R.T. Louis-Ferdinand, *College Pharmacy & All. Hlth. Prof., Wayne State Univ., Detroit, MI*.
- 545 **Behavioral Evaluation of Sensory Irritation by Ozone.** J.L. Tepper, R. Wood, B. Weiss, *Depts. of Pharmacol. and Rad. Biology & Biophysics, Environ. Health Sciences Ctr., Univ. of Rochester, Rochester, NY*.
- 546 **Macrocyclic (Crown) Ethers: Their Toxicity Neuromuscular Pharmacology and Structure Activity Relationships.** S.C. Gad and F.A. Gavigan, *Allied Corp., Morristown, NJ*; W.D. Adams, *Univ. of Cincinnati, Cincinnati, OH*; G. Schieman, *CMDNJ - Rutgers Med. Sch., Piscataway, NJ*.
- 547 **Changes in High Affinity <sup>3</sup>H GABA Binding in Rat Cerebral Cortex and Hippocampus After Electroshock.** S.M. Ross, *Inst. of Neurotoxicology, Rose Kennedy Ctr., Albert Einstein College of Med., Bronx, NY*; C.R. Craig, *Dept. of Pharmacol. and Tox., West Virginia Univ. Med. Ctr., Morgantown, WV*.
- 548 **Increased Excitability of Motoneurons in  $\beta, \beta'$ -Iminodipropionitrile (IDPN) Neuropathy.** B.G. Gold and H.E. Lowndes, *Dept. Pharmacol., CMDNJ, NJ Med. Sch., Newark, NJ*.
- 549 **Intracellular Recordings from Giant Axon Formations in IDPN Neuropathy.** H.E. Lowndes and B.G. Gold, *Dept. Pharmacol., CMDNJ, NJ Med. Sch., Newark, NJ*.
- 550 **In Vivo Formation of Substituted Pyrrole Adducts and Neurotoxicity of 2,5-Hexanedione in the Hen.** A.P. DeCaprio, P. Weber and R. Abraham, *Inst. Exp. Pathol. and Toxicol. and Dept. of Biochemistry, Albany Med. College, Albany, NY*.
- 551 **Ephaptic Transmission Between Motoneurons in Cats with  $\beta, \beta'$ -Iminodipropionitrile Neuropathy.** H.E. Lowndes and B.G. Gold, *Dept. Pharmacol., CMDNJ, NJ Med. School, Newark, NJ*.
- 552 **Monosodium Glutamate-Induced Alterations in Flurothyl Seizure Threshold.** R. Dawson and G.G. Bierkamper, *Dept. Environ. Hlth. Sci., Div. Tox., The Johns Hopkins Univ., Baltimore, MD*. Sponsor: Z. Annau.



## POSTER SESSION 6B: Inhalation IV

Thursday Afternoon, February 25, 1982

John B. Hynes Exhibition Area

**Organizers: E.V. Buehler, Procter and Gamble Co., Cincinnati, OH  
R.D. Short, Monsanto Co., St. Louis, MO**

**Displayed: 1:30 P.M. — 5:00 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.	
553	<b>Inhalation Toxicity of Decalin After 20, 28 and 35 Days Exposure.</b> L.C. Stone, G.T. Lawhorn, J.C. McKinney, M.S. McCracken and R.L. Kanerva, <i>The Procter and Gamble Co., Miami Valley Labs., Cincinnati, OH</i> . Sponsor: E.V. Buehler.
554	<b>A Six Month Multi-Species Inhalation Study with Maleic Anhydride.</b> R.D. Short and F.R. Johannsen, <i>Monsanto Co., St. Louis, MO</i> ; C.E. Ulrich, <i>I.R.D.C., Mattawan, MI</i> .
555	<b>Disposition and Analysis of Formaldehyde in F-344 Rats After Inhalation Exposure.</b> H.d'A. Heck, M.C. Schmitz and E.L. White, <i>Chem. Ind. Inst. of Tox., Research Triangle Park, NC</i> . Sponsor: D.E. Rickert.
556	<b>Pathological Effects of Chronic Formaldehyde Inhalation in Rats and Mice.</b> W.D. Kerns, K.L. Pavkov and D.J. Donofrio, <i>Battelle Columbus Labs., Columbus, OH</i> ; E.J. Gralla, <i>CIIT, Research Triangle Park, NC</i> .
557	<b>Nasal Mucosal Response Induced by a Respiratory Irritant (Methyl Chloroacetate).</b> D.G. Keyes, R.J. Kociba, J.W. Henck, <i>Research Lab., Dow Chemical U.S.A., Midland, MI</i> .
558	<b>Inhalation Toxicity of a Fluorotelomer — Zonyl® Tela.</b> B.A. Burgess, S.D. Nash and G.L. Kennedy, Jr., <i>E.I. du Pont de Nemours and Co., Inc., Haskell Lab. for Tox. and Ind. Med., Newark, DE</i> .
559	<b>Guinea Pig Respiratory Responses to Isocyanatoethyl Methacrylate- and Isocyanatoethyl Propionate- Protein Conjugates.</b> L.S. Mullin, C.K. Wood and N.D. Krivanek, <i>E.I. du Pont de Nemours and Co., Inc., Haskell Lab., Newark, DE</i> .
560	<b>Ethylene Glycol Monobutyl Ether (EGBE) Vapor 9-Day and 90-Day Inhalation Studies in Fischer-344 Rats.</b> D.E. Dodd, W.M. Snellings and B. Ballantyne, <i>Union Carbide Corp., Bushy Run Research Ctr., Export, PA</i> .
561	<b>Nitroethane: A 13-week Inhalation Toxicity Study in Rats and Mice.</b> T.S. Gushow, T.J. Bell, J.D. Burek, W.J. Potts and J.J. McKenna, <i>Tox. Res. Lab., Dow Chemical USA, Midland, MI</i> .

- 562 **Differential Toxicity of Inhaled Chloroformates in Fischer 344 Rats.** G.E. Wilkinson, B.A. Prentice, A.T. Mosberg and G.L. Fisher, *Battelle Columbus Labs., Columbus, OH*; A.P. Leber, *PPG Industries, Inc., Pittsburgh, PA.*
- 563 **Disposition of Methyl Ethyl Ketone in F-344 Rats After Inhalation Exposure.** J.S. Bus, D. Deyo, M. Cox and E.L. White, *Chem. Ind. Inst. of Tox., Research Triangle Park, NC.*
- 564 **Effect of Chlorphentermine (CP) on the Pulmonary Clearance of (<sup>14</sup>C)-5-Hydroxytryptamine (5-HT) in Rabbit *In Vivo*.** T. Morita, L.S. Angevine and H.M. Mehendale, *Dept. Pharmacol. & Tox., Univ. Mississippi Med. Ctr., Jackson, MS.*
- 565 **An *In Vitro* Model for the Exposure of Lung Alveolar Epithelial Cells to Toxic Gases.** P.O. Zamora, R.E. Gregory, A.P. Li and A.L. Brooks *Lovelace Inhalation Tox. Res. Inst., Albuquerque, NM.* Sponsor: R.O. McClellan.
- 566 **Major Findings in a Twenty-Four Month Inhalation Toxicity Study of Methyl Chloride in Mice and Rats.** K.L. Pavkov, W.D. Kerns, C.E. Chrisp, D.C. Thake, R.L. Persing and H.H. Harroff, *Battelle Columbus Labs., Columbus, OH*; E.J. Gralla, *CIIT, Research Triangle Park, NC.*
- 567 **Interactive Effects of JP-5 Vapor Exposure and Elevated Temperature on Renal Lesion Induction.** L.L. Pitts, II, A.P. D'Addario, M.J. Cowan, Jr. and R.H. Bruner, *Naval Med. Res. Inst./Tox. Detachment and Air Force Aerospace Med. Res. Lab., Wright-Patterson AFB, OH.* Sponsor: M.E. Anderson.
- 568 **The Effect of Benzene Inhalation on Murine Hematopoietic Precursor Cells (CFU-e, BFU-e, CFU-gm).** R.L. Hilderbrand and L.L. Pitts, *NMRI/TD, Wright-Patterson AFB, OH*; M. Kohsaki and M.J. Murphy, Jr., *The Bob Hipple Lab. for Cancer Research, Dayton, OH.* Sponsor: V.L. Carter, Jr.
- 569 **Changes in Phospholipid Biosynthetic Enzymes in Type II Cells and Macrophages (PAM) Isolated From Rat Lungs After NO<sub>2</sub> Exposure.** E.S. Wright, M.J. Vang, J.N. Finkelstein and R.D. Mavis, *Univ. of Rochester Sch. of Med. & Dent., Rochester, NY.* Sponsor: P.E. Morrow.
- 570 **A Subchronic Acrolein Inhalation Study in Rats: I. Biochemical and Pathological Changes.** R.S. Kutzman, E.A. Popenoe, B.Y. Cockrell, M.A. Schmaeler and R.T. Drew, *Med. Dept., Brookhaven National Lab., Upton, NY and Experimental Path. Lab., Herndon, VA.*
- 571 **A Subchronic Acrolein Inhalation Study in Rats: II. Assessment of Pulmonary Function.** D.L. Costa and R.S. Kutzman, *Med. Dept., Brookhaven National Lab., Upton, NY.* Sponsor: R.T. Drew.
- 572 **A Subchronic Acrolein Inhalation Study in Rats: III. Application of Discriminant Analysis to Identify Key Indices of Pulmonary Toxicity.** P. Hu, D.L. Costa and R.S. Kutzman, *Med. Dept., Brookhaven Nat'l. Lab., Upton, NY.* Sponsor: R.T. Drew.

- 573 **A Subchronic Acrolein Inhalation Study in Rats: IV. Impact on Hypertension - Sensitive and Resistant Animals.** R.S. Kutzman, R.W. Wehner and S.B. Haber, *Med. Dept., Brookhaven Nat'l. Lab., Upton, NY.* Sponsor: R.T. Drew.
- 574 **Effects of Inhaled Toluene and m-Xylene on Conditioned Behavior.** G.D. Gentry, R.W. Wood, *Dept. of Rad. Biology and Biophysics, Environ. Hlth. Sci. Ctr., Univ. of Rochester Med. Ctr., Rochester, NY.*
- 575 **Subacute Inhalation Toxicity of Aniline: The Relationship Between Methemoglobin Formation and Toxicity.** F.O. O'Neal, *E.I. du Pont de Nemours and Co., Inc., Haskell Lab. for Toxicology and Ind. Med., Newark, DE.* Sponsor: G.L. Kennedy, Jr.
- 576 **Subchronic Toxicity of Morpholine in Rats.** C.C. Conaway, *Texaco Inc., Beacon, NY;* W.B. Coate and R.W. Voelker, *Hazleton Labs. America, Inc., Vienna, VA.* Sponsor: R.D. Harbison.
- 577 **Reversible Active-Site Specific Inhibition of Cholinesterases by Isocyanates.** W.E. Brown, A.H. Green, M.H. Karol and Y. Alarie, *Dept. Biol. Sci., Carnegie-Mellon Univ., Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.*
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#### **ANNUAL BANQUET**

Thursday, February 25, 1982

7:00 P.M.

Grand Ballroom

Open to all attendees and guests

Complimentary Wine

Courtesy, Charles River Breeding Laboratories, Inc.

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#### **PLATFORM SESSION 21: Biotransformation/Disposition V**

Friday Morning, February 26, 1982

Grand Ballroom

**Co-Chairs: W.M. Haschek, Oak Ridge Nat'l. Labs., Oak Ridge, TN  
R.S.H. Yang, Bushy Run Research Center, Export, PA**

<b>Paper No.</b>	<b>Time (A.M.)</b>	
578	8:30	<b>Cell Specific Activation and Detoxification of Benzo(a)pyrene by Two Cloned Murine Testicular Cell Lines.</b> R. Filler and L.S. Woods, <i>Biology Div., Oak Ridge Nat'l. Lab., Oak Ridge, TN.</i>

- 579 8:45 ***In Vivo* Metabolism of the Anti-Juvenile Hormone Precocene II and the Generation of Dihydrodiol Metabolites.** M-T.S. Hsia and S.J. Grossman, *Environ. Tox. Ctr. and Dept. of Entomology, Univ. of Wisconsin, Madison, WI.*
- 580 9:00 **N-Vinyl-2-Pyrrolidinone: Disposition and Metabolism Studies.** G.A. Digenis and J.S. McCianahan, *College of Pharmacy, Univ. of Kentucky, Lexington, KY.*
- 581 9:15 **Enzymatic Reduction of 1-Nitropyrene by Rat Liver Fractions.** J.P. Nachtman, *Chevron Environ. Hlth. Ctr., Richmond, CA;* E.T. Wei, *School Pub. Hlth., Univ. of California, Berkeley, CA.*
- 582 9:30 **The Excretion and Tissue Distribution of [<sup>14</sup>C]-2,4,7-Trinitro-9-Fluorenone in the Rat.** W.F. Busby, Jr., M.E. Goldman and G.N. Wogan, *Dept. of Nutrition and Food Sci., Massachusetts Inst. of Tech., Cambridge, MA;* F. Aldrich and T.H.F. Smith, *IBM Corp., White Plains, NY.*
- 583 9:45 **Metabolism of 2-Methylnaphthalene *In Vitro*: Methyl Group Oxidation.** M.J. Melancon and J.J. Lech, *Dept. of Pharm. & Tox., Med. Coll. of Wisconsin, Milwaukee, WI.*
- 584 10:00 **Disposition of Diisodecyl Phthalate Following Oral Exposure in Rats.** D.G. Pegg, *Biomedical Science Dept., General Motors Research Labs., Warren, MI.* Sponsor: J.J. Vostal.
- 585 10:15 **Disposition of Acetaldehyde Oxime in the Rat.** P.D. Unger and A.J. Salerno, *Corp. Med. Affairs, Allied Corp., Morristown, NJ.*
- 586 10:30 **Metabolic Fate of Ethylenediamine in the Rat Parallel to a Two-Year Chronic Toxicity Study: (I) Pharmacokinetic Study.** R.S.H. Yang, M.J. Tallant, J.W. Lento and J.A. McKelvey, *Bushy Run Research Ctr., Mellon Inst.-Union Carbide Corp., Export, PA.*
- 587 10:45 **Metabolic Fate of Ethylenediamine in the Rat Parallel to a Two-Year Chronic Toxicity Study: (II) Material Balance Study.** R.S.H. Yang, *Bushy Run Research Ctr., Mellon Inst.-Union Carbide Corp., Export, PA.*
- 588 11:00 **Comparative Distribution and Covalent Binding Study of 1-<sup>14</sup>C and 2,3-<sup>14</sup>C Acrylonitrile in Rats.** M.Y.H. Farooqui, O. Elshabrawy, R.K. Upreti and A.E. Ahmed, *Dept. of Pharmacol. Tox. and Chem. Path. Univ. of Texas Med. Br., Galveston, TX.* Sponsor: W. Decker.
- 589 11:15 **Parent Compound Pharmacokinetics of Inhaled Methyl Chloride in the Rat and Dog.** T.D. Landry, T.S. Gushow, J.M. Wall and M.J. McKenna, *Tox. Research Lab., Dow Chemical USA, Midland, MI.*

## PLATFORM SESSION 22: Inhalation V

Friday Morning, February 26, 1982

Republic Ballroom

*Co-Chairs: M.H. Karol, Univ. of Pittsburgh, Pittsburgh, PA*

*G.J. Traiger, Univ. of Kansas, Lawrence, KS*

Paper No.	Time (A.M.)	
590	8:30	<b>Lung Toxicity Due to Simple Heterocyclic Compounds in Mice.</b> R. Wiley, L. Gammal, G. Traiger, H. Choo and S. Baraban, <i>Depts. of Med. Chem. and Pharmacol., The Univ. of Kansas, Lawrence, KS.</i>
591	8:45	<b>Effect of Ammonia on Hepatic Microsomal Enzyme Activity in the Mouse.</b> J.C. Kapeghian, A.B. Jones and I.W. Waters, <i>Depts. of Pharmacol. and Pharmaceutics, Univ. of Mississippi, University, MS.</i> Sponsor: W.M. Davis.
592	9:00	<b>Disposition of Carbaryl-<sup>14</sup>C Residues Following Inhalation and Oral Exposure.</b> B.L. Roberts and H.W. Dorough, <i>Graduate Ctr. for Tox., Univ. of Kentucky, Lexington, KY.</i>
593	9:15	<b>Comparative Hydrolysis and Disposition of Inhaled and Orally Administered Carbofuran-Carbonyl-<sup>14</sup>C in Rats.</b> M. Trono and H.W. Dorough, <i>Graduate Ctr. for Tox., Univ. of Kentucky, Lexington, KY.</i>
594	9:30	<b>Retention and Fate of Inhaled Aldicarb in Rats.</b> H.H. Lysy and H.W. Dorough, <i>Grad. Ctr. for Tox., Univ. of Kentucky, Lexington, KY.</i>
595	9:45	<b>The Pharmacokinetics of 1,1-Dichloroethylene in Rats During and After Inhalation Exposure.</b> C.E. Dallas and F.W. Weir, <i>Environ. Science Disc., Univ. Texas Sch. of Public Hlth., Houston, TX;</i> J.V. Bruckner and L. Putcha, <i>Dept. Pharmacol., Div. Toxicol., Univ. Texas Med. Sch., Houston, TX;</i> S. Feldman, <i>Dept. Pharmaceutics, Univ. Houston, Houston, TX.</i>
596	10:00	<b>Effect of Chlorphentermine Pretreatment on the Distribution of Chlorphentermine in Isolated Perfused Rat Lungs.</b> L.S. Angevine, V.G. Lockard and H.M. Mehendale, <i>Dept. Pharmacol. &amp; Tox., Univ. Mississippi Med. Ctr., Jackson, MS.</i>
597	10:15	<b>Effects of Chlorphentermine Treatment on Rat Alveolar Macrophage Phagocytosis.</b> B.E. Lehnert and J. Ferin, <i>Dept. RBB, Univ. of Rochester Med. Ctr., Rochester, NY.</i> Sponsor: P.E. Morrow.
598	10:30	<b>Repeated Inhalation Challenge of Guinea Pigs Displaying Delayed Respiratory Sensitivity.</b> J. Stadler and M.H. Karol, <i>Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.</i>
599	10:45	<b>Comparison of the Genotoxicity of Particulate Extracts of Smoke-Free and Forest Fire Smoke-Polluted Air.</b> C.J. Viau, <i>Grad. Ctr. for Toxicol., Univ. of Kentucky;</i> J.M. Lockard and P.S. Sabharwal, <i>T.H. Morgan Sch. of Biol. Sci., Univ. of Kentucky, Lexington, KY;</i> H.G. Enoch, <i>Kentucky Dept. of Energy, Lexington, KY.</i>

- 600 11:00 **The Behavior of Inhaled Carbon Disulfide (CS<sub>2</sub>) in Rat Blood.** C.W. Lam and V. DiStefano, *Univ. of Rochester, School of Medicine, Rochester, NY.* Sponsor: D. Taves.
- 601 11:15 **A Non-Invasive Method for Repeated Evaluation of Pulmonary Performance in Unanesthetized and Unrestrained Guinea Pigs.** K.L. Wong and Y. Alarie, *Grad. Sch. Pub. Hlth., Univ. of Pittsburgh, PA.*

## PLATFORM SESSION 23: Mutagenesis

Friday Morning, February 26, 1982

Independence Room

**Co-Chairs: C.R. Clark, *Inhal. Tox. Res. Inst., Albuquerque, NM***

**M.A. Friedman, *American Cyanamid Corp., Wayne, NJ***

- | Paper No. | Time (A.M.) |   |
|-----------|-------------|---|
| 602       | 8:30        | <b>Mutagenicity Testing of Melamine.</b> R.W. Mast, M.A. Friedman and R.A. Finch, <i>American Cyanamid, Wayne, NJ and Raltech Scientific Services, Madison, WI.</i>   |
| 603       | 8:45        | <b>The Effect of Substrates and Inhibitors of Monoamine Oxidase (MAO) on Hepatic Dimethylnitrosamine (DMN) Metabolism and Mutagenicity in the Ames Test.</b> B.G. Lake, I.R. Rowland, M.A. Collins, J.C. Phillips, R.C. Cottrell and S.D. Gangolli, <i>The British Industrial Biological Research Association, Carshalton, Surrey, U.K.</i> |
| 604       | 9:00        | <b>Effect of Different Exposure Protocols of Ethyl Carbamate on Sister Chromatid Exchange (SCE) Frequencies <i>in Vivo</i>.</b> M. Cheng and M.K. Conner, <i>Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.</i> Sponsor: Y. Alarie.   |
| 605       | 9:15        | <b>Multicellular Sister Chromated Exchange (SCE) Induction by Diepoxybutane (DEB).</b> J.E. Luo, O.G. Gotera and M.K. Conner, <i>Grad. Sch. of Pub. Hlth. Univ. of Pittsburgh, Pittsburgh, PA.</i> Sponsor: Y. Alarie.  |
| 606       | 9:30        | <b>Mammalian Cell Point Mutation Assay with the Anti-neoplastic Amsacrine.</b> R.S. Lake, E.J. McGuire and F.A. de la Iglesia, <i>Dept. of Tox. Warner-Lambert/Parke-Davis Pharmaceutical Res., Div., Ann Arbor, MI.</i>  |
| 607       | 9:45        | <b>Preliminary Characterization of Mutagens Produced as a Result of Chlorination of Humic Acids.</b> J.R. Meier, R.D. Lingg, K.L. Baker, W.H. Kaylor and R.J. Bull, <i>Hlth. Effects Research Lab., USEPA, Cincinnati, OH.</i>  |
| 608       | 10:00       | <b>Detection of Mutagenicity in Human Urine.</b> L. Recio, H.G. Enoch, M.A. Hannan, <i>Graduate Center for Tox., Kentucky, D.O.E., McDowell Cancer Network, Lexington, KY.</i> Sponsor: S.D. Harrison.  |
| 609       | 10:15       | <b>Mutagenesis of Nitro-Dibenzo-p-Dioxins.</b> W.E. White, Jr. and S.G. Rock, <i>Div. Molec. Biol., Dept. of Biochem., Univ. of Alabama in Birmingham, Birmingham, AL.</i>  |

610	10:30	<b>Genotoxicity Evaluation of a Pyridoquinazoline Topical Antiallergic Agent.</b> R.S. Lake, D. Brusick and F.A. de la Iglesia, <i>Dept. of Tox., Warner-Lambert/Parke-Davis Pharm. Res., Ann Arbor, MI and Dept. of Molec. Tox., Litton Bionetics, Kensington, MD.</i>
611	10:45	<b>Genotoxicity Evaluation of Amsacrine.</b> R.S. Lake, C.L. Heifetz and F.A. de la Iglesia, <i>Dept. of Tox., Warner-Lambert/Parke-Davis Res. Div., Ann Arbor, MI.</i>
612	11:00	<b>Metyrapone Enhances Microsomal-Dependent Mutagenesis.</b> L.M. Distlerath, J.C. Loper and M.W. Tabor, <i>Dept. of Environ. Hlth. and Dept. of Microbiology, Univ. of Cincinnati Med. Ctr., Cincinnati, OH.</i> Sponsor: C.C. Smith.
613	11:15	<b>Time Course of <i>In Vivo</i> Induction of Sister Chromatid Exchange by Ethylnitrosourea and Methylnitrosourea.</b> J.L. Charles, R.A. Carchman, D. Kram and J.F. Borzelleca, <i>Dept. Pharmacol., Med. College of VA, Richmond, VA.</i>

## POSTER SESSION 7A: General Toxicology V

Friday Morning, February 26, 1982

John B. Hynes Exhibition Area

**Organizers: J.E. Manno, Louisiana State Univ. Med. Sch.,**

**Schreveport, LA**

**R.C. Shank, Univ. of California, Irvine, CA**

Displayed: 8:30 A.M. — Noon

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.

614	<b>Talin Protein Sweetener: Toxicology and Safety Assessment:</b> J.D. Higginbotham and D.J. Snodin, <i>Tate and Lyle Group Research and Dev., Reading, U.K.</i> ; J.W. Daniel, <i>Life Science Research, Stock, Essex, U.K.</i>
615	<b>Skin Absorption of Methanol.</b> R. Lindenschmidt, M. Elbeera and R.B. Forney, <i>Dept. of Pharmacol. and Tox., Indiana Univ., Sch. of Med., Indianapolis, IN.</i>
616	<b>The Effect of Diisopropylfluorophosphate (DFP) on Serum Calcium and Magnesium.</b> W.E. Ridder and R.B. Forney, <i>Dept. of Pharmacol. and Tox., Indiana Univ. Sch. of Med., Indianapolis, IN.</i>
617	<b>Analysis of Hemoperfusion for the Treatment of Parathion Toxicity.</b> D. Eigenberg, T. Pazdernik and J. Doull, <i>Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS.</i>
618	<b>Factors Contributing to the Difference in Acute Toxicity of Chlorpyrifos and Methyl Chlorpyrifos.</b> L.G. Sultatos, L.G. Costa, C. Wang and S.D. Murphy, <i>Div. of Tox., Univ. of Texas Med. Sch. at Houston, Houston, TX.</i>

- 619 **Ribavirin: A Subacute Toxicological Evaluation in Rats and Dogs.** F.E. Reno, J.A. Trutter and R.W. Voelker, Jr., *Hazleton Labs. America, Vienna, VA*; G.L. Wannarka, P.G. Canonico and M. Castello, *U.S. Army Med. Res. Inst. of Inf. Dis., Ft. Detrick, Frederick, MD.*
- 620 **Evaluation of the Rabbit as an Alternate Model for Measuring the Acute Oral Toxicity of Pesticide Granular Formulations.** S.E. Hastings, G.P. Zwicker and M.W. Sauerhoff, *Stauffer Chemical Co., Environ. Hlth. Ctr., Farmington, CT.*
- 621 **The Effect of Time of Dosing on Chemical Toxicity.** R. Luthra, G. Kyle and J.V. Bruckner, *Dept. Pharmacol., Div. Toxicol., Univ. Texas Med. Sch., Houston, TX.*
- 622 **Heat Precipitation of Acid Soluble Collagen as a Screen for Severe Corneal Opacifiacients,** S.J. Williams, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Tox. & Ind. Med., Newark, DE.* Sponsor: G.L. Kennedy, Jr.
- 623 **Subchronic Dermal Toxicity of Allyl Methacrylate in Rabbits.** W.H. Siddiqui and E.J. Hobbs, *Tox. Dept. Hlth. and Env. Sci., Dow Corning Corp., Midland, MI.*
- 624 **Effect of Age of Hens on Their Sensitivity to Delayed Neurotoxicity Induced by a Single Oral Dose of Tri- $\alpha$ -Tolyl Phosphate.** M.B. Abou-Donia, H.M. Makkawy, A.E. Salama and D.G. Graham, *Dept. of Pharmacol. and Path., Duke Univ. Med. Ctr., Durham, NC.*
- 625 **Effect of Lung, Liver and Kidney Toxicants on Respiratory Rates of Mice.** P.J. Hakkinen, R. Frankel, M. Harden, L.A. Balogh and H.P. Witschi, *Univ. of Tenn-Oak Ridge Grad. Sch. Biomedical Sciences and Biology Div., Oak Ridge Nat'l. Lab., Oak Ridge, TN.*
- 626 **Chronic Toxicity of Malamine in Fischer 344 Rats.** G.N. Rao, P.J. Giesler, T.E. Palmer, R.W. Mast, M.A. Friedman and C.B. Shaffer, *Raltech, Div. of Ralston Purina Co., Madison, WI and American Cyanamid Co., Chemicals Group, Wayne, NJ.*
- 627 **Effects of Ribavirin on Blood and Bone Marrow of Monkeys.** M.D. Castello, T.M. Cosgriff, P.G. Canonico, G.L. Wannarka and C.T. Spears, *Dept. of Antiviral Studies, U.S. Army Med. Res. Inst. of Inf. Dis., Ft. Detrick, Frederick, MD.* Sponsor: F. Reno.
- 628 **Mophologic Changes in the Gastric Mucosa of Rats and Dogs Treated with an Analog of Prostaglandin E.** A.W. Kramer, Jr., W.J. Dougherty, A.R. Belson and B.M. Henderson, *American Cyanamid Co., Wilbur G. Malcolm Tox. Labs., Pearl River, NY.* Sponsor: M.J. Iatropoulos.
- 629 **Percutaneous Acute and Chronic Renal Toxicity Induced by Shale Oil and Petroleum Derived Jet and Diesel Fuel.** J.R. Easley and J.M. Holland, *Biol. Div., Oak Ridge National Lab., Oak Ridge, TN.*
- 630 **Effects of Carbon Disulfide on Electrical Indicants of Neurotoxicity in Rats.** C.S. Rebert and S.S. Sorenson, *Neuroscience Program, SRI Int'l., Menlo Park, CA.* Sponsor: D.C.L. Jones.



- 631 **Age-Related Susceptibility of Rat Endocrine Pancreas to Cyproheptadine.** S.A. Chow and L.J. Fischer, *Dept. of Pharmacol., Tox. Ctr., Univ. of Iowa, Iowa City, IA.*
- 632 **Allura Red Dye Study in Mice.** A.T. Modak and V.K. Berry, *Div. of Tox. and Dept. of Anatomy, Univ. Texas Hlth. Science Ctr., San Antonio, TX.*
- 633 **Behavioral Effects of Acrylamide in Mice.** J.J. Teal and H.L. Evans, *Inst. of Environ. Med., New York Univ. Med. Ctr., New York, NY.*
- 634 **Cytotoxicity Studies of Heated Chrysotile Asbestos.** R. Valentine and G.L. Fisher, *Battelle Columbus Labs., Columbus, OH;* M.W. Chang and R.W. Hart, *National Ctr. for Tox. Research, Jefferson, AK.*
- 635 **Gossypol Inhibition of Soluble Adenylate Cyclase from Bovine Testis.** K.L. Olgiati, D.L. Toscano and W.A. Toscano, Jr., *Dept. of Physiol. Lab. of Tox., Harvard Univ. Sch. of Pub. Hlth., Boston, MA.* Sponsor: J.G. Dent.
- 636 **The Interaction of Anthraquinone Derivatives with DNA and Protein in Vitro. I. Intercalation with DNA.** B.M. Elliott and J. Ashby, *ICI Central Tox. Lab., Alderley Park, Nr. Macclesfield, Cheshire, U.K.* Sponsor: I.F.H. Purchase.
- 637 **An Investigation of <sup>35</sup>S-Sulphate Incorporation into Rat Bone Marrow Cell Suspensions as a Means of Quantitating Cells Within the Myeloid Series.** A.F. Wright, *ICI, Central Tox. Lab., Alderley Park, Nr. Macclesfield, Cheshire, UK;* N.M. Blackett, *Inst. of Cancer Research, Cheshire, UK;* M.S. Rose, *ICI Corp. Biosciences Group, Runcorn Heath, Cheshire, UK.*
- 638 **Formation of 7-Methylguanine in Liver DNA from Rats Treated *in Vivo* with N-Nitrosopyrrolidine.** E.J. Hunt and R.C. Shank, *Dept. Comm. & Env. Med., Univ. of Calif. Southern Occup. Hlth. Ctr., Univ. of Calif., Irvine, CA.*
- 639 **Oxidation of Tetramethyl Hydrazine by Peroxidizing Enzymes: An Electron Spin Resonance Study.** K. Sivarajah, B. Kalyanaraman, R.P. Mason and T.E. Eling, *Lab. of Pulmonary Function and Tox., National Inst. of Environ. Hlth. Sciences, Research Triangle Park, NC.*
- 640 **Effect of Chemical Structure on the Percutaneous Absorption and Partition Coefficients of Hair Dyes.** R.L. Bronaugh, E.R. Congdon and K.D. White, *Div. of Tox., FDA, Washington, DC.* Sponsor: T.F.X. Collins.
- 641 **Depletion of Mouse Hepatic Glutathione by Selected Endogenous Compounds.** R.C. James, S.M. Roberts and R.D. Harbison, *Div. of Interdisciplinary Tox., Univ. of Arkansas for Med. Sciences, Little Rock, AR.*
- 642 **Utilization of *in Vitro* Erythrocyte Fragility to Predict Toxicity of a Group of Antifungal Echinocandin B Analogs.** L.C. Howard, M.D. Gunnoe, M. Debono, B.J. Abbott and J.R. Turner, *Tox. Div., Lilly Research Labs., Greenfield, IN.* Sponsor: J.L. Emmerson.

- 643 **Dermal Toxicity of Hexafluoroacetone.** G.L. Kennedy, Jr., J.E. Henry, H.C. Chen and O.L. Dashiell, *E.I. du Pont de Nemours and Co., Inc., Haskell Lab. for Tox. and Ind. Med., Newark, DE.*
- 644 **Hypoglycemic Effect of the Venom from the Snake *Piscivorus piscivorus*.** S.A. Taha, *Dept. of Pharmacol., College of Pharmacy, Univ. of Riyadh, Riyadh, Saudi Arabia.*

## POSTER SESSION 7B: General Toxicology VI

Friday Morning, February 26, 1982

John B. Hynes Exhibition Area

**Organizers: J.L. Emmerson, Eli Lilly Research Labs., Greenfield, IN  
D.C. Villeneuve, Environ. Hlth. Directorate, Ottawa, Ont., Canada**

Displayed: 8:30 A.M. — Noon

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.

- 645 **Intravenous (IV) Toxicity Study of Homoharringtonine (HH) (NSC 141633) in CDF1 Mice and Beagle Dogs.** K.N. Newman and R.G. Meeks, *Southern Research Inst., Birmingham, AL*; J.F. Ferrell, *Experimental Path. Labs., Inc., Herndon, VA*; K.S. Greenspun, *Battelle TPO, Vienna, VA.*
- 646 **Red Cell Kinetics in Ribavirin-Treated Monkeys.** P.G. Canonico, M.D. Kastello and G. Wannarka, *Dept. of Antiviral Studies, U.S. Army Med. Res. Inst. Inf. Dis., Frederick, MD.* Sponsor: F. Reno.
- 647 **Bile Duct Proliferation After 4-Fluoro- $\beta$ -Oxobenzene-propanenitrile Administration in Monkeys.** R.J. Arceo, M.R. Irwin and M.J. Iatropoulos, *American Cyanamid Co., Wilbur G. Malcolm Tox. Labs., Pearl River, NY.*
- 648 **Nephrotoxicity and Kidney Concentration of Selected Furan Derivatives in Mice.** L. Gammal, R. Wiley, G. Traiger and S. Baraban, *Dept. of Pharmacol. & Tox. and Med. Chem., The Univ. of Kansas, Lawrence, KS.*
- 649 **Cardiotoxicity of Beta-Adrenergic Agonists in Mice of Various Age Groups.** X. Joseph, V. Whitehurst and T. Balazs, *Food and Drug Admin., Washington, DC.*
- 650 **Application of Computer-Assisted Electrocardiographic Analysis to Cardiovascular Toxicology.** W.P. Watkinson, K.S. Robinson and M.A. Brice, *U.S.E.P.A., Research Triangle Park, NC.* Sponsor: N. Chernoff.
- 651 **Subchronic Toxicity of Octachlorostyrene in the Rat.** D.C. Villeneuve, I. Chu, V. Secours, V.E.O. Valli and G.C. Becking, *Environ. and Occup. Tox. Div., Environ. Hlth. Directorate, Ottawa, Ontario and Biopath Analysts, Guelph, Ont. Canada.*

- 652 **Cardiovascular and Respiratory Effects of Methyl Methacrylate Infusion in the Anesthetized Dog.** K.C. Baran, K.L. Marquis, H.H. Mincer and I.W. Waters, *Dept. of Pharmacol., Sch. of Pharmacy, Univ. of Mississippi, University, MS.* Sponsor: W.M. Davis.
- 653 **In Vitro Rates of Collagen Synthesis in Mouse Lung Tissue Following the Administration of Butylated Hydroxytoluene.** J.P. Kehrer, *Dept. of Pharmacol., Coll. of Pharmacy, The Univ. of Texas at Austin, Austin, TX.* Sponsor: D. Acosta.
- 654 **Morphological Changes Produced in the Testes of Young Male Rats Following Oral Administration of Di-n-Pentyl Phthalate.** P.M.D. Foster, D.M. Creasy, J.R. Foster and S.D. Gangolli, *The British Ind. Biological Res. Assoc., Woodmansterne Rd., Carshalton, U.K.*
- 655 **Acrylamide Effects on Activity of Glyceraldehyde-3-Phosphate Dehydrogenase in Rat Brain Homogenate.** I.L. Vyas, R.D. Howland and H.E. Lowndes, *CMDNJ, New Jersey Med. Sch., Newark, NJ.*
- 656 **Effect of Phthalate Esters on Succinate Oxidation and Energy Coupling in Rat Liver Mitochondria.** R.L. Melnick and C.M. Schiller, *National Tox. Program and Lab. of Pharmacol., NIEHS, Research Triangle Park, NC.*
- 657 **Effects of Acrylamide Pretreatment on the Behavioral Suppression of Psychoactive Agents in Rats.** R.E. Squibb and H.A. Tilson, *Lab. Behav. Neurol. Toxicol., NIEHS, Research Triangle Park, NC.* Sponsor: B. Fowler.
- 658 **Characteristics of Peroxisome Proliferation Induced in Isolated Hepatocytes by Hypolipidemic Drugs and Phthalate Esters.** T.J.B. Gray, J.A. Beamand, B.G. Lake, J.R. Foster and S.D. Gangolli, *The British Ind. Biological Res. Assoc., Woodmansterne Rd., Carshalton, Surrey, U.K.*
- 659 **Ten Year Chronic Toxicology of Norlestrin in Female Monkeys,** J.E. Fitzgerald and F.A. de la Iglesia, *Dept. of Tox., Warner-Lambert/Parke-Davis Pharmaceutical Res., Ann Arbor, MI.*
- 660 **Systemic Toxicity of Ametantrone Acetate in Mice and Dogs.** J.R. Watkins, S.N. Kim, U. Jayasekara, J.L. Sanyer, J.A. Anderson, J.E. Fitzgerald and F.A. de la Iglesia, *Dept. of Tox., Warner-Lambert/Parke-Davis Pharmaceutical Res. Div., Ann Arbor, MI.*
- 661 **Toxicokinetics of Hydrazine and H70 Via Limited Percutaneous Exposure in the Rabbit.** W.C. Keller, J.P. Murphy, M.E. Andersen, R.H. Bruner and K.C. Back, *AFAMRL/TH, Wright-Patterson AFB, OH.*
- 662 **Comparison of Selected Biochemical and Hematological Parameters and Histopathology in Rats Anesthetized Prior to Necropsy with Ether, Pentobarbital and T-61.**® T.E. Davis, J.E. Calkins and J.W. Thackara, *Biosphere Research Center, Inc., New City, NY.* Sponsor: W.D. Gray.

- 663 **Sources of Intralaboratory Variability and the Effects of Dose Volume in Ocular Toxicity Testing.** S.J. Williams and G.J. Graepel, *E.I. du Pont de Nemours & Co., Inc., Haskell Lab. for Tox. & Ind. Med., Newark, DE.* Sponsor: G.L. Kennedy, Jr.
- 664 **A Novel Method for Quantitative Cutaneous Toxicokinetics.** J.M. Holland and J. Kao, *Biology Div., Oak Ridge National Lab., Oak Ridge, TN.*
- 665 **A Comparative Study of Irritation Responses With and Without Anesthetics in the Albino Rabbit Eye.** C.A. Hoheisel, D.K. Lowther, G.W. Bierbower and R.L. Harris, *U.S. Cons. Prod. Safety Comm., Direc. for Hlth. Sci., Washington, DC.* Sponsor: R.E. Osterberg.
- 666 **Toxicity in Monkeys of a Ribavirin Regimen for Use in Lassa Fever Patients.** G.L. Wannarka, E.L. Stephen, E.F. Jackson and P.G. Canonico, *U.S. Army Med. Res. Inst. of Inf. Dis., Ft. Detrick, Frederick, MD.* Sponsor: F. Reno.
- 667 **Subchronic Toxicity of Levair® in Beagle Dogs.** A.C. Katz, D.W. Frank, M.W. Sauerhoff and G.M. Zwicker, *Stauffer Chemical Co., Environ. Hlth. Ctr., Farmington, CT.*
- 668 **Platelet Aggregation: Inhibition of Secondary Aggregation by Phenol.** M.L. Coan, K.R. Case and H.B. Bosmann, *Tox. Training Program, Depts. of Radiation Biology and Biophysics and Pharmacol. and Tox., Univ. of Rochester, Rochester, NY.* Sponsor: T.W. Clarkson.
- 669 **Acute and Subacute Toxicity of Octachlorostyrene in the Rat.** I. Chu, D.C. Villeneuve, V. Secours, V.E.O. Valli and G.C. Becking, *Environ. and Occup. Tox. Div., Environ. Hlth. Directorate, Ottawa, Ont. and Biopath Analysts, Guelph, Ont.*
- 670 **Subacute Toxicity of Dietary Cadinene in Fischer 344 Rats.** D.E. Johnson, L.C. Uraih, W.R. Richter, M.B. Powers and D.C. Jessup, *Int. Res. Dev. Corp., Mattawan, MI and Nat'l. Tox. Prog., Bethesda, MD.*
- 671 **The Ledtox Protocol System: An Automated Interactive Protocol Information System.** R.S. Wasserman, J.F. Noble and M. Mandel, *Med. Res. Div./Information Services Div., Wilbur G. Malcom Tox. Labs., American Cyanamid Co., Pearl River, NY.*
- 672 **Identification of Laboratory Animals.** C.K. Wood, C.E. Cover, W.A. Cook and J.R. Gibson, *Haskell Lab. for Tox. and Ind. Med., Newark, DE.*
- 673 **Acute Toxicity of Uranium Extractant (UE) and UE Co-Solvent.** W.J. Powers, S.C. Gad and B.J. Dunn, *Corporate Med. Affairs, Allied Corp., Morristown, NJ.*
- 674 **Benzene Inhibits Mitochondrial RNA and Protein Synthesis.** G. Kalf and T. Rushmore, *Thomas Jefferson Univ., Philadelphia, PA; R. Snyder, Rutgers Univ., New Brunswick, NJ.*

The Effect of An Experimental Reduction of Sodium  
in Drinking Water on the Blood Pressure Distribution  
Patterns of Elementary Students. E.J. Calabrese and  
R.W. Tuthill, *Div. of Pub. Hlth., Univ. of Massachusetts,  
Amherst, MA.*

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**JOINT SYMPOSIUM**  
with  
**Environmental Mutagen Society**  
**Is There a Role Today for Mutagenicity Testing**  
**in the Safety Evaluation of Chemicals?**

*A Debate*

Friday Afternoon, February 26, 1982

Grand Ballroom

2:00 P.M. — 5:00 P.M.

**Moderator:**

W. Gary Flamm, *Bureau of Foods, Food and Drug Administration,  
Washington, DC*

**For the Proposition:**

David J. Brusick, *Dept. of Molecular Toxicology, Litton Bionetics, Inc.,  
Kensington, MD*

Verne A. Ray, *Medical Research Labs., Pfizer Pharmaceuticals,  
Groton, CT*

**Against the Proposition:**

Albert C. Kolybe, Jr., *Bureau of Foods, Food and Drug Administration,  
Washington, DC*

Robert B. Cumming, *Biology Division, Oak Ridge National Lab.,  
Oak Ridge, TN*

**Rapporteur:**

Mortimer L. Mendelsohn, *Biomedical Sciences Division, Lawrence  
Livermore Lab., Livermore, CA*

All SOT registrants will be admitted without payment of  
additional fees. You must show your registration badge.

## NOTES

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## NOTES

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# NOTES

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## NOTES

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**SPECIALTY SECTION MEETINGS**

**Metals**

Tuesday, February 23, 1982 — 5:00 P.M.

Independence Room

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**Mechanisms**

Tuesday, February 23, 1982 — 5:15 P.M.

Republic Room

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**Neurotoxicology**

Wednesday, February 24, 1982 — 5:30 P.M.

Independence Room

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**Reproductive Toxicology**

Wednesday, February 24, 1982 — 5:30 P.M.

Republic Room

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**Mid-Atlantic Regional Section**

Wednesday, February 24, 1982 — 5:30 P.M.

Constitution Room