

19th ANNUAL MEETING

March 9-13, 1980

**Sheraton Washington Hotel
Washington, DC**

PROGRAM

Mixer and Reception

Sunday, March 9, 1980

6:00 - 7:30 P.M.

Washington Room

Sheraton Washington Hotel

Cash Bar

open to all attendees and guests

Conference Symposia

Hepatic Toxicity and Neoplasia in the Rodent

Monday Afternoon, March 10, 1980

1:30 P.M.

Sheraton Room

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Perspectives in Risk Assessment

Tuesday Morning, March 11, 1980

8:30 A.M.

Sheraton Room

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Toxicology in the Workplace

Responsibilities for Safe Workplace:

A Multidisciplinary Challenge

Wednesday Morning, March 12, 1980

8:15 A.M.

Sheraton Room

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Unresolved Mechanisms

Wednesday Afternoon, March 12, 1980

1:30 P.M.

Sheraton Room

NINETEENTH ANNUAL MEETING

sponsored by

Society of Toxicology

Sheraton Washington Hotel - Washington, DC

March 9 - 13, 1980

REGISTRATION FEES*

	<u>Member or Post Doctoral In Training</u>	<u>Non- Member</u>	<u>Student, Full-time, Predoctoral</u>
Preregistration	\$40.00	\$65.00	\$ 5.00
At Conference	50.00	75.00	10.00
Banquet	19.25	19.25	19.25

*Payable in U.S. funds only. Return form with payment to:
Executive Secretary, Society of Toxicology
475 Wolf Ledges Parkway
Akron, OH 44311 Tel.: 216/762-2289

SESSIONS SUMMARY

Platform

<u>Day</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Monday A.M.	Inhalation Toxicology I	Sheraton Room	12
Monday A.M.	Metabolism I	Washington Room	13
Monday P.M.	General Toxicology I	Exhibition Hall C	20
Monday P.M.	Nervous System I	Maryland Suite	22
Monday P.M.	Mutagenesis I	Washington Room	23
Tuesday A.M.	Inhalation Toxicology III	Washington Room	30
Tuesday A.M.	Pharmacokinetics	Maryland Suite	31
Tuesday P.M.	Cardiac	Maryland Suite	43
Tuesday P.M.	Oncogenesis I	Sheraton Room	44
Tuesday P.M.	Immunotoxicology	Washington Room	45
Wednesday A.M.	Teratology and Reproduction II	Washington Room	49
Wednesday A.M.	Metals I	Maryland Suite	51
Wednesday P.M.	Metabolism III	Washington Room	57
Wednesday P.M.	Mycotoxins	Maryland Suite	58
Thursday A.M.	Bioactivation	Washington Room	63
Thursday A.M.	General Toxicology IV	Sheraton Room	64

Symposia

Monday P.M.	Hepatic Toxicity and Neoplasia in the Rodent	Sheraton Room	19
Tuesday A.M.	Perspectives in Risk Assessment	Sheraton Room	29
Wednesday A.M.	Toxicology in the Workplace Responsibilities for a Safe Workplace: A Multidisci- plinary Challenge	Sheraton Room	49
Wednesday P.M.	Unresolved Mechanisms	Sheraton Room	56

Poster

Monday A.M.	Hepatic and Gastrointestinal	Exhibition Hall B	15
Monday A.M.	Teratology and Reproduction I	Exhibition Hall B	17
Monday P.M.	Inhalation Toxicology II	Exhibition Hall B	25
Monday P.M.	Disposition	Exhibition Hall B	26
Tuesday A.M.	General Toxicology II	Exhibition Hall B	40
Tuesday A.M.	Biochemical Mechanisms	Exhibition Hall B	42
Tuesday P.M.	Metabolism II	Exhibition Hall B	45
Wednesday A.M.	General Toxicology III	Exhibition Hall B	52
Wednesday A.M.	Mutagenesis II	Exhibition Hall B	55
Wednesday P.M.	Aquatic Toxicology	Exhibition Hall B	59
Wednesday P.M.	Metals II	Exhibition Hall B	60
Thursday A.M.	Oncogenesis II	Exhibition Hall B	66
Thursday A.M.	Nervous System II	Exhibition Hall B	67

—GENERAL MEETING INFORMATION—

Registration

Exhibit Hall Lobby — Sunday: 1 P.M. - 8 P.M.; Monday, Tuesday, and Wednesday: 8 A.M. - 6 P.M.

Abstracts of Papers

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

Hotel Accommodations

The Sheraton Washington Hotel is Conference headquarters. The following guaranteed guest room rates apply when reservations are made on the printed form accompanying the pre-conference mailing:

Single	\$45-\$70
Twin or Double	\$57-\$85

The hotel accepts the following credit cards:

American Express, Bank Americard, VISA, Carte Blanche, Diners Club, Master Charge

The Sheraton Hotel, located nearby, will also be used after the Washington Sheraton fills, at comparable rates.

Sessions

All held on the Lobby Level of Sheraton Washington Hotel.

Hospitality

Nathan Hale (Towers Building)

Snack Bar

A snack bar will be open Monday, Tuesday, Wednesday in the Exhibit Hall 7:45 a.m. - 4:30 p.m.

Conference Office

Room 1, Exhibit Hall C

—SPECIAL EVENTS AND SERVICES—

Annual Banquet

Washington Room, 7:00 p.m., Tuesday, March 11, \$19.25. Complimentary wine; Courtesy, Charles River Breeding Laboratories.

Annual Business Meeting

Sheraton Room, 3:00 P.M. Tuesday, March 11. Open only to Society of Toxicology members.

“Issues” Session

Sheraton Room, Wednesday, March 12, 12:00 - 1:15 P.M. The Officers and Councilors will be available for discussions of pertinent questions with the membership in an open forum. Bring your sandwich, etc., from the Snack Bar and participate in a stimulating discussion of SOT affairs.

Ladies Hospitality

Nathan Hale Room (Towers Building), 9 A.M. - 4 P.M., Monday, Tuesday, Wednesday; 9 A.M. - Noon, Thursday.

Mixer and Reception

Washington Room, 6:00 - 7:30 P.M. Sunday, Cash Bar.

Placement Service

Rooms 1087, 1091 (Mezzanine Level),
10 A.M. - Noon, Monday, Tuesday, Wednesday
2 P.M. - 4 P.M., Monday, Tuesday
Co-Chairmen: Mark Hite, W.E. Rinehart

Press Room

Room 1085 (Mezzanine Level),
8 A.M. - 6 P.M., Monday, Tuesday, Wednesday
8 A.M. - Noon, Thursday

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**(Composed of the Officers and four
elected Councilors)**

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Tom S. Miya, President
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Councilors

Mary O. Amdur (1978-1980)
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Executive Secretary
William E. McCormick
475 Wolf Ledges Parkway
Akron, OH 44311
(216) 762-2289

Office of the Secretary
Chemistry Building 320
University of Arizona
Tucson, AZ 85721
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1980 Conference

General Manager: J. Wesley Clayton
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ELECTED COMMITTEES

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Perry J. Gehring, Auditor

APPOINTMENTS

Historian

Harry W. Hays

Placement

Mark Hite, Director
William E. Rinehart, Co-Director

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

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Liaison with European Society of Toxicology

Robert A. Scala
Bo Holmstedt

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

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Perry J. Gehring
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Liaison with American Industrial Hygiene Association

J. Wesley Clayton, Jr.
Perry J. Gehring
Tom S. Miya

Liaison with Environmental Mutagen Society

Gordon W. Newell

FUTURE MEETINGS

Meeting	Year	Dates	Location
20	1981	March 1-5	Town and Country San Diego, CA
21	1982	March 7-11	Sheraton Boston Boston, MA
22	1983	March 6-10	Caesar's Palace Las Vegas, NV
23	1984	March 11-15	Atlanta Hilton Atlanta, GA
24	1985	March 17-21	Town and Country San Diego, CA

PAST PRESIDENTS

Harold C. Hodge	1961-1962
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Paul S. Larson	1963-1964
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Frederick Coulston	1965-1966
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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

AWARDS

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

Education

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

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

Frank R. Blood

1974.....	Y. Alarie
1975.....	D.J. Ecobichon G.J. Johnstone O. Hutzinger
1976.....	R.D. Brown
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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

Mixer and Reception

Sunday, March 9, 1980

6:00 - 7:30 P.M.

Washington Room

Sheraton Washington Hotel

Cash Bar

open to all attendees and guests

PLATFORM SESSION 1: Inhalation Toxicology I

Monday Morning, March 10, 1980

Sheraton Room

Chairman: M. J. McKenna

**Toxicology Research Laboratory, Dow Chemical Co., U.S.A.,
Midland, MI**

Assistant: W. M. Snellings

Carnegie-Mellon Institute of Research, Pittsburgh, PA

Assistant: C. S. Barrow

**Chemical Industry Institute of Toxicology,
Research Triangle Park, NC**

Paper No.	Time (A.M.)	
1	8:30	Generation of High Concentrations of Liquid Aerosols for Acute Inhalation Toxicity Testing. J.L. Miller, J.W. McCabe, L.J. Humm and B.O. Stuart. <i>Stauffer Chem. Co., Richmond Toxicol. Lab., Richmond, CA and Stauffer Environ. Hlth. Ctr., Farmington, CT.</i> Sponsor: T.R. Castles.
2	8:45	Decreased Superoxide Anion Radical Production by Rat Alveolar Macrophages Following Inhalation of Ozone. M.A. Amoruso, G. Witz and B.D. Goldstein. <i>Dept. Environ. Med., New York Univ. Med. Ctr., New York, NY.</i>
3	9:00	Effects in the Rat of Intratracheally Administered Uranyl Fluoride. J.B. Scott, F.A. Smith and C.L. Yuile. <i>Dept. of Rad. Biol. and Biophys., Univ. of Rochester Sch. of Med. and Dent., Rochester, NY.</i>
4	9:15	Chlorphentermine Uptake by Rabbit Lung Slices. L.S. Angevine and H.M. Mehendale. <i>Dept. of Pharmacol. and Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS.</i>
5	9:30	Translocation of Intratracheally Instilled $^{49}\text{V}_2\text{O}_5$ in Rats. T.L. Felten, A.W. Conklin, C.S. Skinner and J.G. Hadley. <i>Biol. Dept., Pacific Northwest Lab., Richland, WA.</i>
6	9:45	Concentration Dependence of Sensory Irritation Tolerance to Chlorine in Rats. C.S. Barrow and W. Steinhagen. <i>Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.</i> Sponsor: J.E. Gibson.
7	10:00	Experimental Sensitization by Repeated Inhalation of Aromatic Isocyanates. M.H. Karol, C. Dixon, M. Brady and Y. Alarie. <i>Dept. of Ind. Environ. Hlth. Sci., Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.</i>
8	10:15	Comparative Effects of Some Mono and Di-isocyanates as Sensory Irritants. G.K. Sangha and Y. Alarie. <i>Dept. of Ind., Environ., Hlth. Sci., Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.</i>

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|----|-------|---|
| 9 | 10:30 | Acute Lethal Effects of Polyvinylchloride Thermal Decomposition Products in Normal and Cannulated Mice. R.C. Anderson and Y. Alarie, <i>Dept. of Ind. Environ. Hlth. Sci., Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.</i> |
| 10 | 10:45 | Comparison of Acute Inhalation Toxicity of Combustion and Pyrolysis Products from Flexible Polyurethane Foam. J.R. Hodgson, H. Stone and D. Drozdowski, <i>Tenneco Chems., Inc., Saddle Brook, NJ, and U.S. Testing Co., Inc., Hoboken, NJ.</i> |
| 11 | 11:00 | Evaluation of Combustion Toxicity: A Profile Approach. B.A. Burgess. <i>E. I. Du Pont de Nemours and Co., Haskell Lab. for Toxicol. and Ind. Med., Newark, DE.</i> Sponsor J.R. Gibson. |
| 12 | 11:15 | Regional Deposition and Absorption of Inhaled Hydrogen Fluoride. J.B. Morris and F.A. Smith. <i>Dept. of Rad. Biol. and Biophys., Univ. of Rochester, Rochester, NY.</i> |
| 13 | 11:30 | Quantitative Structure-Toxicity Studies: Prediction of Target Organs and Lung Lethal Doses for Furans and Other Heteroaromatic Ring Systems. J.E. Garst, <i>Dept. of Animal Sci., Univ. of Illinois, Urbana, IL,</i> and B.J. Wilson, <i>Dept. of Biochem., Vanderbilt Univ. Med. Sch., Nashville, TN.</i> |
| 14 | 11:45 | Induction of Superoxide Dismutase in Cultured Pneumocytes by Paraquat. K. Saito, J.W. McKay, D.E. Gardner and D.B. Menzel, <i>Depts. of Pharmacol. and Med., Duke Univ. Med. Ctr., Durham, NC and H.E.R.L., U.S.E.P.A., Research Triangle Park, NC.</i> |

PLATFORM SESSION 2: Metabolism I

Monday Morning, March 10, 1980

Washington Room

Chairman: R. P. Smith

Dartmouth Medical School, Hanover, NH

Assistant: H.M. Mehendale

University of Mississippi Medical Center, Jackson, MS

- | Paper No. | Time (A.M.) | |
|-----------|-------------|---|
| 15 | 8:30 | The Effect of Ethoxyquin (EQ) on the Hepatotoxicity of Dimethylnitrosamine (DMN) in the Rat. J.C. Phillips, B.G. Lake, C.S. Topp, D. Mendis and S.D. Gangolli. <i>The British Ind. Biolog. Res. Assoc., Carshalton, Surrey, UK.</i> Sponsor: P.J. Gehring. |
| 16 | 8:45 | The Effect of Inducers on the Profile of Biphenyl Metabolites Formed <i>in Vivo</i> and <i>in Vitro</i>. K. Halpaap-Wood, E.C. Horning and M.G. Horning, <i>Baylor Coll. of Med., Houston, TX.</i> |

- 17 9:00 **Effects of Phenobarbital, 3-Methylcholanthrene and SKF 525-A on Styrene-induced Acute Hepatotoxicity in Rats.** S. Chakrabarti and J. Brodeur, *Département de médecine du travail et d'hygiène du milieu, Faculté de Médecine, Université de Montréal, Québec, Canada.*
- 18 9:15 **Induction of Hepatic Drug-Metabolizing Enzyme Activity in Rats Due to Polychlorinated Biphenyl Aroclor 1260 or 2,3,6,2',3',6' Hexachlorobiphenyl.** G. Reddy, R.H. Weltman and D.H. Norback, *William S. Middleton Memorial V.A. Hospital and Univ. of Wisconsin, Madison, WI.*
- 19 9:30 **The Effects of Cytochrome P-450 Inducers on the *in Vivo* Metabolism of 2,4-Diaminoanisole, a Hair Dye Intermediate.** P.H. Grantham and T. Benjamin, *Natl. Cancer Inst., Bethesda, MD.* Sponsor: E.K. Weisburger.
- 20 9:45 **Induction of Both Cytochromes P-450 and P-448 by 2,3',4,4',5-Pentabromobiphenyl, A Component of Firemaster.** L.W. Robertson, A. Parkinson and S. Safe, *Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI and Dept. of Chem., Univ. of Guelph, Guelph, Ont.* Sponsor: R. Hartung.
- 21 10:00 **Effect of Phenobarbital and 3-Methylcholanthrene Pretreatment on Gamma-Glutamyltransferase Activity in Rat Liver.** F.C. Kauffman, R.K. Evans, L.A. Reinke and R.G. Thurman, *Dept. Pharmacol. & Exp. Therap., Univ. of Maryland, Sch. of Med., Baltimore, MD and Dept. Pharm., Univ. of North Carolina, Sch. of Med., Chapel Hill, NC.*
- 22 10:15 **Structure-Activity Rules for PCB Isomers and Congeners as Hepatic Microsomal Enzyme Inducers.** A. Parkinson, L.W. Robertson, R. Cockerline and S. Safe, *Dept. of Chem., Univ. of Guelph, Guelph, Ont. and Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI.* Sponsor: R. Hartung.
- 23 10:30 **Altered Disposition of Propranolol in Dogs Following Phenobarbital Pretreatment.** S.A. Bai, V.T. Vu and F.P. Abramson, *Dept. Pharmacol., George Washington Univ. Med. Ctr., Washington, DC.* Sponsor: P. Mazel.
- 24 10:45 **Investigation of the Possible Biochemical Correlates Associated with Kepone Potentiation of CCl₄ Hepatotoxicity.** L.R. Curtis and H.M. Mehendale, *Dept. of Pharmacol. and Toxicol., Univ. Mississippi Med. Ctr., Jackson, MS.*
- 25 11:00 **Aspon and Malathion Inhibition of Rat Tissue Esterases and Toxicologic Interactions.** S.D. Cohen, E.M. Ambelas and G.L. Ginsberg, *Sect. of Pharmacol. and Toxicol., Sch. of Pharm., Univ. of Connecticut, Storrs, CT.*
- 26 11:15 **Metabolism of Fluchloralin in Rats.** J.O. Nelson and K.M. Rudo, *Dept. of Entomol., Univ. of Maryland, College Park, MD.* Sponsor: R.E. Menzer.
- 27 11:30 **Effect of Interaction on the Storage and Metabolism of Chlorobenzene and Lindane.** R.W. Chadwick, T.M.

Scotti, M.F. Copeland, M.L. Mole, R. Froehlich and N. Cook, *E.P.A. Env. Res. Ctr., H.E.R.L., Research Triangle Park, NC.*

- 28 11:45 **Metabolism of the Ethynyl Moiety of 17 Alpha-Ethynylestradiol by Rhesus Monkey Liver Microsomes.** S.E. Schmid, *Natl. Ctr. for Toxicological Res., Jefferson, AR, and the Univ. of Arkansas for Med. Sci., Little Rock, AR.* Sponsor: T.E. Shellenberger.

POSTER SESSION 1: Hepatic and Gastrointestinal

Monday Morning, March 10, 1980

Exhibition Hall B

**Chairmen: J. J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

R. C. Schnell, University of Nebraska Medical Center, Omaha, NE

- | Paper No. | Time (A.M.) | |
|-----------|-------------|---|
| 29 | 8:30-10:30 | Effect of Some Compounds on Hepatic Xenobiotic Metabolism and Urinary D-Glucuronic Acid Metabolite Excretion in the Rat and Guinea Pig. B.G. Lake, R.C. Longland, R.A. Harris, M.A. Collins and S.D. Gangolli. <i>The British Ind. Biolog. Res. Assoc., Carshalton, Surrey, UK.</i> Sponsor: L. Golberg. |
| 30 | | Counteracting the Effects of the Toxin of <i>Clostridium Difficile</i> in Mice. M. Ehrich and T.D. Wilkins, <i>Anaerobe Lab., Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.</i> Sponsor: S.D. Cohen |
| 31 | | Altered Sex Differentiation of Hepatic Ethylmorphine N-Demethylation by Methadone Induced Reduction in Neonatal Androgen Levels. E.M.K. Lui, J. Gregson and G.W. Lucier, <i>Natl. Inst. Environ. Hlth. Sci., Research Triangle Park, NC.</i> |
| 32 | | What is the Importance of Hepatomegaly in the Assessment of Drug Action? M.S.I. Dhami, F.A. de la Iglesia and G. Feuer, <i>Dept. of Clin. Biochem., Univ. of Toronto, Toronto, Canada and Warner-Lambert/Parke-Davis, Pharm. Res. Div., Ann Arbor, MI.</i> |
| 33 | | Effects of Enzyme Inducers on the Hepatotoxic Action of Ethylene. D. Guest, C.S. Barrow, J. Popp and J.G. Dent, <i>Chem. Ind. Inst. Toxicol., Research Triangle Park, NC.</i> Sponsor: E. Gibson. |
| 34 | | Altered Hepatobiliary Permeability by <i>Amanita Phalloides</i> and Protection by Bile Duct Ligation. C.L. Fuhrman-Lane, J.M. Fujimoto and M.J. Dibben, <i>Dept. of Pharmacol. and Toxicol., Med. Coll. of Wisconsin, and Botany Div., The Milwaukee Pub. Museum, Milwaukee, WI.</i> |
| 35 | | The Influence of Bile Salts and SKF 525-A on the Transfer of Morphine in Rat Liver Slices. T. Imamura, |

- R.B. Franklin and J.M. Fujimoto, *Dept. of Pharmacol. and Toxicol., Med. Coll. of Wisconsin, Milwaukee, WI, and Toxicol. Res. Lab., VA Center, Wood, WI.*
- 36 **Assessment of Collagenase Activity in Chronic Liver Injury.** W.J. Lindblad and G.C. Fuller, *Dept. of Pharmacol. and Toxicol., Univ. of Rhode Island, Kingston, RI.*
- 37 **Effect of Drugs on Progesterone Receptor in Rat Liver Endoplasmic Reticulum.** R. Drangova, M.H.R. Ryder and G. Feuer, *Dept. of Clin. Biochem., Univ. of Toronto, Toronto, Canada.*
- 38 **Effect of Disulfiram Pretreatment on the Biliary Excretion of Indocyanine Green and Sulfobromophthalein.** A. Hunter and M. Walker, *Dept. of Pharmacol., Sch. of Med., East Carolina Univ., Greenville, NC.* Sponsor: J.P. DaVanzo.
- 39 **The Effect of Diethylstilbesterol Pretreatment on the Elimination of [14C]-Phenytoin in the Isolated Perfused Rat Liver.** C. Montgomery and M. Vore, *Dept. Pharmacol. and Grad. Ctr. for Toxicol., Univ. of Kentucky, Lexington, KY.*
- 40 **The Effect of Estradiol-17 Beta Pretreatment on the Elimination of ¹⁴C-Phenytoin in the Isolated Perfused Rat Liver and *in Vivo*.** M. Vore and C. Montgomery, *Dept. Pharmacol. and Grad. Ctr. for Toxicol., Univ. of Kentucky, Lexington, KY.*
- 41 **Liver Microsomal FAD-Containing Monooxygenase Metabolizes Sulfur-Containing Pesticides.** N.P. Hajjar and E. Hodgson, *Toxicol. Prog., Dept. of Entomol., North Carolina State Univ., Raleigh, NC.*
- 42 **Prolyl Hydroxylase Activity and Immunologically Related Cross-Reacting Protein in Patients with Alcoholic Liver Disease.** S.W. Mann, G.C. Fuller, E.I. Vidins and J.V. Rodil, *Dept. of Pharmacol. and Toxicol., Univ. of Rhode Island, Kingston, RI, and V.A. Hospital, Providence, RI.*
- 43 **Species Specific Hepatotoxicity of SD 39109. Cyclopropanecarboxamide, 1-Methyl-N-(4-(1-Methylethoxy)-3-(Trifluoromethyl-Phenyl))-.** C.M. Parker, J.R. Albert and K.H. Pilgram, *Shell Dev. Co., Houston, TX and Modesto, CA, and C.W. Mastri, Ind. Bio-Test Labs., Inc., Northbrook, IL.*
- 44 **The Ultrastructure of Liver of Rats Fed Photomirex or Mirex: A One-Year Recovery Study.** A. Singh, V.E.O. Valli and T. Bast, *Depts. of Biomed. Sci. and of Pathol., Ontario Vet. Coll., Univ. of Guelph, Guelph, Ont., and D.C. Villeneuve, Bur. of Chem. Hazards, Hlth. Protection Br., Ottawa, Ont., Canada.*
- 45 **Histochemical Indicators of Subcellular Loci of Acute Injury by Model Cytotoxins.** P. Chieco, M. Treinen Moslen and E.S. Reynolds, *Dept. of Pathol., Univ. of Texas Med. Br., Galveston, TX.*

- 46 **Hexachlorobiphenyl- and Aroclor-Induced Structural and Subcellular Hepatic Alterations in the Liver of Rats.** R.H. Weltman and D.H. Norback, *William S. Middleton Memorial V.A. Hospital and Univ. of Wisconsin, Madison, WI.*
- 47 Paper Cancelled
- 48 **Experimental Hepatic Atrophy Induced by Iridaea Carrageenan in the Mouse: Interaction Study with the Hepatomegalic Dieltrin.** R. Mankes and R. Abraham, *Ctr. for Exp. Pathol. & Toxicol., Alb. Med. Coll., Albany, NY.*

POSTER SESSION 2: Teratology and Reproduction I

Monday Morning, March 10, 1980

Exhibition Hall B

**Chairmen: J. J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

R. C. Schnell, University of Nebraska Medical Center, Omaha, NE

Paper No.	Time (A.M.)	
49	8:30-10:30	Effects of Maternal Administration of Diazepam on the Progeny in Rats. M. Massotti, F.R. Alleva and T. Balazs, <i>Bur. of Drugs, Food and Drug Admin., Washington, DC.</i>
50		Alterations in Reproduction and Thyroid Function in Adult Female Mink Fed Excessive Iodine. R.E. Jones, R.K. Ringer and R.J. Aulerich, <i>Dept. Poultry Sci., Michigan State Univ., East Lansing, MI,</i> and R. Nachreiner, <i>Dept. Pathol., Michigan State Univ., East Lansing, MI.</i> Sponsor: S.D. Aust.
51		Effects of Trifluoroethanol on the Testis of the Rat. R.M. Wilkenfeld, F.A. Smith and R.H. Garman, <i>Dept. Rad. Biol. and Biophys., Univ. of Rochester, Sch. of Med. and Dent., Rochester, NY.</i>
52		Effects of Cadmium on the Ultrastructural Development of Rat Alveolar Epithelium. G.P. Daston, <i>Dept. of Biol., Univ. of Miami, Coral Gables, FL.</i> Sponsor: K. Lampe.
53		See Platform Session 11, Wednesday Morning
54		Teratogenicity of 1,1-Diphenylhydrazine Hydrochloride in the Mouse. T.A. Ledoux, P.W. Fisher and T.A. Marks, <i>Research Triangle Inst., Research Triangle Park, NC.</i> Sponsor: G.M. Szczech.
55		Teratogenic Evaluation of 1,4-Dichlorobutene-2 (DCB) in the Rat. G.L. Kennedy, Jr., R. Culik and H.J. Trochimowicz, <i>E. I. Du Pont de Nemours and Co., Haskell Lab. for Toxicol. and Ind. Med., Newark, DE.</i>
56		Estrogen Action in the Neonatal Rat — Relation to Toxicity. D.M. Sheehan, W.S. Branham, K.L.

- Medlock, M.E. Olson and D. Zehr, *Div. of Teratogenesis Res., Natl. Ctr. for Toxicol. Res., FDA/DHEW, Jefferson, AR*. Sponsor: C.A. Kimmel.
- 57 **Methadone HCl and Skeletal Formation of CD-1 Mice Offsprings.** Q.Q. Bui and W.L. West, *Dept. of Pharmacol., Howard Univ. Coll. of Med., Washington, DC*. Sponsor: S. Green.
- 58 **Distribution of Tissue-Bound Methylmercury in the Fetal Guinea Pig After Maternal Methylmercury Administration.** B.J. Kelman, S.E. Steinmetz, B.K. Walter and L.B. Sasser, *Pacific Northwest Lab., Richland, WA, and the Comparative Animal Res. Lab., Oak Ridge, TN*.
- 59 **The Use of Selective Sedimentation in the Separation of Estrogen Binding Components in the Immature Rat Uterus.** J.R. Harmon and G.L. Kimmel, *Natl. Ctr. for Toxicol. Res., Jefferson, AR*. Sponsor: J.F. Holson.
- 60 **Fetal Toxicity of Cadmium: Time Course of Placental Uptake of Cd.** A.A. Levin and R.K. Miller, *Depts. of Pharmacol./Toxicol. and Ob./Gyn., Univ. of Rochester, Sch. of Med. and Dent., Rochester, NY*. Sponsor: Z.A. Shaikh.
- 61 **Comparison of the Embryotoxicity of Hydrazine and Monomethylhydrazine.** W.C. Keller, C.T. Olson, C.L. Gaworski, K.C. Back and P. Andrachek, *AMRL/THT, Wright-Patterson AFB, OH, and Univ. of California, Irvine, Dept. Com. and Environ. Med., THRU, Dayton, OH*.
- 62 **Herbicide-Induced Hydronephrosis and Respiratory Distress: Effects of *in Utero* Exposure to Nitrofen (2,4-Dichloro-4'-Nitrophenyl Ether).** R.D. Costlow and J.M. Manson, *Dept. of Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH*. Sponsor: P.B. Hammond.
- 63 **Perinatal Toxicity of Perchloroethylene.** S.J. Tepe, M.A. Dorfmueller, R. York, L. Hastings and J.M. Manson, *Dept. of Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH*. Sponsor: P.B. Hammond.
- 64 **Evaluation of Teratogenicity and Behavioral Toxicity with Inhalation Exposure of Maternal Rats to Trichloroethylene.** M.A. Dorfmueller, S.P. Henne, R.G. York, R.L. Bornschein and J.M. Manson, *Dept. of Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH*. Sponsor: P.B. Hammond.
- 65 **Embryofetal Toxicity and Teratogenicity of Isomers of Xylene in the Mouse.** P.S. Nawrot and R.E. Staples, *NIEHS (NIH), Research Triangle Park, NC*.
- 66 **Teratogenicity of 3,3',4,4',5,5'-Hexachlorobiphenyl (HCB) in the Mouse.** R.E. Staples, G.L. Kimmel and T.A. Marks, *NIEHS (NIH) and Research Triangle Inst., Research Triangle Park, NC*.
- 67 **The Effect of Fetal Cadmium Injection on Metallothionein in Fetal and Maternal Rat Liver.** L.B. Sasser, A.A. Levine, B.J. Kelman and R.K. Miller, *Comparative Animal Res. Lab., Oak Ridge, TN; Depts.*

- 68 *of Pharmacol.-Toxicol. and Ob.-Gyn., Univ. of Rochester, Rochester, NY; and Devel. Toxicol. Sect., Battelle, Pacific Northwest Labs., Richland, WA.*
- 69 **Some Antiandrogenic Actions of Zinc Ion in the Mouse.** M.P. Donovan and J.A. Thomas, *Dept. Pharmacol. and Toxicol., West Virginia Univ. Med. Ctr., Morgantown, WV.*
- 70 **Reproductive Effects of Bisphenol A.** G.P. Bond, P.M. McGinnis, K.L. Cheever, S.J. Harris, H.B. Plotnick and R.W. Niemeier, *ETB, DBBS, NIOSH, Cincinnati, OH.* Sponsor: T.R. Lewis.
- 71 **Inhibition of Murine Palate Closure by Methylmercury.** F.C. Olson, *SUNY Sch. Med.* and E.J. Massaro, *Ctr. for Air Environ. Studies, Penn State Univ., University Park, PA.*
- 72 **Vaginal Toxicity of Nonoxynol-9 in the Rat.** L. Tryphonas, H.S. Buttar, I. Dupuis and J.H. Moffatt, *Drug Res. Labs., Hlth. Protection Br., Ottawa, Canada.*
- 73 **The Precision of Pharmacokinetic Parameters for Predicting Embryotoxicity Endpoints.** J.F. Holson, C.A. Kimmel and J.F. Young, *Div. of Teratogenesis Res., Natl. Ctr. for Toxicol. Res., FDA/DHEW, Jefferson, AR.*
- 275 **Pharmacokinetic Approach to Analysis of the "Window" Effect in Teratologic Sensitivity.** C.G. White, J.F. Young and J.F. Holson, *Div. of Teratogenesis Res., Natl. Ctr. for Toxicol. Res., FDA/DHEW, Jefferson, AR.*
- Inhibition of Esterase Activity in Fetal Brain Following in Utero Exposure to the Organo-Phosphate Diazinon** D.L. Avery, A.M. Hoberman, M.F. Cranmer, and J.M. Spyker-Cranmer, *Univ. of Arkansas for Med. Sci., Little Rock, AR*

SYMPOSIUM:

Hepatic Toxicity and Neoplasia in the Rodent

Monday Afternoon, March 10, 1980

Sheraton Room

1:30 P.M. - 8:00 P.M.

Co-Chairmen: R.J. Kociba, Dow Chemical Co., U.S.A., Midland, MI

P.M. Newberne, Massachusetts Institute of Technology, Cambridge, MA

Time (P.M.)

1:30 - 2:15

Morphologic Classification of Proliferative Lesions of Rodent Liver. W.H. Butler, *Imperial Chemical Industries, Limited, Macclesfield, Cheshire, England*

- 2:15 - 3:00 **Biological Characterization of Hepatocellular Hyperplastic Nodules and Carcinomas.** G. Williams, *Naylor Dana Institute for Disease Prevention, Valhalla, NY*
- 3:00 - 3:15 Break
- 3:15 - 3:45 **Transplantation Studies with Proliferative Lesions of Rodent Liver.** M. Reuber, *Frederick Cancer Research Center, Frederick, MD*
- 3:45 - 4:15 **Role of Hepatic Toxicity in Proliferative Lesions of Rodent Liver.** P. Grasso, *British-Petroleum Research Center, Middlesex, England*
- 4:15 - 4:30 **Correlation of Genetic and Non-Genetic Events with Neoplasia.** P.G. Watanabe, R.H. Reitz, A.M. Schumann, W.T. Stott and J.F. Quast, *Toxicology Research Laboratory, Dow Chemical Co., Midland, MI*
- 4:30 - 5:00 **Dose Selection for Long-Term Toxicity Studies of Substances Causing Hepatic Enzyme Induction.** P. M. Newberne, *Massachusetts Institute of Technology, Cambridge, MA*
- 5:00 - 5:30 **Regulatory Interpretation of Proliferative Lesions of Rodent Liver.** A.C. Kolbye, Jr., *U.S Food and Drug Administration, Washington, D.C.*
- 5:30 - 7:00 Break for Dinner
- 7:00 - 8:00 **Panel Discussion, Questions and Comments from Floor:**
*J.R. Mitchell, Department of Pharmacology
 Baylor University, Houston, TX*

PLATFORM SESSION 3: General Toxicology I

Monday Afternoon, March 10, 1980

Exhibit Hall C

Chairman: D. Couri, Ohio State University, Columbus, OH

**Assistant: M.S. Abdel-Rahman, Ohio State University,
 Columbus, OH**

**Assistant: P. Toy-Manning, Ohio State University,
 Columbus, OH**

Paper No.	Time (P.M.)	
74	1:30	Lack of Nitrosamine Formation From Selected Anti-Histamines; Correlation of <i>in Vitro</i> and <i>in Vivo</i> Activity. W. Dairman, W. Mergens, K. Brown and H. Newmark, <i>Hoffmann-La Roche, Inc., Nutley, NJ.</i> Sponsor: S.E. Sadek.
75	1:45	Toxicity of Naphthalene Anti-Diepoxide, Syn-Diepoxide and Dihydrodiol Epoxide in Mice and

- Rats. W.G. Stillwell and M.G. Horning, *Baylor Coll. of Med., Houston, TX*, and W.-S. Tsang and G.W. Griffin, *Univ. of New Orleans, LA*.
- 76 2:00 **O-Dichlorobenzene — Myelotoxicity and Cytogenetic Study in Rats.** H.E. Scribner, J.A. Reustle and J.M. Smith, *Toxicol. Dept., Rohm and Haas Co., Spring House, PA*.
- 77 2:15 **Results of a Toxicology Study in Cats Fed Diets Containing Propylene Glycol for Up to Three Months.** J.F. Quast, C.G. Humiston, C.E. Wade, J.E. Beyer, R.R. Albee, D.J. Schuetz and D.C. Morden, *Toxicol. Res. Lab., Dow Chemical U.S.A., Midland, MI*. Sponsor: R.J. Kociba.
- 78 2:30 **Preliminary Evaluation of the Subacute Toxicity of Anatoxin-A.** N.B. Astrachan and B.G. Archer, *Stauffer Chem. Co., Farmington, CT, and Univ. of Idaho, Moscow, ID*. Sponsor: R. Freudenthal.
- 79 2:45 **Toxicity of B-0006, a Carboxylic Polyether Ionophore, in Rats.** R.M. McClain, J.M. Armstrong, W.G. Crouthamel and T.J. Hayes, *Res. Div., Hoffmann-La Roche Inc., Nutley, NJ*. Sponsor: S.E. Sadek.
- 80 3:00 **Investigations on Scombroid Toxicity in the Beagle Dog.** S. Henry, T. Sobotka, W. Staruskiewicz, V. Olivito and T. Michel, *Bur. of Foods, Food and Drug Admin. Washington, DC*. Sponsor: T. Farber.
- 81 3:15 **Precipitation of Serum Proteins by Extracts of Cotton Dust and Stems.** S.A. Kutz, *Dept. Microbiol., West Virginia Univ. Sch. of Med., Morgantown, WV, and ICI Americas Inc., Wilmington, DE*. Sponsor: L.E. Gongwer.
- 82 3:30 **Toxicology of 2'-Deoxycoformycin (2'-dCF) Plus 9-Beta-D-Arabinofuranosyladenine 5'-Monophosphate (ARA-AMP) in Mice, Dogs, and Monkeys.** S.D. Harrison, Jr., S. McAfee, J.C. Peckham and E.P. Denine, *Southern Res. Inst., Birmingham, AL*.
- 83 3:45 **Behavioral Effects of Acute and Subchronic Aerosol Exposure of Rats to M-Det.** R.A. Sherman, M.H. Weeks, A. Asaki, W. Kerby, J. Bergmann and J. Macko, *U.S. Army Environ. Hyg. Agency, Aberdeen Proving Ground, MD*.
- 84 4:00 **Hypolipidemic Activity and Toxicity Studies of a Styryl-Hexahydro-Indolinol, 34-250.** R.E. Bagdon, R.G. Engstrom, L.A. Kelly, H.A. Hartman, R.L. Robison and G.E. Visscher, *Res. and Devel. Div., Sandoz, Inc., East Hanover, NJ*.
- 85 4:15 **Species Differences of Rats and Mice in Studies of Comparative Subacute Toxicity of Retinoids.** E.J. Hixson, E.P. Denine and S.D. Harrison, Jr., *Southern Res. Inst., Birmingham, AL*.
- 86 4:30 **Toxicity of Chlorine Dioxide in Drinking Water.** M.S. Abdel-Rahman and D. Couri, *Ohio State Univ., Toxicol. Div., Columbus, OH*.

87 4:45 **Ophthalmic Hazard from Methylrosaniline Chloride.**
B. Ballantyne, *Union Carbide Corp., Chems. and
Plastics Div., South Charleston, WV.*

PLATFORM SESSION 4: Nervous System I

Monday Afternoon, March 10, 1980

Maryland Suite

**Chairman: R.P. Maickel, Department of Pharmacology and
Toxicology, Purdue University, Lafayette, IN**

Assistant: M. Holsapple, Purdue University, Lafayette, IN

Assistant: A. Malave, Purdue University, Lafayette, IN

Paper No.	Time (P.M.)	
88	1:30	Development of Caudate Neuronal Morphology and Motor Behavior in the Hypothyroid Rat. C.P. Comer and S. Norton, <i>Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS.</i>
89	1:45	The Possible Role of Conditioned Taste Aversion in the Inhibition of Ethanol Consumption in Rats. J.E. Zabik and J.D. Roache, <i>Dept. Pharmacol. and Toxicol., Sch. of Pharm. and Pharmacol. Sci., Purdue Univ., West Lafayette, IN.</i> Sponsor: R.P. Maickel.
90	2:00	Central Depressants or Anticonvulsants Plus Pyridoxine as Antidotes to Acute Isoniazid Intoxication. L. Chin, M.L. Sievers, R.N. Herrier and A.L. Picchioni, <i>Dept. Pharmacol. and Toxicol., Univ. of Arizona Coll. of Pharm., Tucson, AZ, and Phoenix Indian Med. Ctr., Phoenix, AZ.</i>
91	2:15	Effects of Kepone and Mirex on Biogenic Amines in the Mouse. I.K. Ho, K. Fujimori, Y.Y. Chang-Tsui, T. Nabeshima and H.M. Mehendale, <i>Dept. of Pharmacol. and Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS.</i>
92	2:30	A Numerical Grading System for Reporting the Clinical Signs of Neurotoxicity in Adult Leghorn Hens. Illustrated by motion film. D.W. Fletcher and D.H. Jenkins, <i>Bio-Life Assocs., Ltd., Neillsville, WI.</i> Sponsor: M.L. Keplinger.
93	2:45	Effects of Acute Organophosphate Exposure on a Myelin-Specific Enzyme in Hen CNS. A.P. DeCaprio, E.J. Olajos and I. Rosenblum, <i>Inst. of Comparative and Human Toxicol., Albany Med. Coll., Albany, NY.</i>
94	3:00	The Use of Human Neuroblastoma Cells in Tissue Culture in the Study of Organophosphorus-Induced Delayed Neurotoxicity. D.G. Graham, J.S. Lee and M.B. Abou-Donia, <i>Depts. of Pathol. and Pharmacol., Duke Univ. Med. Ctr., Durham, NC.</i>
95	3:15	Studies of the Inhibition of Sterologenes in Hexacarbon-Induced Distal Axonopathy in Sciatic Nerves of the Rat. P.J. Gillies, R.M. Norton, E.L. White

- and J.S. Bus. *Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.* Sponsor: J.E. Gibson.
- 96 3:30 **The Formation of Conjugated Schiff Bases with 2,5-Hexanedione: An Hypothesis for the Molecular Basis for Hexacarbon Neuropathy.** D.G. Graham, M.B. Abou-Donia and B.R. Shaw, *Depts. of Pathol. and Pharmacol., Duke Univ. Med. Ctr., Durham, NC, and Dept. of Chem., Duke Univ., Durham, NC.*
- 97 3:45 **An *in Vitro* Assessment of Neurotoxicity of Polychlorinated Biphenyls in Mice.** D.L. Rosin, D.W. End, B.R. Martin and W.L. Dewey, *Dept. of Pharmacol., Med. Coll. of Virginia, Virginia Commwlth. Univ., Richmond, VA.* Sponsor: J.L. Egle, Jr.
- 98 4:00 **Anticonvulsant Activity of Trichloroethylene (TCE-2).** D.W. End, R.A. Carchman and W.L. Dewey, *Dept. of Pharmacol., Med. Coll. of Virginia, Richmond, VA.* Sponsor: J.L. Egle, Jr.
- 99 4:15 **Subchronic Toxicity and Recovery From Acrylamide Administered to Rats in the Drinking Water.** J.D. Burek, R.R. Albee, J.E. Beyer, T.J. Bell, R.M. Carreon, D.C. Morden, C.E. Wade, E.A. Hermann, S.J. Gorzinski, *Toxicol. Res. Lab., Dow Chem. U.S.A., Midland, MI.* Sponsor: B.A. Schwetz.
- 100 4:30 **Subchronic Dermal Toxicity of Acetyl Ethyl Tetramethyl Tetralin (AETT), Galaxolide, and Celestolide in Rats: Emphasis on Neurobehavioral Effects.** F.H. Stults, D.M. Ford and E.J. Moran, *Int'l Flavors and Fragrances, Inc., Union Beach, NJ.* Sponsor: G.R. Thompson.

PLATFORM SESSION 5: Mutagenesis I

Monday Afternoon, March 10, 1980

Washington Room

Chairman: J.F. Borzelleca, Department of Pharmacology, Medical College of Virginia, Richmond, VA

Assistant: R. Carchman, Department of Pharmacology, Medical College of Virginia, Richmond, VA.

Assistant: E. Carmines, Department of Pharmacology, Medical College of Virginia, Richmond, VA

- | Paper No. | Time (P.M.) | |
|-----------|-------------|--|
| 101 | 1:30 | Mechanism of N-Hydroxyacetylarylamine Mutagenicity in the <i>Salmonella</i> Test System. P.J. Wirth and S.S. Thorgeirsson, <i>Lab. of Chem. Pharmacol., Natl. Cancer Inst., Natl. Insts. of Hlth., Bethesda, MD.</i> Sponsor: R.H. Adamson. |
| 102 | 1:45 | Induction of Sister Chromatid Exchange in Alveolar Macrophages, Bone Marrow and Regenerating |

- Liver of Mice Exposed to Styrene.** M.K. Conner, Y. Alarie and R.L. Dombroske, *Depts. of Human Genetics and Ind. Environ. Hlth. Sci., Grad. Sch. of Pub. Hlth., Univ. of Pittsburgh, Pittsburgh, PA.*
- 103 2:00 **A Relationship Between Alkylating Agent DNA Damage and Unscheduled DNA Synthesis Inhibition.** W.J. Lindblad and E. Jackim, *U.S. Environ. Protection Agency, Environ. Res. Lab., Narragansett, RI.* Sponsor: G.C. Fuller.
- 104 2:15 **Inhibition of Testicular DNA Synthesis in the Mouse by the Halomethanes.** H.L. Skalsky and J.F. Borzelleca, *Dept. of Pharmacol., Med. Coll. of Virginia, Richmond, VA.*
- 105 2:30 **Unscheduled DNA Synthesis as an *in Vivo* Assay for Chemically Induced DNA Damage in Male Germ Cells.** B. Schmid and G. Zbinden, *Lab. Reprod. and Devel. Toxicol., Natl. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC.* Sponsor: R.L. Dixon.
- 106 2:45 **Metal-Induced Mutagenesis in a Mammalian Cell Point Mutation Assay.** D.E. Amacher and S.C. Paillet, *Saf. Eval. Dept., Pfizer Central Res., Groton, CT.* Sponsor: V.A. Ray.
- 107 3:00 **Mutagenicity of Trinitrotoluene (TNT) and Other Explosive Compounds.** G.S. Edwards, N.D. Speciner and W.Z. Whong, *New England Inst. for Life Sci., Waltham, MA.*
- 108 3:15 **Kinetic Interaction of Chemical Mutagens with Mouse Sperm *in Vivo* as it Relates to Animal Mutagenic Effects.** W.T. Stott and P.G. Watanabe, *Dow Chemical U.S.A., Toxicol. Res. Lab., Hlth. and Environ. Sci., Midland, MI.*
- 109 3:30 **The Mutagenicity, Carcinogenicity, and Metabolism of Methylated Phenanthrenes and Fluorenes.** E. LaVoie, L. Tuiley, V. Bedenko and D. Hoffmann, *Amer. Hlth. Found., Naylor Dana Inst. for Disease Prev., Valhalla, NY.*
- 110 3:45 **Multiple Regions of Metabolic Activation of Mutagenic Polycyclic Hydrocarbons.** M.-T. Chien and J.W. Flesher, *Dept. of Pharmacol., Coll. of Med. and the Grad. Ctr. for Toxicol., Univ. of Kentucky, Lexington, KY.* Sponsor: M. Vore.
- 111 4:00 **Effect of Acidic pH on the *in Vitro* Transformation of Normal Human Fibroblasts by N-OH Arylamines.** J.W. Oldham, G.E. Milo and F.F. Kadlubar, *Depts. of Vet. Pathobiol., Physiol. Chem. and the Comprehensive Cancer Ctr., Ohio State Univ., Columbus, OH, and the Natl. Ctr. for Toxicol. Res., Jefferson, AR.* Sponsor: R. Yeary.
- 112 4:15 **Comparative Mutagenesis Studies Utilizing *in Vitro* Assays.** C.E. Piper, N.E. McCarroll, T.J. Oberly, B.J. Keech, *Hazleton Labs. America, Inc., Vienna, VA.* Sponsor: F.E. Reno.
- 113 4:30 **Influence of Lung and Liver Metabolism on the Mutagenicity of Diesel Soot Extracts.** C.R. Clark,

- 114 4:45 C. Vigil and I.T. Salmeen, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM, and Res. Staff, Ford Motor Co., Dearborn, MI.* Sponsor: R.O. McClellan.
- Fractionation of Non-Volatile Mutagenic Components from Drinking Water Concentrates.** M. W. Tabor, C.C. Smith and J.C. Loper, *Dept. of Environ. Hlth., and Dept. of Microbiol., Univ. of Cincinnati Coll. of Med., Cincinnati, OH.*

POSTER SESSION 3: Inhalation Toxicology II

Monday Afternoon, March 10, 1980

Exhibition Hall B

**Chairmen: J. J. Kocsis, Thomas Jefferson University
Philadelphia, PA**

R.C. Schnell, University of Nebraska Medical Center, Omaha, NE

- | Paper No. | Time (P.M.) | |
|-----------|-------------|---|
| 115 | 1:30-3:30 | Changes in Lung Lysyl Oxidase and Prolyl Hydroxylase Following Cadmium Inhalation. C.O. Chichester, K.C. Palmer, J.A. Hayes and H.M. Kagan, <i>Dept. of Biochem., Boston Univ. Sch. of Med. and Malory Inst. of Pathol., Boston, MA.</i> Sponsor: G.C. Fuller. |
| 116 | | Prolonged Red Cell Glycerol Hemolysis in Mice Inhaling Benzene. B.D. Goldstein, M.G. Rozen and C.A. Snyder, <i>Dept. of Environ. Med., New York Univ. Med. Ctr., New York, NY.</i> |
| 117 | | Alteration of Respiratory Cell Cycle Time as an Indicator of Injury After NO₂ Inhalation. N.A. Hackett, <i>Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.</i> Sponsor: R.O. McClellan. |
| 118 | | Metabolism of Inhaled Organic Bromides: Corroboration of Gas Uptake Results by Direct Measurement of Inorganic Bromide Production. M.L. Gargas, M.E. Andersen and L.J. Jenkins, Jr., <i>NMRI/TD and AMRL/THT, Wright-Patterson AFB, OH.</i> |
| 119 | | Mercury Vapor Exposures and Pharmacokinetics in Mice. G.G. Berg, R.W. Kilpper and T.W. Clarkson, <i>Dept. of Rad. Biol. and Biophys. and Environ. Hlth. Sci. Ctr., Univ. of Rochester Sch. of Med., Rochester, NY.</i> |
| 120 | | A New Exposure Chamber for Long-Term Inhalation Studies. I.F. Carney and E. Gowrie, <i>Imperial Chem. Ind. Ltd., Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire, U.K., and E. Gowrie Ltd., Manchester, U.K.</i> Sponsor: A.A.B. Swan. |
| 121 | | Deposition of Acid Sulfates in the Respiratory Tract of the Dog, Rat and Guinea Pig. A.R. Dahl, M.B. Snipes and T.J. Briner, <i>Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.</i> Sponsor: R.O. McClellan. |

- 122 **Pulmonary Aerosol Deposition in a Multitiered Exposure Chamber.** L.C. Griffis, R.K. Wolff, R.L. Beethe, C.H. Hobbs and R.O. McClellan, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.*
- 123 **Carbofuran Inhibition of Acetylcholinesterase in the Rat Following Oral and Intravenous Exposures.** P.W. Ferguson, S.J. Gee, R.I. Krieger, O.G. Raabe and S.V. Teague, *Dept. of Environ. Toxicol. and Radiobiol. Lab., Univ. of California, Davis, CA.*
- 124 **Sensitivity of Different Behaviors to Toluene.** R.W. Wood and V.G. Laties, *Environ. Hlth. Sci. Ctr. and Dept. of Rad. Biol. and Biophys., Univ. of Rochester Sch. of Med. and Dent., Rochester, NY.* Sponsor: T.W. Clarkson.
- 125 **Behavioral Measurement of Irritation.** R.W. Wood, *Env. Hlth. Sci. Ctr., Dept. of Rad. Biol. and Biophys., Univ. of Rochester Sch. of Med., Rochester, NY.* Sponsor: T. Clarkson.
- 126 **The Effect of Ozone on Rats Susceptible to Salt-Induced Hypertension.** R.T. Drew, D.L. Costa and J. Iwai, *Med. Dept., Brookhaven Natl. Lab., Upton, NY.*
- 127 **The Effect of Vitamin E on Halothane Hepatotoxicity in Mice.** F.O. O'Neal, J.H. Karis and D.B. Menzel, *Depts. of Pharmacol., Anesthesiol. and Med., Duke Univ. Med. Ctr., Durham, NC.*
- 128 **Subacute Inhalation Toxicity of 1,3-Dichloropropene/1,2-Dichloropropane (D-D) in Mice and Rats.** C.M. Parker, *Shell Devel. Co., Houston, TX,* and W.B. Coate and R.W. Voelker, *Hazleton Lab. America, Inc., Vienna, VA.* Sponsor: D.E. Stevenson.
- 129 **Relative Response of Syrian Hamsters to Insulation Fibers After Intratracheal Instillation — Early Effects.** J.A. Pickrell, F.C. Straus, A.H. Rebar and D.A. Villa, *Lovelace Inhal. Res. Inst., Albuquerque, NM.* Sponsor: R.O. McClellan.
- 130 **Acute and Subacute Inhalation Toxicity of Dicyclopentadiene in Rats and Mice.** S.C. Gad, G.F. Egan, D.J. Nachreiner, R.E. Evancheck and C.L. Dickey, *Mellon Inst., Carnegie-Mellon Univ., Pittsburgh, PA.* Sponsor: C.S. Weil.

POSTER SESSION 4: Disposition

Monday Afternoon, March 10, 1980

Exhibition Hall B

**Chairmen: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

R.C. Schnell, University of Nebraska, Medical Center, Omaha, NE

Paper No.	Time (P.M.)	
131	1:30-3:30	Isolation and Identification of the Fecal Metabolites of 4,4'-Dichlorobiphenyl and 2,4,5,2',4',5'-

- Hexachlorobiphenyl in Beagle Dogs. D. Perry, M.J. Miller, D.E. Carter and I.G. Sipes, *Toxicol. Prog. Univ. of Arizona, Tucson, AZ.*
- 132 **Metabolic Fate and Toxicity of Senecionine in Primary Hepatocyte Cultures.** C.E. Green, H.J. Segall and J.L. Byard, *Depts. of Environ. Toxicol. and Physiol. Sci., Univ. of California, Davis, CA.*
- 133 **Computer Simulation of ¹⁴C-Mirex Pharmacokinetics in Female CRL:COBS@CD@SD)BR Rats.** R.A. Byrd, J.F. Holson, C.A. Kimmel, M.D. Morris and J.F. Young, *Div. of Teratogenesis Res., NCTR/FDA/DHEW, Jefferson, AR, and Univ. of Arkansas Med. Sci., Little Rock, AR.*
- 134 **Effect of Pretreatment with Aroclor 1254 and Polychlorinated Biphenyl Isomers on the Toxicity and Metabolism of Benzene.** W.F. Greenlee, D.E. Rickert, J.P. Chism and R.D. Irons, *Depts. of Pathol. and Biochem. Toxicol., Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.* Sponsor: J.E. Gibson.
- 135 **Ipomeanol-4-Glucuronide, a Major Urinary Metabolite of 4-Ipomeanol in Rats.** C.N. Statham, J.S. Dutcher and M.R. Boyd, *Molecular Toxicol. Sect., Clin. Pharmacol. Br., Natl. Cancer Inst., Bethesda, MD.*
- 136 **Disposition of a New Ectoparasitic Agent in the Rat.** R.B.L. van Lier, K.L. Lobb and L.D. Ottosen, *Toxicol. Div., Lilly Res. Labs., Greenfield, IN.* Sponsor: J.S. Wold.
- 137 **Recovery of Acepromazine and Chlorpromazine from Equine Plasma.** S. Ballard and T. Tobin, *Grad. Ctr. for Toxicol. and Dept. of Vet. Sci., Univ. of Kentucky, Lexington, KY.* Sponsor: H.W. Dorough.
- 138 **Effects of Xenobiotics on 5-HT and NE Uptake and Metabolism in the Isolated Perfused Rabbit Lung.** L.S. Angevine, T. Nabeshima, I.K. Ho and H.M. Mehendale, *Dept. of Pharmacol. and Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS.*
- 139 **Uptake and Metabolism of Chlorpromazine by the Isolated Perfused Rat Lung.** Y. Ohmiya and H.M. Mehendale, *Dept. Pharmacol. and Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS.*
- 140 **Uptake and Metabolism of Imipramine by Isolated Perfused Rat and Rabbit Lung.** Y. Ohmiya and H.M. Mehendale, *Dept. of Pharmacol. and Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS.*
- 141 **The Absorption and Metabolism of Three Phthalate Diesters by the Rat Small Intestine.** R.D. White, D.E. Carter, D. Earnest and J. Mueller, *Toxicol. Prog., Univ. of Arizona, Tucson, AZ.* Sponsor: A.J. Gandolfi.
- 142 **Disposition of Hexachlorocyclopentadiene in Rats After Oral and Inhalation Exposure.** L.J. Lawrence, J.P. Newton, W.A. Heierman and H.W. Dorough, *Grad. Ctr. for Toxicol., Univ. of Kentucky, Lexington, KY.*
- 143 **Percutaneous Penetration ¹⁴C-Parathion in the Mouse: Effect of Anatomical Region.** C.S. Skinner, *Battelle Northwest, Richland, WA, and W.W. Kilgore,*

- Dept. of Environ. Toxicol., Univ. of California at Davis, Davis, CA. Sponsor: J.G. Hadley.*
- 144 **The Disposition and Metabolism of Benzyl 2,5-Diacetoxybenzoate (BDAB) After Oral Administration to Rats and Rabbits.** B.E. Domeyer, G.M. Ridder and P.M. Quinlin, *Miami Valley Labs., The Procter & Gamble Co., Cincinnati, OH.* Sponsor: E.V. Buehler.
- 145 **Percutaneous Absorption of 1,4-Dioxane Through Excised Human Skin.** R.L. Bronaugh, E.R. Congdon, E.A. Stadtmauer and R.J. Scheuplein, *Div. of Toxicol., Food and Drug Admin., Washington, DC.* Sponsor: H. Blumenthal.
- 146 **Intestinal Absorption and Metabolism of Naphthol: An *in Vivo* Study with a Total Portal Vein Fistula and Artificial Blood.** J.C. Pekas, *Metab. and Rad. Res. Lab., USDA-SEA, AR, Fargo, ND.*
- 147 **Sex Difference in Percutaneous Absorption of Benzoic Acid on Back Skin of Osborne-Mendel Rats.** R.L. Bronaugh, E.A. Stadtmauer and E.R. Congdon, *Division of Toxicol., Food and Drug Admin., Washington, DC.* Sponsor: H. Blumenthal.
- 148 **Enhanced Elimination of Hexachlorobenzene in Sheep Administered 5% Mineral Oil in the Diet.** K. Rozman, S. Smith, T. Rozman and H. Greim, *Institut fuer Toxikologie der Gesellschaft fuer Strahlen- und Umweltforschung mbH, Munich, GDR, and Dept. of Animal and Range Sci., New Mexico State Univ., Las Cruces, NM.* Sponsor: M.J. Iatropoulos.
- 149 **Quantitative Determination of Intestinal Excretion of Hexachlorobenzene in Mineral Oil Treated and Untreated Rhesus Monkeys with Complete Biliary Bypasses.** T. Rozman, J. Williams, K. Rozman and H. Greim, *Institut fuer Toxikologie der Gesellschaft fuer Strahlen- und Umweltforschung mbH, Munich, GDR, and Intl. Ctr. of Environ. Saf., Holloman AFB, NM.* Sponsor: M.J. Iatropoulos.
- 150 **Intestinal Excretion of Hexachlorobenzene in the Rat.** T. Rozman, K. Rozman, J. Williams and H. Greim, *Institut fuer Toxikologie der Gesellschaft fuer Strahlen- und Umweltforschung mbH, Munich, GDR, and Intl. Ctr. of Environ. Saf., Holloman AFB, NM.* Sponsor: M.J. Iatropoulos.
- 151 **Cardiac Glycoside Disposition and the Milkweed, *Asclepias Sp.* — Monarch Butterfly Interaction. Microsomal Monooxygenase Activity of Fat Body and Gut Homogenates of Monarch Butterfly Larvae, *Danaus Plexippus.* Role of Gut Microflora in Cardiac Glycoside Disposition.** M.A. Marty, S.J. Gee, R.I. Krieger and J.N. Seiber, *Dept. of Environ. Toxicol., Univ. of California, Davis, CA.*
- 152 **Conversion of 7-Substituted Carcinogenic Derivatives of Benz(a)anthracene to 7-Hydroxymethylbenz(a)anthracene.** B.J. Tiejema and J.W. Fleisher, *Dept. of Pharmacol., Coll. of Med. and the*

- Grad. Ctr. for Toxicol., Univ. of Kentucky, Lexington, KY. Sponsor: M. Vore.*
- 153 **Production of ^{14}C from Trichloroethylene in Rats and Mice and a Possible Interaction of a Trichloroethylene Metabolite with DNA.** L.G. Parchman and P. Magee, *Fels Res. Inst., Temple Univ. Sch. of Med., Philadelphia, PA.*
- 154 **Placental and Milk Transfer of Methadone in the Guinea Pig and Its Effects on Perinatal Hepatic Drug-Metabolizing Enzymes.** R.C.K. Pak and D.J. Ecobichon, *Dept. of Pharmacol. and Therapeutics, McGill Univ., Montreal, P.Q., Canada.*
- 155 **A Study of the Disposition of ^{14}C -Labelled Benzene Metabolites Using Whole Body Autoradiography.** W. F. Greenlee, E.A. Gross and R.D. Irons, *Dept. of Pathol., Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.* Sponsor: J.E. Gibson.
- 156 **Biological and Metabolic Studies with the Novel Sweetener 4,1',6'-Trichloro-.4,1',6'-Trideoxy-galactosucrose.** J.W. Daniel and I. Das, *Life Sci. Res., Stock, and St. George's Hospital Med. Sch., London, England.*
- 157 **The Importance of Micelle Formation in Biliary Excretion of Chlordecone (Kepone).** L.C. Mutter, P.S. Guzelian and R.V. Blanke, *Dept. Pharmacol., Med. Coll. of Virginia, Richmond, VA.*

SYMPOSIUM: Perspectives in Risk Assessment

Tuesday Morning, March 11, 1980

8:30 A.M. - 9:30 A.M.

Sheraton Room

Chairman: R.I. Krieger, University of California, Davis, CA

Time (A.M.)

- 8:30 **Definition of Human Carcinogenic Hazards, Present Constraints and Likely Future Directions.** G. Gori, *National Cancer Institute, Bethesda MD*
- 8:45 **Facts and Fears: Understanding Perceived Risk.** P. Slovic, *Decision Research, Eugene OR*
- 9:00 **The Quantitative Assessment of Low Risks of Cancer** F. Carlborg, *Consultant, St. Charles, IL*
- 9:15 **Realistic Perspective for Risk Assessment.** G.A. Schweitzer, *Environmental Protection Agency, Washington, DC.*
- 9:30 **Science and Politics in Chemical Risk Assessment** C. Davies, *The Conservation Foundation, Washington, DC.*

PLATFORM SESSION 6: Inhalation Toxicology III

Tuesday Morning, March 11, 1980

Washington Room

Chairman: R. O. McClellan

Lovelace Inhalation Toxicology Research Inst., Albuquerque, NM

Assistant: R. L. Miller

Dow Chemical Co., Midland, MI

Assistant: M. A. Burkstaller

**Chemical Industry Institute of Toxicology,
Research Triangle Park, NC**

Paper No.	Time (A.M.)	
158	8:30	Chronic Inhalation Exposure of Squirrel Monkeys to Pirbuterol Acetate Aerosol. H.V. Levinsky, C. Breckenridge, D.A. Gonci and H.M. McIlhenny, <i>Dept. of Drug Saf. Eval., Pfizer Central Res., Groton, CT, and Dept. of Inhal. Toxicol., Bio-Research Labs., Senneville, Quebec, Canada.</i> Sponsor: T.O. King.
159	8:45	Ethyl Acrylate Vapor Inhalation Study: 3 Month Sacrifice of Rats and 6 Month Sacrifice of Rats and Mice. R.R. Miller, J.A. Ayres, L.W. Rampy, J.M. Smith, C.S. Weil, J.J. Clary and G.C. Jersey, <i>Dow Chem. Co., Rohm and Haas Co., Carnegie-Mellon Inst. of Res., Celanese Chem. Co.</i>
160	9:00	Synergistic Hematotoxicity of Inhaled Benzene and Ingested Ethanol. K.A. Baarson, C.A. Snyder, B.D. Goldstein and R.E. Albert, <i>New York Univ., Inst. of Environ. Med., and A.J. Lanza Labs., New York, NY.</i>
161	9:15	Pulmonary and Extrapulmonary Toxicity of 3-Methylfuran in Mice. W.M. Haschek, H.P. Witschi and M.R. Boyd, <i>Biol. Div., Oak Ridge Natl. Lab., Oak Ridge, TN, and Clin. Pharmacol. Br., Natl. Cancer Inst., Bethesda, MD.</i>
162	9:30	Chronic Inhalation of Cigarette Tobacco Smoke by Fischer Rats. W.E. Dalbey, P. Nettesheim, R. Griesemer, J.E. Caton and M.R. Guerin, <i>Biol. Div., Oak Ridge Natl. Lab., Oak Ridge, TN.</i> Sponsor: H. Witschi.
163	9:45	A Ninety Day Inhalation Toxicity Study of 2-Methyl-3-Butyn-2-ol in Rats and Mice. K.D. Nitschke, D.G. Keyes and R.J. Kociba, <i>Toxicol. Res. Lab., Hlth. and Environ. Sci., Dow Chemical U.S.A., Midland, MI.</i>
164	10:00	An Experimental Study of the Pulmonary Retention of Lead in Man. P.E. Morrow, F.R. Gibb, H. Beiter and F. Amato, <i>Dept. of Rad. Biol. & Biophys., Univ. of Rochester Med. Ctr., Rochester, NY.</i>
165	10:15	Subchronic Inhalatory Exposure of Rats to Iodoform Vapor. M.F. Tansy, M. Werley, W. Landin, F.M. Kendall and W. Sherman, <i>Dept. of Physiol. and Biophys., Temple Univ. and Scott Paper Co., Philadelphia, PA.</i>

166	10:30	Use of Human Autopsy Material for <i>in Vitro</i> Studies: The Effects of Delta-9-Tetrahydrocannabinol on Isolated Human Bronchioles. R.M. Orzelek-O'Neil, F.R. Goodman and R.B. Forney, <i>Dept. of Pharmacol. and Toxicol., Indiana Univ. Sch. of Med., and The Dow Chem. Co., Indianapolis, IN.</i>
167	10:45	Deposition of Surrogate Diesel Aerosols in Beagle Dogs. R.K. Wolff, G.M. Kanapilly and R.O. McClellan, <i>Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.</i>
168	11:00	Removal of Nitrate Ion from the Airways of Rat Lung. P.D. Ross, D.E. Gardner and D.B. Menzel, <i>Depts. of Pharmacol. and Med., Duke Univ. Med. Ctr., Durham, NC, and H.E.R.L., U.S.E.P.A., Research Triangle Park, NC.</i>
169	11:15	Blood Gas Analysis of the Acute Pulmonary Response to Cardroom Cotton Dust in Rabbits. S.A. Kutz, <i>Dept. of Microbiol., West Virginia Univ. Sch. of Med., Morgantown, WV, and ICI Americas Inc., Wilmington, DE.</i> Sponsor: L. Gongwer.
170	11:30	Sulfuric Acid and Nitrogen Dioxide Induced Alterations in the Response of the Guinea Pig to Histamine Aerosol. S.A. Silbaugh and J.L. Mauderly, <i>Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.</i> Sponsor: R.O. McClellan.
171	11:45	Toxicity and Fate of Di-2-Ethylhexyl Phthalate Following Inhalation Exposure in Rats. D.G. Pegg, <i>Biomed. Sci. Dept., General Motors Res. Labs., Warren, MI.</i> Sponsor: J.J. Vostal.

PLATFORM SESSION 7: Pharmacokinetics

Tuesday Morning, March 11, 1980

Maryland Suite

Chairman: I.G. Sipes

University of Arizona

Tucson, AZ

Assistant: H.B. Matthews, NIEHS, Research Triangle Park, NC

Paper No.	Time (A.M.)	
172	8:30	Pharmacokinetic Modeling with Interval Excretion Data. J.C. Ramsey, G.E. Blau and P.J. Gehring, <i>Toxicol. Res. Lab., The Dow Chem. Co., Midland, MI.</i>
173	8:45	Dose Dependent Disposition of ¹⁴C Labeled Ethylene Oxide in Rats. T.R. Tyler and J.A. McKelvey, <i>Mellon Inst., Carnegie-Mellon Univ., Pittsburgh, PA.</i> Sponsor: R.S.H. Yang.
174	9:00	Pharmacokinetics of Vinyltoluene in Rats Following Inhalation Exposures. R.J. Karbowski, R.J. Nolan and W.H. Braun, <i>Toxicol. Res. Lab., Hlth. and Environ. Sci., The Dow Chem. Co. U.S.A., Midland, MI.</i>

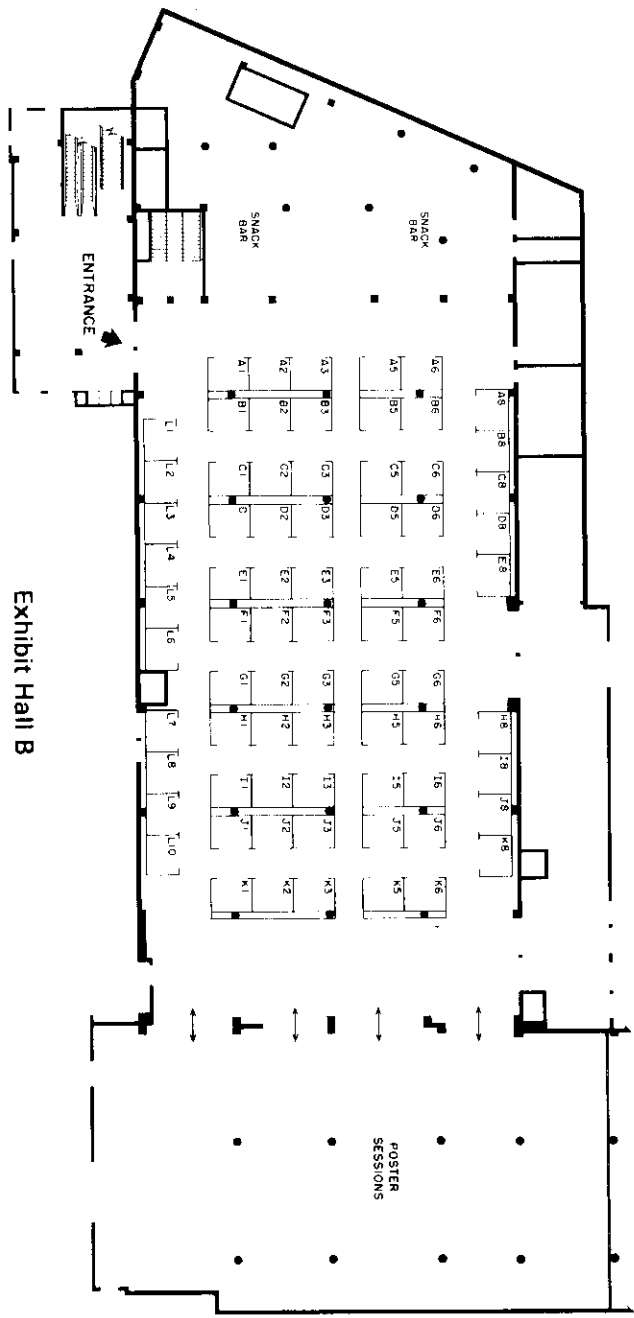


Exhibit Hall B

1980 CONFERENCE EXHIBITORS

We sincerely appreciate the attendance of the following exhibitors at our 1980 Conference. We invite your visiting each of them in Exhibit Hall B.

Name	Booth
Allentown Caging Equipment Co., Inc.	
Allentown, NJ	H-2
American Board of Toxicology, Inc.	D-5
Beckman Instruments, Inc.	
Fullerton, CA	B-1
Bellco Glass, Inc.	
Vineland, NJ	B-6
Bio Serve, Inc.	
Frenchtown, NJ	K-8
Blue Spruce Farms	
Altamont, NY	G-6
Charles River Breeding Laboratories, Inc.	
Wilmington, MA	C-1,C-2
Clinical Recruiting Associates	
Blauvelt, NY	L-10
Columbus Instruments	
Columbus, OH	F-1
Coulbourn Instruments, Inc.	
Lehigh Valley, PA	D-1
Edstrom Industries, Inc.	
Waterford, WI	D-2
Elars Bioresearch Laboratories, Inc.	
Fort Collins, CO	H-3
Elsevier North Holland, Inc./Excerpta Medica	
New York, NY	G-3
Experimental Pathology Laboratories, Inc. (EPL)	
Herndon, VA	G-1,G-2
Gam Rad	
Novi, MI	F-2
Hacker Instruments, Inc.	
Fairfield, NJ	F-5
Harlan Industries, Inc.	
Indianapolis, IN	L-6
Hazleton Research Animals, Inc.	
Vienna, VA	L-9
Hazleton Systems, Inc.	
Aberdeen, MD	A-1,A-2,A-3
Hotpack Corp.	
Philadelphia, PA	I-1

Kratos - Instem Ltd.	
La Jolla, CA	G-5
Laboratory Data Control, Div. of Milton Roy Co.	
Riviera Beach, FL	E-6
Lab Products, Inc.	
Rochelle Park, NJ	L-1,L-2,L-3,L-4
Laboratory Research Enterprises, Inc.	
Kalamazoo, MI	L-5
Life Science Products, Inc.	
Silver Spring, MD	H-1
Litton Bionetics, Inc.	
Kensington, MD	I-2
MacMillan Publishing Co., Inc.	
New York, NY	D-3
National Institute of Environmental Health Sciences (Institutional Exhibitor)	
Park, NC	C-8
Nuair, Inc.	
Minneapolis, MN	E-5
Ortho Instruments	
Westwood, MA	C-6
Product Safety Labs.	
East Brunswick, NJ	I-5
Ralston Purina Company	
St. Louis, MO	E-1,E-2
Raltech Scientific Services	
Madison, WI	D-8,E-8
Research Equipment Co., Inc.	
Bryan, TX	I-6
Stillmeadow, Inc.	
Houston, TX	C-3
Taconic Farms, Inc.	
Germantown, NY	A-8
Technical Evaluation & Management Systems, Inc. (TEAMS)	
Dallas, TX	B-8
Technicon Industrial Systems	
Tarrytown, NY	B-3
Toxicity Research Labs., Ltd.	
Muskegon, MI	F-3
Toxicology Laboratory Accreditation Board, Inc.	
Decatur, IL	D-5
Toxigenics Inc., Subsidiary of Whittaker Corp. (formerly microbiological Associates)	
Decatur, IL	B-5
Tracor Jitco, Inc.	
Rockville, MD	C-5
Unifab Corporation	
Kalamazoo, MI	D-6
The Upjohn Company	
Kalamazoo, MI	B-2

Wahmann Manufacturing Company	
Timonium, MD	E-3
White Eagle Laboratories, Inc.	
Doylestown, PA	H-8
Wil Research Laboratories, Inc.	
Cincinnati, OH	A-5,A-6
Zeigler Brothers, Inc.	
Gardners, PA	I-3

REFRESHER COURSE

Principles of Toxicology — I (Basic Kinetics)

A Society of Toxicology Continuing Education Course

Sunday, March 9, 1980

1:00 P.M. - 5:15 P.M.

Maryland Suite

Topics presented will include absorption, distribution and biotransformation, excretion and toxicokinetics. Detailed manuscripts of each presentation will be made available to participants. Recognized experts will discuss each of the topics and opportunity for questions from the floor will be provided.

\$25.

Pre-registration necessary.

See Conference Pre-registration form enclosed in this packet.

ALPHABETICALLY BY TOPIC

Sheraton Washington Hotel	
Exhibit Halls	
	Square Feet
A	40,350
B	36,100
C	29,400
FOYER	5,775

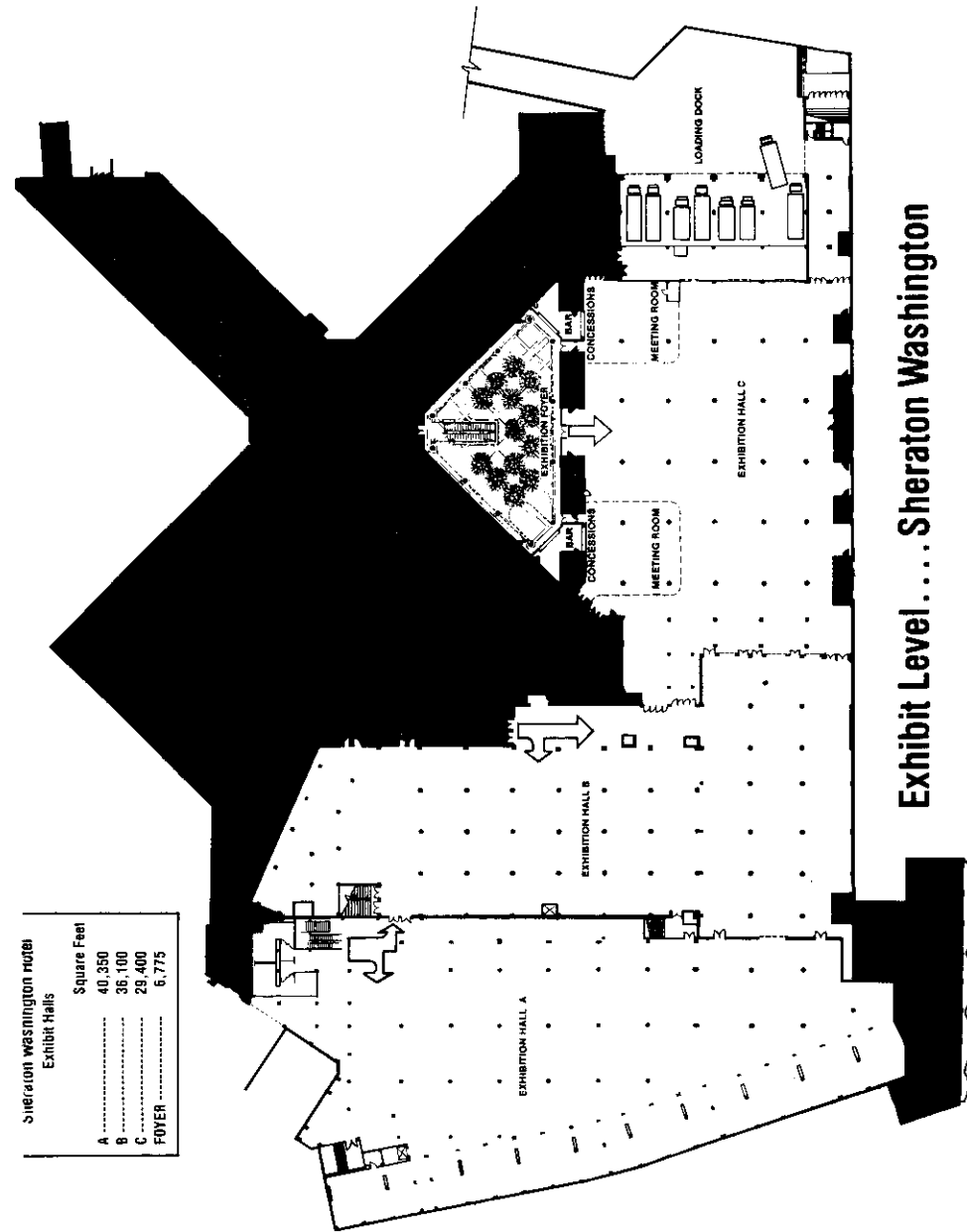


Exhibit Level . . . Sheraton Washington

- 175 9:15 **Metabolism of Inhaled Benzene and Toluene: Correlation Between Kinetic Constants Obtained *in Vivo* and *in Vitro*.** R.L. Hilderbrand, M.E. Andersen and L.J. Jenkins, Jr., *NMRI/TD and AMRL/TH, Wright-Patterson AFB, OH.*
- 176 9:30 **The Pharmacokinetics of Inhaled Methylene Chloride in Human Volunteers.** M.J. McKenna, J.H. Saunders, W.H. Boeckler, R.J. Karbowski, K.D. Nitschke and M.B. Chenoweth, *Toxicol. and Biomed. Res. Labs., Dow Chem. U.S.A., Midland, MI.*
- 177 9:45 **Organ Perfusion as the Rate Limiting Step in the Metabolism of Some Inhaled Gases and Vapors: an Explanation of Deviations from Michaelis-Menten Curves.** M.E. Andersen, *AMRL/THT, Wright-Patterson AFB, OH.*
- 178 10:00 **Influence of Ozone on Pentobarbital Pharmacokinetics.** J.A. Graham, D.B. Menzel, F.J. Miller and D.E. Gardner, *HERL, EPA, Research Triangle Park, NC, and Dept. Pharmacol., Duke Univ., Durham, NC.*
- 179 10:15 **Acrylonitrile: Pharmacokinetic Profile in Rat Plasma After Single Oral or Intravenous Administration.** N.L. Freshour, J.C. Ramsey and W.H. Braun, *Toxicol. Res. Lab., Dow Chem. U.S.A., Midland, MI.*
- 180 10:30 **Pharmacokinetics of 2,4-Dichlorophenoxyacetic Acid (2,4-D) in Fischer 344 Rats.** F.A. Smith, R.J. Nolan, E.A. Hermann and W.H. Braun, *Toxicol. Res. Lab., Hlth. and Environ. Sci., The Dow Chem. Co., U.S.A., Midland, MI.*
- 181 10:45 **Pharmacokinetics of Ethylene Glycol in the Rat Following Intravenous Administration.** T.C. Marshall, C.R. Clark and R.O. McClellan, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.*
- 182 11:00 **Distribution and Excretion of Hexachlorinated Biphenyls in the Cynomolgus Monkey.** I.G. Sipes, M.L. Slocumb, D.E. Carter and G. Chen, *Toxicol. Prog., Univ. of Arizona, Tucson, AZ.*
- 183 11:15 **Pharmacokinetics and Behavioral Effects of Caffeine in the Horse.** E.W. Greene and T. Tobin, *Grad. Ctr. for Toxicol. and Dept. of Vet. Sci., Univ. of Kentucky, Lexington, KY.* Sponsor: H.W. Dorough.
- 184 11:30 **Bioavailability, Pharmacokinetics, and Acute Toxicological Evaluation of Ellipticine.** J.T. Hill, J.P. Andrews, R.M. Dagnall and M.A. Urbanek, *Hazleton Labs. America, Inc., Vienna, VA, and Battelle Columbus Labs., Toxicol. Prog. Office, Vienna, VA.* Sponsor: F.E. Reno.
- 185 11:45 **Placental Transfer, Pharmacokinetics and Metabolism of Phosfolan (Cyclane) in the Mouse.** N.M. Bakry and M.B. Abou-Donia, *Dept. of Pharmacol., Duke Univ. Med. Ctr., Durham, NC.*

POSTER SESSION 5: General Toxicology II

Tuesday Morning, March 11, 1980

Exhibition Hall B

*Chairmen: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA*

R.C. Schnell, University of Nebraska Medical Center, Omaha, NE

Paper No.	Time (A.M.)	
186	8:30-10:30	Optimization of Cholesterol Oxidase Method for Dogs and Rats with the Rotochem II Centrifugal Fast Analyzer. K.L. Givens, D.C. Williams, III and P.A.G. Malya, <i>Biomed. Res. Dept., ICI Americas Inc., Wilmington, DE.</i> Sponsor: L.E. Gongwer.
187		Survival Rates and Group Size Determination in Chronic Studies Using Charles River CD® Rats. C.A. Lapin and P.W. Schneider, Jr., <i>Haskell Lab. for Toxicol. and Ind. Med., E. I. Du Pont de Nemours and Co., Newark, DE.</i> Sponsor: G.L. Kennedy, Jr.
188		Palpable Mass Data: A Real Time Data Collection and Reporting System. I.L. Schoch, R.S. Wasserman, R.W. Liddell, S.M. Heft, C.E. Traitor, J.F. Noble and J.C. Eastman, <i>Lederle Labs., American Cyanamid Co., Pearl River, NY.</i>
189		Histopathology Data: A Real Time Data Collection and Reporting System. R.S. Wasserman, D.A. McClarnon, B.M. Sparano, G. Yarmoluk, J.C. Eastman and M.J. Iatropoulos, <i>Lederle Labs., American Cyanamid Co., Pearl River, NY.</i>
190		Effect of Fasting on Clinical Chemistry Parameters and Organ and Body Weight in Rats. R.R. Maronpot, L.G. Peterson, S.J. Kozbelt, L.R. Barnhart and M.L. Steel, <i>Mellon Inst., Carnegie-Mellon Univ., Pittsburgh, PA.</i>
191		Verapamil and Clonidine as Antidotes in Amitriptyline Poisoning in Rabbits. A. El-Hage, T. Balazs and W.L. West, <i>Bur. of Drugs, Food and Drug Admin., and Dept. of Pharmacol., Howard Univ., Washington, DC.</i>
192		Cardiopulmonary Responses to Intracerebroventricular Administration of Phencyclidine in Anesthetized Dogs. I.W. Waters, R.B. Hackett, K.W. Obrosky, R.F. Borne and G.W. Baker, <i>Depts. of Pharmacol. and Medicinal Chem., Sch. of Pharm., Univ. of Mississippi, University, MS.</i> Sponsor: W.M. Davis.
193		Comparative Toxicity of Actinomycin D, Azetomycin I, and Actinomycin P₁P₁. L. Stout, E.P. Denine, S. McAfee and J.C. Peckham, <i>Southern Res. Inst., Birmingham, AL.</i>
194		Effects of Benzene on the Development of Erythropoietic Cells in the Fetal Mouse. M. Mizens and H.H.

- Cornish, *Dept. of Environ. & Ind. Hlth., Univ. of Michigan, Ann Arbor, MI.*
- 195 **Bone Marrow as a Prediction System for Toxicity.** A. Munson, P. Hallett, D. Stablein and B. Kauffman, *Dept. of Pharmacol., VCU/MCV Cancer Ctr., Med. Coll. of Virginia, Richmond, VA.* Sponsor: M. Henry.
- 196 **Preclinical Toxicologic Evaluation of Abbott-48722 (Potassium 2-[2,3-Dichloro-4-(4-Hydroxybenzoyl) Phenoxy] Acetate), a New Diuretic, Uricosuric Agent.** J.P. Lewkowski, J.L. Emerson, P.K. Cusick, K.R. Majors, I.A. Heyman and J.W. Kesterson, *Div. of Drug Saf. Eval., Abbott Labs., North Chicago, IL.*
- 197 **Renal Function Tests as Indicators of Kidney Injury in Subchronic Toxicity Studies.** W.M. Kluwe, *Natl. Inst. Environ. Hlth. Sci., Research Triangle Park, NC.* Sponsor: J. Goldstein.
- 198 **90 Day Sub-Chronic Toxicity of a Ginseng Extract in Pure-Bred Beagle Dogs.** R.A. Parent, K.R. Stevens, J.G. Babish, L. Gephart and G.E. Cox, *Food and Drug Res. Labs., Inc., Waverly, NY, and Pharmaton, Ltd., Lugano, Switzerland.* Sponsor: F.J. Koschier.
- 199 **Acute and Subchronic Toxicity of Ethylenediamine Dihydrochloride in Rats.** R.S.H. Yang, M.D. Woodside, R.R. Maronpot, R.H. Garman and C.S. Weil, *Mellon Inst., Carnegie-Mellon Univ., Pittsburgh, PA.*
- 200 **Evaluation of the Safety of Ginseng Extract Following Dietary Administration Through Two Generations.** F.J. Koschier, G.E. Cox, K.R. Stevens, J.G. Babish and R.A. Parent, *Food and Drug Res. Labs., Inc., Waverly, NY, and Pharmaton Ltd., Lugano, Switzerland.*
- 201 **Muscular Degeneration in Rats After Postnatal Treatment with 6-Mercaptopurine.** F.R. Alleva, T. Balazs, B.H. Haberman, M.A. Weinberger and L.J. Slaughter, *Food and Drug Admin., and Howard Univ., Washington, DC.*
- 202 **Thyroid Morphology After Administration of Tetracyclines to Man.** M.J. Iatropoulos, G. Gordon, B.M. Sparano and J.F. Noble, *Toxicol. Res., Med. Res. Div., Amer. Cyanamid Co., Pearl River, NY.*
- 203 **Acetaminophen Metabolism in the Isolated Perfused Kidney.** J.F. Newton, W.E. Braselton, Jr., C.H. Kuo, W.M. Kluwe, M.W. Gemborys, G.H. Mudge and J.B. Hook, *Dept. of Pharmacol./Toxicol., Michigan State Univ., East Lansing, MI, and Dept. of Pharmacol./Toxicol., Dartmouth Med. Sch., Hanover, NH.*

POSTER SESSION 6: Biochemical Mechanisms

Tuesday Morning, March 11, 1980

Exhibition Hall B

**Chairmen: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

R.C. Schnell, University of Nebraska Medical Center, Omaha, NE

Paper No.	Time (A.M.)	
204	8:30-10:30	Comparison of Lipid Peroxidation by Perfluoro-Octanoic Acid or CCl₄. M.A. Rozner and D.R. Taves, <i>Dept. of Pharmacol. and Toxicol., Univ. of Rochester, Rochester, NY.</i>
205		Hydroxyl Radical-Dependent Lipid Peroxidation. B.A. Svingen, M.Tien and S.D. Aust, <i>Environ. Toxicol. Ctr., Dept. of Biochem., Michigan State Univ., East Lansing, MI.</i>
206		Similarities and Differences in Nadph/Cumene Hydroperoxide (CHP)-Supported Lipid Peroxidation (LP) in Mouse Hepatic Microsomes. A.P. Kulkarni and E. Hodgson, <i>Toxicol. Prog., Dept. of Entomol., North Carolina State Univ., Raleigh, NC.</i>
207		Paraquat and Diquat Inhibit DNA Synthesis in Vitro. E.L. Carmines, R.A. Carchman and J.F. Borzelleca, <i>Dept. of Pharmacol., Med. Coll. of Virginia, Richmond, VA.</i>
208		Cyclic AMP-Mediated Induction of Macrophage Activation. F.H. Prosser, S.V. Nichols and W.K. Nichols, <i>Dept. of Biochem., Pharmacol. and Toxicol., Univ. of Utah, Salt Lake City, UT.</i> Sponsor: D.J. George.
209		Stimulation of Uterine DNA Synthesis by O,P'-DDT. G.M. Stancel, V. Mukku and J.S. Ireland, <i>Dept. Pharmacol., Univ. Texas Med. Sch., Houston, TX.</i> Sponsor: S.D. Murphy.
210		Enzyme Development in the Colon and Liver of the Rat after Prenatal Exposure to 1,2-Dimethylhydrazine (DMH). J.A. Alderman and C.M. Schiller, <i>Lab. of Organ Function and Toxicol., Natl. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC.</i> Sponsor: G. Lucier.
211		Kepona Induced Changes in Ca²⁺ ATPase and ⁴⁵Ca Binding in Rat Brain and Muscle Tissues. D. Desai, M. Koury and S.K. Mishra, <i>Dept. of Neurol., The Univ. of Mississippi Med. Ctr., Neurol. and Res. Serv., V.A. Med. Ctr., Jackson, MS.</i>
212		Effects of Hydrazine and 1,2-Dimethylhydrazine on Intestinal Na,K-Stimulated Adenosine 5'-Triphosphatase (Na,K-ATPase). R. Walden and C.M. Schiller, <i>Lab. of Organ Function and Toxicol., Natl. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC.</i> Sponsor: G. Lucier.

- 213 ***In Vitro* Inhibition of Mitochondrial Respiration by 3, 5-Dinitro-4-Chloro- α,α,α -Trifluorotoluene (DNCTT).** C.M. Schiller, R. Walden, J.A. Alderman and H.L. Falk, *Natl. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC.*
- 214 **Hepatic Effects of Di(2-Ethylhexyl) Phthalate (DEHP) and Its Primary Metabolites: Enhancement of Ethanol Oxidation and Role of the Mitochondria in the Phthalate-Induced Hypolipidemia.** S.J. Morton and R.J. Rubin, *Dept. of Environ. Hlth. Sci., Sch. of Hyg. and Pub. Hlth., Johns Hopkins Univ., Baltimore, MD.*
- 215 **Comparative Studies on the Hepatic and Testicular Effects of Some Phthalate Esters (PE) in the Rat.** B.G. Lake, P.M.D. Foster, M.A. Collins and S.D. Gangolli, *The British Ind. Biolog. Res. Assoc., Carshalton, Surrey, UK.* Sponsor: P.J. Gehring.
- 216 **Quantitative Histochemical Assessment of Cyanide-Inhibited Cytochrome Oxidase Activity by Kinetic Microdensitometry.** B. Ballantyne and J.E. Bright, *Union Carbide Corp., Chems. and Plastics Div., South Charleston, WV, and Med. Div., Chem. Def. Estab., Porton Down, Wiltshire, UK.*
- 217 **The Inhibitory Effect of N-(Phosphonomethyl)Glycine *in Vivo* on Energy-Dependent, Phosphate-Induced Swelling of Isolated Rat Liver Mitochondria.** E.A. Bababunmi and O.O. Olorunsogo, *Dept. of Biochem., Univ. of Ibadan, Ibadan, Nigeria.*

PLATFORM SESSION 8: Cardiac

Tuesday Afternoon, March 11, 1980

Maryland Suite

**Chairmen: Tibor Balazs, Food and Drug Administration,
Washington D.C.**

**Assistant: E. Herman, Food and Drug Administration,
Washington, D.C.**

**Assistant: L. Weiss, Food and Drug Administration,
Washington, D.C.**

Paper No.	Time (P.M.)	
218	1:30	Effect of Kepone on Cardiac ATPases and ^3H-Catecholamines Uptake in Rats. D. Desaiiah, <i>Dept. of Neurol., Univ. of Mississippi Med. Ctr., Jackson, MS.</i>
219	1:45	Electrocardiographic Evaluation of Cardiac Lesions Produced by Isoproterenol in Rats. W.C. Van Arsdel and T. Balazs, <i>Bur. of Drugs, Food and Drug Admin., Washington, DC.</i>

220	2:00	Further Studies on the Cardiotoxicity of Trichloroethylene. J.F. White and G.P. Carlson, <i>Dept. of Pharmacol. and Toxicol., Sch. of Pharm. and Pharmacal Sci., Purdue Univ., West Lafayette, IN.</i>
221	2:15	Cardiotoxicity of Centrally Active Drugs in Man. L.R. Weiss, C. Brophy, S. Bartok and T. Balazs, <i>Bur. of Drugs, Food and Drug Admin., Washington, DC.</i>
222	2:30	Adriamycin Cardiomyopathy in Beagle Dogs. M.J. Iatropoulos, W.F. Dougherty, G. Gordon, C. Hall, B.M. Henderson, B.M. Sparano and J.F. Noble, <i>Toxicol. Res., Med. Res. Div., American Cyanamid Co., Pearl River, NY.</i>
223	2:45	Hemodynamic and Metabolic Studies of Allylamine-Induced Myocardial Necrosis. P.J. Boor and T.J. Nelson, <i>Dept. of Pathol., Univ. of Texas Med. Br., Galveston, TX.</i> Sponsor: M. Treinen Moslen.

PLATFORM SESSION 9: Oncogenesis I

Tuesday Afternoon, March 11, 1980

Sheraton Room

Chairman: H.A. Milman

National Cancer Institute, Bethesda, MD

**Assistant: M. Dieter, National Cancer Institute,
Bethesda, MD**

Paper No.	Time (P.M.)	
224	1:30	The Inhalation Carcinogenesis of Vinyl Bromide. W. Busey, C. Ulrich and M. Dorato, <i>Exp. Pathol. Labs., Herndon, VA, and Huntingdon Res. Ctr., New City, NY.</i>
225	1:45	Results of a Two-Year Chronic Toxicity and Oncogenic Study of Rats Ingesting Diets Containing Dibromoneopentyl Glycol (FR-1138). D.G. Keyes, R.J. Kociba, R.W. Schwetz, C.E. Wade, D.A. Dittenber, S.J. Gorzinski, T. Quinn, R.P. Kalnins, E.A. Hermann, J.J. Momany and B.A. Schwetz, <i>Toxicol. Res. Lab., Hlth. and Environ. Sci., Dow Chem. U.S.A., Midland, MI.</i>
226	2:00	Lack of Genotoxicity of Certain Hepatocarcinogenic Drugs and Organochlorine Pesticides in Liver Culture Assays. G.M. Williams and C.J. Maslansky, <i>American Hlth. Found., Naylor Dana Inst. for Disease Prev., Valhalla, NY.</i>
227	2:15	The Evaluation of the Dose Response and <i>in Utero</i> Exposure of Saccharin in the Rat. G.P. Schoenig, <i>Consultant to the Calorie Control Council, Atlanta, GA,</i> and E.I. Goldenthal and F.X. Wazeter, <i>Int'l Res. Dev. Corp., Mattawan, MI.</i>
228	2:30	The Effect of Sodium Saccharin on Several Urinary Parameters in the Rat. D.L. Arnold, B. Stavric, P.F. McGuire and I.C. Munro, <i>Food Direct., Hlth. Protection Br., Ottawa, Canada.</i>

- 229 2:45 **Mononuclear Cell Leukemia in Fischer 344 Rats.** R.R. Maronpot, E.H. Fowler and L.L. Mudry, *Mellon Inst., Carnegie-Mellon Univ., Pittsburgh, PA.*

PLATFORM SESSION 10: Immunotoxicology

Tuesday Afternoon, March 11, 1980

Washington Room

**Chairman: R.P. Sharma, Utah State University,
Logan, UT**

Assistant: L.D. Koller, University of Idaho, Moscow, ID

Paper No.	Time (P.M.)	
230	1:30	The Depression of Cell-Mediated Immunity by Low Concentrations of Asbestos in Drinking Water. K.L. White and A.E. Munson, <i>Dept. of Pharmacol., Med. Coll. of Virginia, Richmond, VA.</i> Sponsor: J.F. Borzelleca
231	1:45	Effects of Complex Chemicals on Ontogeny of Immunocompetence in Rats Exposed In Utero. T.M. Graham, J.E. Morris and F.D. Andrews, <i>Biol. Dept., Pacific Northwest Lab., Richland, WA</i>
232	2:00	Evaluation of Chemicals for Immunomodulatory Effects Using an In Vitro Antibody-Producing Assay. S.A. Kutz, R.D. Hinsdill and D.J. Weltman, <i>Ctr. for Environ. Toxicol., Univ. of Wisconsin, Madison, WI and ICI Americas Inc., Wilmington, DE.</i> Sponsor: L. Gongwer
233	2:15	Tumor Growth and Cell-Mediated Tumor Cytotoxicity in Mice Exposed to Lead. N.E. Kerkvliet and L.D. Koller. <i>Sch. of Vet. Med., Oregon State Univ., Corvallis, OR and Dept. of Vet. Med., Univ. of Idaho, Moscow, ID</i>
234	2:30	Immunotoxicology of Trichloroethylene: V. Sanders, B. Kauffman, P. Hallett, D. Stablein and A. Munson, <i>Dept. of Pharmacol., VCU/MCV Cancer Ctr., Med. Coll. of Virginia, Richmond VA.</i> Sponsor: M. Henry
235	2:45	Hydralazine-Induced Antinuclear Antibodies in Dogs. T. Balazs, C. Robinson and N. Balter, <i>Bur. of Drugs, Food and Drug Admin., Washington, DC</i>

POSTER SESSION 7: Metabolism II

Tuesday Afternoon, March 11, 1980

Exhibition Hall B

**Chairman: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

R.C. Schnell, Univ. of Nebraska Medical Center, Omaha, NE

Paper No.	Time (P.M.)	
236	1:30 - 3:30	Refractoriness of Channel Catfish to Kepone Potentiated CC14 Hepatotoxicity. L.R. Curtis and H.M.

- Mehendale. *Dept. Pharmacol. & Toxicol., Univ. of Mississippi, Med. Ctr., Jackson, MS*
- 237 **Isopropanol and Acetone Potentiation of CC14 Hepatotoxicity: Single vs. Repetitive Pre-Treatments.** S. Lock, W.R. Hewitt, P. du Souich and G.L. Plaa. *Dept. de Pharmacologie, Universite de Montreal, Montreal, Quebec, Canada*
- 238 **Destruction of Adrenal and Hepatic Microsomal Mixed Function Oxidases (MFO) by Carbon Tetrachloride (CC14) in the Absence of Malonaldehyde Production.** H.D. Colby, M.L. Marquess, P.B. Johnson, M.R. Pope and P.R. Miles, *Dept. of Physiol. and Biophys., West Virginia Univ. Med. Ctr., Morgantown, WV.*
Sponsor: J.U. Bell
- 239 **Arachidonic Acid-Dependent Metabolism of Xenobiotics.** K. Sivarajah, T.E. Eling, J. Lasker and M.B. Abou-Donia. *Dept. of Pharmacol., Duke Univ., Durham, NC and NIEHS, Research Triangle Park, NC*
- 240 **Fatty Acid Modification of Benzo(a)Pyrene Metabolism.** J.G. Babish, K.W. Miller and H. Gershon. *Dept. of Prev. Med., New York State Coll. of Vet. Med., Cornell Univ. and Boyce Thompson Inst. at Cornell, Ithaca, NY*
- 241 **Toxicokinetics of Terephthalic Acid (TPA) in Adult F-344 Rats and Distribution of 14-C-TPA in Maternal and Fetal Tissues.** T.Y. Chin, R.W. Tyl and H. d'A. Heck, *Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.*
Sponsor: J.E. Gibson
- 242 **Metabolism of Dimethyl Terephthalate (DMT) in F-344 Rats and B6C3F1 Mice.** H. d'A. Heck, *Chem. Ind. Inst. of Toxicol., Research Triangle Park, NC.* Sponsor: J.E. Gibson
- 243 **Effect of Trans-Stilbene Oxide on Hepatic and Renal Drug-Metabolizing Enzymes and Toxicity.** C.-H. Kuo and J.B. Hook, *Dept. of Pharmacol. & Toxicol., Michigan State Univ., East Lansing, MI*
- 244 **The Effects of Carmustine on Hepatic Drug Metabolism in Mice.** V.L. Wilson and R.E. Larson, *Sch. of Pharm., Oregon State Univ., Corvallis, OR*
- 245 **Effect of Acute and Chronic Chlordimeform Treatment on Rat Hepatic Microsomal Drug Metabolizing Enzymes.** D.R. Raupp, G.K.W. Yim, R.C. Schnell. *Dept. of Pharmacol. & Toxicol., Sch. of Pharm., Purdue Univ., West Lafayette, IN*
- 246 **Effects of Diethyldithiocarbamate, (DEDTC) on Cytochrome P-450, (P-450) Heme Oxygenase, (HO) and δ -Aminolevulinic Acid Synthetase, (δ Alas) of Rat Liver.** G.E. Miller and F.E. Greene, *Dept. of Pharmacol., Milton S. Hershey Med. Ctr., Penn State Univ., Hershey, PA*
- 247 **The Effect of Prolactin on the Distribution of 2,4,5,2', 4',5'-Hexachlorobiphenyl (6-CB) and on Hepatic Monooxygenase Activity in the Female Mouse.** M.J.

- Vodicnik and J.J. Lech, *Dept. of Pharmacol. & Toxicol., Med. Coll. of Wisconsin, Milwaukee, WI*
- 248 **Effect of Protein Deficiency on the Interaction of Components of the Mixed Function Oxidase System.** J.R. Hayes and T.C. Campbell*, *Dept. Pharmacol., Med. Coll. of Virginia, Richmond, CA and *Div. Nutr. Sci., Cornell Univ., Ithaca, NY*
- 249 **Effect of Ethylaminoethanol on Hepatic Microsomal Enzyme Activity.** A.C. Stevens and R. Hartung, *Toxicol. Prog., Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI*
- 250 **Effect of N-Acetylcysteine on the Hepatotoxicity and Pharmacokinetics of ¹⁴C-Acetaminophen in Male Swiss Webster Mice.** L.W. Whitehouse, L.T. Wong, C.J. Paul and G. Solomonraj. *Drug Res. Labs., Hlth. Protection Br., Health and Welfare Canada, Ottawa, Canada.* Sponsor: H.W. Buttar
- 251 **Stimulation of p-Nitroanisole O-Demethylation in the Hemoglobin-Free Perfused Rat Liver by Epinephrine: Studies in Various Nutritional States.** S.A. Belinsky, L.A. Reinke, M.A. Danis, F.C. Kauffman and R.G. Thurman, *Dept. of Pharmacol., Univ. of North Carolina, Chapel Hill, NC and Dept. of Pharmacol., Univ. of Maryland, Baltimore, MD*
- 252 **Kinetics of Activation and Inhibition of Rabbit Hepatic Aniline Hydroxylase and Benzphetamine Demethylase by Volatile Anesthetics.** M.F. Skelly and P. Mazel, *Depts. of Pharmacol. & Anesthesiol., The George Washington Univ., Washington, DC*
- 253 **Stable Isotope Effects on the Formation and Elimination of a Metabolite. A Study on the Kinetics of Acetaminophen Derived from Phenacetin and From Deuterated Phenacetin in the Perfused Rat Liver Preparation.** K.S. Pang, *Dept. of Pharmaceutics, Sch. of Pharm., Univ. of Houston, Houston, TX.* Sponsor: M.G. Horning
- 254 **The Effect of Pyrrolizidine Alkaloids from *Senecio vulgaris* on Specific Liver Mixed Function Oxidase Activities.** D.F. Eastman and H.J. Segall, *Dept. of Physiol. Sci., Univ. of California Davis, Davis, CA.* Sponsor: S.N. Giri
- 255 **Induction of Benzopyrene Metabolism by 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Primary Cultures of Adult Rat Hepatocytes.** A.R. Steward and J.L. Byard, *Dept. Environ. Toxicol., Univ. California, Davis, CA*
- 256 **The Effect of Pretreatment with Phenobarbitone or Aroclor 1254 on Hexachloro 1:3 Butadiene Nephrotoxicity in the Rat.** E. A. Lock and J. Ishmael, *Imperial Chem. Inds. Ltd., Central Toxicol. Lab., Alderley Park, Nr. Macclesfield, Cheshire, U.K.* Sponsor: Dr. M.S. Rose
- 257 **Effect of Chlorinated Diphenyl Ether Isomers on Xenobiotic Metabolism in Rat Liver.** G.P. Carlson, E.N. Smith and K.M. Johnson, *Dept. of Pharmacol. & Toxicol., Sch. of Pharm. & Pharmacol. Sci., Purdue Univ., West Lafayette, IN*

- 258 **Effect of Oral Trichloroethylene on Various Hepatic Parameters of the Rat.** C.R. Elcombe, I. Pratt and M.S. Rose. *Imperial Chem. Inds. Ltd., Central Toxicol. Lab., Alderley Park, Nr. Macclesfield, Cheshire, U.K.*
- 259 **Chronic Effects of Trichloroethylene on Murine Hepatic Mixed Function Oxidase Activities.** D. Barnes, A. Tucker and A. Munson, *Depts. of Pharmacol., East Carolina Med. Sch., Greenville, NC and Med. Coll. of Virginia, Richmond, VA.* Sponsor: J. Egle
- 260 **Effect of Various Inducers on Hamster Hepatic and Mammary BP-Hydroxylase.** R. Gingell, P. Hertzog, V. Placqua and M. Rustia, *Eppley Inst. for Res. in Cancer, Univ. Nebraska Med. Ctr., Omaha, NE*
- 261 **Microsomal Enzyme Induction by PBB Congeners.** G.A. Dannan and S.D. Aust, *Environ. Toxicol. Ctr., Dept. Biochem., Michigan State Univ., East Lansing, MI*
- 262 **Protection Against Acephate Toxicity by TOTP.** C. Wang, H. Hand and S.D. Murphy. *Div. of Toxicol., Dept. of Pharmacol., Univ. of Texas Med. Sch. at Houston, Houston, TX*

ANNUAL BUSINESS MEETING

Tuesday Afternoon, March 11, 1980

3:00 P.M.

Sheraton Room

SOT MEMBERS ONLY

Tom S. Miya, Presiding

ANNUAL BANQUET

Tuesday Evening, March 11, 1980

7:00 P.M.

Washington Room

Open to all attendees and guests.

\$19.25

Complimentary wine;

Courtesy, Charles River Breeding Laboratories, Inc.

**SYMPOSIUM: Toxicology in the Workplace
Responsibilities for a Safe Workplace:
A Multidisciplinary Challenge**

Wednesday Morning, March 12, 1980

8:15 A.M. - 12:30 P.M.

Sheraton Room

Chairman: V.K. Rowe

Time (A.M.)

- 8:15 - 8:30 Introduction. V.K. Rowe
- 8:30 - 9:00 **What does the Industrial Hygienist want or need from the Toxicologist?** P.E. Toth, *Ford Motor Company, Dearborn, MI*
- 9:00 - 9:30 **What does the Physician want or need from the Toxicologist?** R.E. Eckardt, *Former Director, Medical Research & Environmental Health, Division of Exxon Corporation, Scottsdale, AZ*
- 9:30 - 10:00 **What does Government want or need from the Toxicologist?** D.P. Rall, *Director of the National Toxicology Program, Research Triangle Park, NC*
- 10:00 - 10:15 Intermission
- 10:15 - 10:45 **What does Management want or need from the Toxicologist?** J.W. Hanley, *President, Monsanto Company, St. Louis, MO*
- 10:45 - 11:15 **What does Labor want or need from the Toxicologist?** G.H.R. Taylor, *Director, Dept. of Occupational Safety and Health, A.F. of L.-C.I.O., Washington, DC*
- 11:15 - 12:00 **What does the Public want or need from the Toxicologist?** J. Higginson, *Director, International Agency for Research on Cancer, Lyon, France*
- 12:00 - 12:30 Discussion

**PLATFORM SESSION 11:
Teratology and Reproduction II**

Wednesday Morning, March 12, 1980

Washington Room

**Chairman: K.S. Khera, Bureau of Chemical Safety, Ottawa,
Ontario, Canada**

**Assistant: H.S. Buttar, Health Protection Branch, Ottawa,
Ontario, Canada**

**Assistant: S. Charbonneau, Health Protection Branch, Ottawa,
Ontario, Canada**

Paper No.	Time (A.M.)	
263	8:30	Developmental Malformations Induced by Metabolically-Liberated Cyanide. C.C. Willhite, V.H. Ferm, M.

- Marin-Padilla and R.P. Smith. *Depts. of Pharmacol. & Toxicol., Anat., Cytol. and Pathol., Dartmouth Med. Sch., Hanover, NH*
- 264 8:45 **Effects of Inhaled Epichlorohydrin on Fertility and Fetal Development in Rats and Rabbits.** J.A. John, J.F. Quast, F.J. Murray, J.W. Henck, L.G. Calhoun, T.S. Lederer, M.K. Pilny and R.E. Staples. *Toxicol. Res. Lab., Hlth. and Environ. Sci., Dow Chem. U.S.A., Midland, MI*. Sponsor: B.A. Schwetz
- 265 9:00 **Mechanism of Cyclophosphamide-Induced Teratogenesis.** J.M. Manson, R. Simons, C. Boyd. *Dept. Environ. Hlth., Univ. Cincinnati, Cincinnati, OH*. Sponsor: P.B. Hammond
- 266 9:15 **Toxicity of Nadph in a Coupled Microsomal Activating/Embryo Culture System.** K.T. Kitchin, M.K. Sanyal and B. Schmid, *Natl. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC*. Sponsor: G. Lucier
- 267 9:30 **Teratologic Evaluation of Ortho-Toluene Diamine(o-TDA) in Sprague-Dawley Rats and Dutch-Belted Rabbits.** M. Knickerbocker, T.A. Re, R.A. Parent and J.H. Wedig, *Food and Drug Res. Labs., Inc., Waverly, NY and Olin Corp., New Haven, CT*
- 268 9:45 **Teratologic Evaluation of N-Cyclohexyl-2-Pyrrolidone (NCP) in Sprague-Dawley Rats and Dutch-Belted Rabbits.** M.K. Knickerbocker, T.A. Re, R.A. Parent and J.H. Wedig, *Food and Drug Res. Labs., Inc., Waverly, NY and Olin Corp., New Haven, CT*
- 269 10:00 **Preclinical Reproductive Toxicology Evaluation of Trazodone (Desyre®), a New Class of Anti-Depressant.** J.L. Perhach, Jr., R.H. Cox, Jr., H.C. Hawkins and J.H. Weikel, Jr., *Dept. of Pathol. & Toxicol., Mead Johnson Pharmaceutical Div., Evansville, IN*
- 270 10:15 **Evaluation of Triamcinolone Teratogenicity in 2 Different Stocks of New Zealand White Rabbit.** M.E. DiFebbo, Y.J. Kang and F.J. Guerriero, *Smith Kline & French Labs., Philadelphia, PA*. Sponsor: K.T. Szabo
- 271 10:30 **Three-Generation Reproduction and Dominant Lethal Mutagenesis Studies on Ethylene Glycol.** M.D. Woodside, L.R. DePass and C.S. Weil, *Mellon Inst. Carnegie-Mellon Univ., Pittsburgh, PA*
- 272 10:45 **Three Generation Study of 2-Methylbenzimidazole in Rats,** H.J. Sekerke and E.R. Hart, *Litton Bionetics, Inc., Kensington, MD*
- 273 11:00 **Potentiative Action of SKF-525A and N-Methyl 2-Thioimidazole on Ethylenethiourea-Induced Teratogenicity in Rats.** K.S. Khara and F. Iverson, *New Research Centre, Tunney's Pasture, Ottawa, Canada*
- 274 11:15 **Inhibition of α -Aminoisobutyric Acid (AIB) Transport Across Human Placental Membranes by Several Membrane Active Compounds.** D.R. Goodman and R.D. Harbison, *Dept. of Pharmacol., Vanderbilt Univ., Nashville, TN*

- 53 11:30 **Functional Teratology of the Immune System Resulting from Exposure during Development to the Chlorinated Hydrocarbon Chlordane.** J.M. Spyker-Cranmer, D.L. Avery, J.B. Barnett and A.M. Hoberman, *Univ. of Arkansas for Med. Sci., Little Rock, AR*
- 276 11:45 **Wide Spectrum Evaluation of Non-CNS Physiological Alterations Following Fetal Insult in the Rat.** M.S. Christian and E.M. Johnson, *McNeil Labs., Ft. Washington, PA and Thomas Jefferson Univ., Philadelphia, PA.* Sponsor: R.L. Steelman

PLATFORM SESSION 12: Metals I

Wednesday Morning, March 12, 1980

Maryland Suite

Chairman: G.M. Cherian, University of Western Ontario, London, Ontario, Canada

Assistant: B.J. Kelman, Battelle Northwest Laboratories, Richland, WA

Assistant: B.R. Nechay, University of Texas, Galveston, TX

- | Paper No. | Time (A.M.) | |
|-----------|-------------|--|
| 277 | 8:30 | Selenium Toxicity: Effects on S-Adenosylmethionine (SAM) and S-Adenosylhomocysteine (SAH). P.A. Toy-Manning and D. Couri, <i>Div. of Toxicol., Ohio State Univ., Columbus, OH</i> |
| 278 | 8:45 | Induction of Mitochondrial DNA Synthesis in Cell Types Prone to Neurodegeneration After Ingestion of Methylmercury in the Cat. C.T. Miller, D. Krewski and L. Tryphonas, <i>Food Toxicol. Div., Hlth. Protection Br., Ottawa, Canada</i> |
| 279 | 9:00 | The Influence of Ca⁺⁺ and Mg⁺⁺ Upon the Permeability of the Rat Lung to Heavy Metal Ions. S.J. Williams, M. Sabransky and D.B. Menzel, <i>Depts. of Pharmacol. and Med., Duke Univ. Med. Ctr., Durham, NC</i> |
| 280 | 9:15 | Characterization of the Potenturia Induced by Long-Term Administration of Cadmium in Rat. A. Bernard, A. Goret, J.P. Buchet, H. Roels and R. Lauwerys, <i>Unite de Toxicologie Industrielle et Medicale, Louvain Univ., Brussels, Belgium</i> |
| 281 | 9:30 | The Inhibition of Bovine Heart Muscle Succinate Dehydrogenase by Cadmium. G. Petrazzuolo and I. Gray, <i>Dept. of Biol., Grad. Sch. of Arts & Sci., Georgetown Univ., Washington, DC.</i> Sponsor: S. Schwartz |
| 282 | 9:45 | Cadmium Induced Changes in Gluconeogenesis in Rats. B. Rajanna, K.D. Chapatwala, D.D. Vaishnav and D. Desai, <i>Div. of Natl. and Appl. Sci., Selma Univ., Selma, AL and Dept. Neurol., Univ. Mississippi Med. Ctr., Jackson, MS</i> |

283	10:00	Tissue Distribution and Retention of Cadmium in Developing Rats: Mineral Role of Hepatic Metallothionein. K.L. Wong and C.D. Klaassen, <i>Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS</i>
284	10:15	Age Difference in the Susceptibility to Cadmium-Induced Testicular Damage in Rats. K.L. Wong and C.D. Klaassen, <i>Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS</i>
285	10:30	Renal Reabsorption of δ-Aminolevulinic Acid in Control and Lead Exposed Rats. E.J. O'Flaherty and P.B. Hammond, <i>Dept. of Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH</i>
286	10:45	A Neurobehavioral Profile of Chronic Lead Toxicity. L.S. Raffles, H. Zenick, I.A. Michaelson, R. Greenland and V. Caruso, <i>Dept. of Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH</i> . Sponsor: P.B. Hammond
287	11:00	Comparative Efficacy of CaEDTA, ZnEDTA and ZnCaEDTA in Mobilizing Lead. A.L. Aronson and C.F.G. Brownie, <i>Dept. Physiol., Biochem. & Pharmacol., New York State Coll. Vet. Med., Cornell Univ., Ithaca, NY</i>
288	11:15	Effects of Prewaning Lead Exposure on the Auditory Startle Reflex: Evidence for Hyperreactivity. L.D. Fechter, A. Harris, S. Sato and A.M. Goldberg, <i>Dept. Environ. Hlth. Sci., The Johns Hopkins Univ. Sch. of Hyg. & Pub. Hlth., Baltimore, MD</i>
289	11:30	Possible Relationship Between Lead and Calcium Transport into Milk of the Lactating Mouse. C.A. Keller and R.A. Doherty, <i>Toxicol. Training Prog., Environ. Hlth. Sci. Ctr., Univ. of Rochester Sch. of Med., Rochester, NY</i> . Sponsor: T.W. Clarkson
290	11:45	Effects of Twelve Metal Ions on Metallothionein, Glutathione, Heme Oxygenase and Cytochrome P-450 Content of Rat Liver and Kidney. D.L. Eaton, N.H. Stacey, K.L. Wong and C.D. Klaassen, <i>Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS</i>

POSTER SESSION 8: General Toxicology III

Wednesday Morning, March 12, 1980

Exhibition Hall B

**Chairmen: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

**R.C. Schnell, University of Nebraska, Medical Center,
Omaha, NE**

Paper No.	Time (A.M.)	
291	8:30 - 10:30	The Subacute Toxicity of Methyl-(1-Butylcarbamoyl)-2-Benzimidazole Carbamate (Benomyl[®]) in Rats. K.C. Baran, T.B. Barnes, R.N. Hunsinger and L.W. Masten,

- Dept. of Pharmacol., Sch. of Pharm., Univ. of Mississippi, University, MS. Sponsor: W.M. Davis*
- 292 **Acute Oral Toxicity of Selected Analgesic, Antihistaminic, Decongestant and Antitussive Agents in Various Laboratory Animals.** C.G. Gerbig and S.D. Warner, *Toxicol. Lab., Hlth. & Consumer Products Dept., Dow Chem. U.S.A., Indianapolis, IN.* Sponsor: D.J. Thompson
- 293 **Isopropylmyristate (IPM) as a Model, Species-Variable Skin Irritant: Direct Comparison of Rabbit and Human Primary Skin Irritation Responses to IPM.** R.L. Campbell and L.L. Stone, *The Procter & Gamble Co., Miami Valley Labs., Cincinnati, OH.* Sponsor: E.V. Buehler
- 294 **Sub-Chronic Effects of Immobilized Lactase on a Silica Carrier in Rats Following *in Utero* Exposure.** L. Gephart, C.S. Schwartz and R.A. Parent, *Food and Drug Res. Labs., Inc., Waverly, NY and Ind. Biolog. Syst. of Corning Glass Works, Corning, NY.* Sponsor: F. Koschier
- 295 **A Chronic Toxicity Study in Dogs with 3,3-Dimethyl-1-(Methylthio)-2-Butanone O-[(Methyl-Amino) Carbonyl]Oxime (Thiofanox).** D.M. Serrone, G.A. Wright and W.T. Chin, *Dept. of Saf. Assessment, B.H. Korsch, Life Sci. Res., Diamond Sharmock Corp., T.R. Evans Res. Ctr., Painesville, OH*
- 296 **Effect of Chronic Treatment of Chlordane on Serum Enzymes in Rats Fed on Iron-Sufficient and -Deficient Diets.** K.N. Chetty, L. Drummond and D. Desaiyah, *Div. Sci. & Technol., M.I. Coll., Holly Springs, MS and Dept. Neurol., Univ. Mississippi Med. Ctr., Jackson, MS*
- 297 **Comparison of Toxicity Induced by Oral Administration of Mirex and Kepone in the Male Mouse.** K. Fujimori, T.P. Huang, I.K. Ho and H.M. Mehendale. *Dept. of Pharmacol. and Toxicol., Univ. Mississippi Med. Ctr., Jackson, MS*
- 298 **Studies on the Toxicity of EL-614, a New Rodenticide.** R.B.L. van Lier, L.D. Ottosen, G.K. Hanasono and J.L. Carter, *Lilly Res. Labs., Toxicol. Div., Greenfield, IN.* Sponsor: J.S. Wold
- 299 **The Effects of Sodium and Calcium Salts of Maleic Vinyl Ether Copolymer on Efficacy, Acute Toxicity and Serum Ions.** T. Bradshaw, K. White and A. Munson. *Dept. of Pharmacol., Med. Coll. of Virginia, Richmond, VA.* Sponsor: J. Hayes
- 300 **Immunotoxicologic Evaluation of Technical Penta-chlorophenol Fed Subchronically to Lactating Dairy Cattle.** J.H. Forsell and L.R. Shull, *Dept. of Dairy Sci., Michigan State Univ., East Lansing and J.R. Kateley, Dept. of Immunol., E.W. Sparrow Hospital, Lansing, MI.* Sponsor: S.D. Aust
- 301 **Ascorbic Acid Potentiated Pathologic and Toxicologic Effects of Paraquat (MV) and n-Propyl Viologen (PV) in Rats.** G.E. McArn, S.J. Gee, R.I. Krieger, L.O. Lim, J.H.

- Ross, *Depts. of Environ. Toxicol. and Med. Pathol., Univ. of California, Davis, CA*
- 302 **Pharmacological Activity of the Basic Fraction of Marijuana Whole Smoke Condensate in Mice.** J.M. Johnson, L. Lemberger, M. Novotny, R.B. Forney, W.S. Dalton and M.P. Maskarinec, *Dept. of Pharmacol. & Toxicol., Indiana Univ. Sch. of Med. and Lilly Res. Labs., Indianapolis, IN and Dept. of Chem., Indiana Univ., Bloomington, IN*
- 303 **Combined Effects of Delta-9-Tetrahydrocannabinol and Cannabichromene on the Isolated, Field Stimulated Guinea Pig Ileum.** J.D. O'Neil, F.R. Goodman and R.B. Forney, *Dept. of Pharmacol. & Toxicol., Indiana Univ. Sch. of Med. and The Dow Chem. Co., Indianapolis, IN*
- 304 **The Effects of *In Vivo* Treatment with Trichloroethylene (TCE) on Thioglycollate (TG) Recruited Mouse Peritoneal Exudate Cells (PEC).** R. Carchman, F. Kessler, R. Bradley, D. Laskin and A. Munson, *Dept. of Pharmacol., Med. Coll. of Virginia, Richmond, VA.*
Sponsor: John Egle
- 305 **Dichloroacetate, Sodium: 3-Month Oral Toxicity Studies in Rats and Dogs.** R. Katz, C.N. Tai, R.M. Diener, R.F. McConnell and D.E. Semonick, *Ciba-Geigy Corp., Toxicol. & Pathol. Subdiv., Ardsley, NY*
- 306 **Subacute Oral Toxicity of a Condensate Water Mixture in Rats, Mice and Dogs.** C.A. Tyson, J.V. Dilley, S. Winslow and J.C. Dacre, *SRI Int'l., Menlo Park, CA and U.S. Army Med. Bioengr. Res. & Dev. Lab., Ft. Detrick, Frederick, MD*
- 307 **Acute Toxicity of Heat Transfer Fluids Proposed for Use in Solar Energy Applications.** D.W. Brewster, T.C. Marshall and C.R. Clark, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.* Sponsor: H.W. Dorough
- 308 **Comparative Study of the Toxicopathology of Purified Congeners of Polybrominated Biphenyls in Rats.** B.T. Akoso, S.D. Sleight, S.D. Aust and R. Nachreiner, *Depts. of Pathol. & Biochem., Michigan State Univ., East Lansing, MI*
- 309 **Some Chemical and Chromatographic Properties of Polybrominated Biphenyls.** G.A. Dannan, G.J. Mileski and S.D. Aust, *Environ. Toxicol. Ctr., Dept. Biochem., Michigan State Univ., East Lansing, MI*
- 310 **A Method for the Purification of Polybrominated Biphenyl Congeners.** G.A. Dannan, G.J. Mileski and S.D. Aust, *Environ. Toxicol. Ctr., Dept. of Biochem., Michigan State Univ., East Lansing, MI*
- 408 **1,1,-Dichloroethylene Elicited Lung Injury.** P.G. Forkert and E.S. Reynolds, *Depts. of Pathol. & Internal Med., Univ. of Texas Med. Br., Galveston, TX*

POSTER SESSION 9: Mutagenesis II

Wednesday Morning, March 12, 1980

Exhibition Hall B

**Chairmen: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

**R.C. Schnell, University of Nebraska Medical Center,
Omaha, NE**

Paper No.	Time (A.M.)	
311	8:30 - 10:30	Quantitative Aspects of an in Vitro Mutagenicity Assay. N. Gruener and M.P. Lockwood, <i>Dept. of Environ. Hlth. Sci., Grad. Sch. of Pub. Hlth., Tulane Univ., New Orleans, LA</i>
312		The Metabolism and Mutagenicity of Methylene Chloride. T. Green, <i>Imperial Chem. Inds., Ltd., Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire U.K.</i> Sponsor: Dr. M.S. Rose
313		Mutagenicity of Quinolines and Their Effects on Rat Lung and Liver Aryl Hydrocarbon Hydroxylase. J.M. Benson and R. Kubrick, <i>Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.</i> Sponsor: R.O. McClellan
314		Parallel Effects on Mutagenesis in Cultured V79 Chinese Hamster Cells of Phorbol and Fatty Acid Ester Tumor-Promoting Agents. H.E. Wey and C.S. Baxter, <i>Dept. of Environ. Hlth., Univ. of Cincinnati, Cincinnati, OH.</i> Sponsor: Carl C. Smith
315		Inhibition of Aflatoxin B₁ Mutagenesis by Conjugative Metabolism. J.J. Wong and D.P.H. Hsieh, <i>Dept. of Environ. Toxicol., Univ. of California, Davis, CA</i>
316		Mutagenicity of Aflatoxins in Salmonella Typhimurium Forward Mutation Assay. D.P.H. Hsieh, H.E. Olsen and C.I. Wei, <i>Dept. of Environ. Toxicol., Univ. California, Davis, CA.</i> Sponsor: D.P.H. Hsieh
317		Mutagenic and Transforming Potential of Povidone-Iodine (PVP-I): F. Kessler, D. Laskin, R. Carchman and J.F. Borzelleca. <i>Dept. of Pharmacol., Med. Coll. of Virginia, Richmond, VA</i>
318		A Comparison of DNA Repair in Cultured Rat Hepatocytes with Bacterial Mutagenesis Using 200 Compounds. G.S. Probst and L.E. Hill, <i>Lilly Res. Labs., Greenfield, IN.</i> Sponsor: J.S. Wold
319		Human Cell Mediated Benzo(A)Pyrene Cytotoxicity, Mutagenicity and DNA Binding. A.E. Aust, V.M. Maher and J.J. McCormick, <i>Carcinogenesis Lab., Michigan State Univ., East Lansing, MI.</i> Sponsor: S.D. Aust
320		On Tracking Down Mutagens from Autoxidized Cholesterol. G.A.S. Ansari, R.D. Walker, and L.L. Smith, <i>Div. of Biochem., Univ. of Texas Med. Br., Galveston, TX.</i> Sponsor: M.T. Molsen

Assessment of DNA Damage During the Growth Adaptation of Murine L5178Y Lymphoma Cells to Methylmercuric Chloride. L.E. Sheck and C.S. Lange, *Depts. of Rad. Biol. & Biophys. and Exp. Radiol., Univ. of Rochester, Rochester, NY.* Sponsor: P.E. Morrow

ISSUES SESSION

Wednesday, March 12, 1980

12 Noon - 1:15 P.M.

Sheraton Room

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

Chaired by President Tom Miya

SYMPOSIUM: Unresolved Mechanisms

Wednesday Afternoon, March 12, 1980

Sheraton Room

1:30 P.M. - 4:45 P.M.

Chairman: J.E. Gibson, Chemical Industrial Institute of Toxicology, Research Triangle Park, NC

Time (P.M.)

- 1:30 **Introduction.** J.E. Gibson
- 1:35 **Immunotoxicology - New Parameters in Risk Assessment.** L.D. Loose, *Albany Medical College, Albany, NY*
- 2:25 Discussion
- 2:35 **The Monotypic Character of Atherosclerotic Lesions: Possible Initiation by Environmental Chemicals.** M.R. Juchau and J.A. Bond, *University of Washington School of Medicine, Seattle, WA*
- 3:25 Discussion
- 3:35 **Role of Lipid Metabolism in Hexacarbon Neuropathy.** J.S. Bus and P.J. Gillies, *Chemical Industry Institute of Toxicology, Research Triangle Park, NC*
- 4:25 Discussion
- 4:45 **Final Remarks.** J.E. Gibson

PLATFORM SESSION 13: Metabolism III

Wednesday Afternoon, March 12, 1980

Washington Room

Chairman: G.P. Carlson, Purdue University, Lafayette, IN

**Assistant: P.T. LaRocca, LaRocca Science Laboratories,
Dumont, NJ**

Assistant: J. White, Eli Lilly and Co., Greenfield, IN

Paper No.	Time (P.M.)	
322	1:30	Metabolism of O-Toluidine ($-^{14}\text{CH}_3$) in the F-344 Rat. D.W. Everett, O.S. Son and E.S. Fiala, <i>Naylor Dana Inst. for Disease Prev., American Hlth. Found., Valhalla, NY</i> . Sponsor: J.H. Weisburger
323	1:45	Metabolism of Trifluralin in Rats. F. Unlu, J.O. Nelson and R.E. Menzer, <i>Dept. of Entomol., Univ. of Maryland, College Park, MD</i>
324	2:00	Metabolism of O-4-Nitrophenyl O-Ethyl Phenylphosphonothioate (EPN) by the Chicken and Rat Liver. J. Lasker, K. Sivarajah, T.E. Eling and M.B. Abou-Donia, <i>Dept. of Pharmacol., Duke Univ., Durham, NC and NIEHS, Research Triangle Park, NC</i>
325	2:15	Metabolism of Rubratoxin B in Isolated Rat Parenchymal Cells. S. Watson and A.W. Hayes. <i>Dept. of Pharmacol. & Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS</i>
326	2:30	The Metabolism of Tris (1,3-Dichloro-2-Propyl) Phosphate in Rat. A.A. Nomeir and H.B. Matthews. <i>Natl. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC</i>
327	2:45	In Vivo Formation and Metabolism of Tobacco Specific Nitrosamines. S.S. Hecht, J.D. Adams, C.B. Chen and D. Hoffmann, <i>American Hlth. Found., Naylor Dana Inst. for Disease Prev., Valhalla, NY</i>
328	3:00	Comparison of Induction Patterns Among Phenobarbital, DDT, 3-Methyl Cholanthrene and TCDD in Rat Liver. B. Madhukar & F. Matsumura, <i>Pest. Res. Ctr., Michigan State Univ., East Lansing, MI</i> . Sponsor: R.E. Peterson
329	3:15	Comparative Metabolism of ortho-, meta-, and para-Toluidine in the Adult Male Rat. K.L. Cheever, D.E. Richards and H.B. Plotnick, <i>MIDS, DBBS, NIOSH, Cincinnati, OH</i> . Sponsor: T.R. Lewis
330	3:30	Acetylation as a Major Metabolic Pathway of Ethylenediamine in the Rat. M.J. Tallant, J.M. Eldridge, D.N. O'Malley and R.S.H. Yang, <i>Mellon Inst., Carnegie-Mellon Univ., Pittsburgh, PA</i>
331	3:45	Hydrolysis of Phthalate Esters by Intestinal Mucosa of Rats and its Inhibition by a Carboxylesterase Inhibitor. J.D. Heck, C.S. Mehta and S.D. Murphy, <i>Div. of Toxicol.,</i>

Dept. of Pharmacol., Univ. of Texas Med. Sch. at Houston, Houston, TX

- 332 4:00 **Excretion of Mercapturic Acids in Rhesus Monkeys Treated with Various Doses of Naphthalene and Diethylmaleate.** K. Rozman, K.H. Summer and H. Greim, *Institut fuer Toxikologie der Gesellschaft fuer Strahlen- und Umweltforschung mbH, Munich D-8042, Int'l. Ctr. of Environ. Saf., Holloman AFB, NM.* Sponsor: M.J. Iatropoulos
- 333 4:15 **Comparison of Renal and Hepatic Effects of Inhaled CC14 in the Rat, and the Influence of Inhaled Isopropanol.** E.C. Henry, F.A. Smith, R.D. Mavis and R.B. Baggs, *Univ. of Rochester Sch. of Med. and Dent., Rochester, NY*
- 334 4:30 **Metabolism and Adrenergic Agonist Activities of Ring Fluorinated Catecholamines.** H.E. Seifried, D.H. McCulloh, C.R. Creveling and K.L. Kirk, *NIAMDD, NIH, Bethesda, MD, Tracor Jitco Inc., Rockville, MD.* Sponsor: A.K. Reddy
- 335 4:45 **Intestinal Metabolism of Phenyl N-Methyl Carbamates.** J.C. Pekas, *Metab. & Rad. Res. Lab., USDA-SEA, AR, Fargo, ND*

PLATFORM SESSION 14: Mycotoxins

Wednesday Afternoon, March 12, 1980

Maryland Suite

**Chairman: P.M. Newberne, Massachusetts Institute of Technology,
Cambridge, MA**

**Assistant: A. Rogers, Massachusetts Institute of Technology,
Cambridge, MA**

- | Paper No. | Time (P.M.) | |
|------------------|--------------------|--|
| 336 | 1:30 | High Pressure Liquid Chromatography Isolation of Pyrrolizidine Alkaloids Derived from Senecio Jacobaea and Amsinckia Intermedia. G.P. Dimenna and H.J. Segall, <i>Dept. of Physiolog. Sci., Univ. of California, Davis, CA.</i> Sponsor: G.M. Conzelman |
| 337 | 1:45 | Effect of Rubratoxin B on Microsomal Enzymes in Mice Pretreated with Phenobarbital and 3-Methylcholanthrene. M.Y. Siraj and A.W. Hayes, <i>Dept. of Pharmacol. and Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS</i> |
| 338 | 2:00 | Citrinin Nephrotoxicity in Rats: A Light and Electron Microscopic Study. V.G. Lockard, R.D. Phillips, A.W. Hayes, W.O. Berndt and R.M. O'Neal, <i>Depts. of Pathol., Pharmacol., & Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS</i> |
| 339 | 2:15 | Irreversible Binding of ¹⁴C-Citrinin by Rat Renal Cortical Tissue. W.O. Berndt and A.W. Hayes, <i>Dept. of</i> |

- Pharmacol. & Toxicol., Univ. Mississippi Med. Ctr., Jackson, MS*
- 340 2:30 **Urinary Excretion of Two Metabolites of the Mycotoxin ¹⁴C-Citrinin in Rats.** R.D. Phillips, W.O. Berndt and A.W. Hayes, *Dept. of Pharmacol. & Toxicol., Univ. Mississippi Med. Ctr., Jackson, MS*
- 341 2:45 **The Effects of Penicillic Acid on Hepatic Function in the Male Mouse.** P.K. Chan and A.W. Hayes, *Dept. of Pharmacol. & Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS*
- 342 3:00 **Effect of Two Solvents on the Reproductive Toxicity of Secalonic Acid D in Mice.** C.S. Reddy, R.V. Reddy and A.W. Hayes, *Dept. of Pharmacol. & Toxicol., Univ. of Mississippi Med. Ctr., Jackson, MS*
- 343 3:15 **T-2 and T-2 Tetraol-Induced Toxicity in Normal Human Diploid Fibroblasts *In Vitro*.** L.E. Allred,³ J.W. Oldham,¹ G.E. Milo,^{1,2} O. Kindig¹ and C.C. Capen.¹ *Depts. Vet. Pathobiol.¹ Physiol. Chem.² and Pharmacol.,³ Ohio State Univ., Columbus, OH.* Sponsor: R. Yeary
- 344 3:30 **Patulin and Rubratoxin B: Interactions of Toxic and Hepatic Effects, and Mutagenic Potential.** K. Kangsadalampai, D.K. Salunkhe and R.P. Sharma, *Intdeptmntl. Toxicol. Prog., Utah State Univ., Logan, UT*
- 345 3:45 **Chronic Toxicity Study of Patulin in the Rat.** P.J. Becci, M. Knickerbocker, G.E. Cox, J.G. Babish, R.E. Dailey and R.A. Parent, *Food and Drug Res. Lab., Inc., Waverly, NY and Food & Drug Admin., Washington, DC*
- 346 4:00 **Chronic-Toxicity Study of Zearalenone in the Rat.** P.J. Becci, G.E. Cox, J.G. Babish, J.M. Taylor and R.A. Parent, *Food & Drug Res. Labs., Inc., Waverly, NY and Food & Drug Admin., Washington, DC*

POSTER SESSION 10: Aquatic Toxicology

Wednesday Afternoon, March 12, 1980

Exhibition Hall B

**Chairmen: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

**R.C. Schnell, University of Nebraska Medical Center,
Omaha, NE**

- | Paper No. | Time (P.M.) | |
|-----------|-------------|---|
| 347 | 1:30 - 3:30 | Effects of Sediment Sequestering on Biological Availability and Toxicity of Mercury and Cadmium, P.C. Francis and W.J. Birge, <i>GRad. Ctr. for Toxicol. and Sch. of Biolog. Sci., Univ. of Kentucky, Lexington, KY.</i> Sponsor: H.W. Dorough |
| 348 | | Enhanced Elimination of a Polychlorinated Biphenyl in Female Yellow Perch: The Effect of Egg Maturation |

- and Spawning. R.E. Peterson, *Sch. of Pharm., Univ. of Wisconsin, Madison, WI*
- 349 **Disposition of Antipyrine in Six Marine Invertebrates: Metabolism and Distribution.** S.J. Gee, R.I. Krieger and L.O. Lim, *Dept. of Environ. Toxicol., Univ. of California, Davis, CA*
- 350 **Chemical Disposition in Marine Mussels *Mytilus Californianus*: Toxicity, Uptake and Elimination of Benzoic Acid and Four p-Substituted Homologues.** L.O. Lim, S.J. Gee and R.I. Krieger, *Dept. Environ. Toxicol., Univ. of California, Davis, CA*
- 351 **Permethrin Hydrolysis by Trout and Mice and its Relationship to the High Toxicity of Permethrin to Fish.** A.H. Glickman and J.J. Lech, *Dept. of Pharmacol. & Toxicol., Med. Coll. of Wisconsin, Milwaukee, WI*
- 352 **Characterization of Monooxygenase Inducers in the Rainbow Trout.** C.R. Elcombe*, M.J. Vodcnik and J.J. Lech, *Dept. of Pharmacol. & Toxicol., Med. Coll. of Wisconsin, Milwaukee, WI*
- 353 **The Effect of Sex Steroids and Pregnenolone-16 α -Carbonitrile on Hepatic Monooxygenase Activity in the Rainbow Trout.** M.J. Vodcnik, C.R. Elcombe and J.J. Lech, *Dept. of Pharmacol. & Toxicol., Med. Coll. of Wisconsin, Milwaukee, WI*
- 354 **Organotin Pollution Detected by Estuarine Mud Snails.** B.S. Smith, *Dept. of Rad. Biol., Biophys., and Environ. Hlth. Sci. Ctr., Univ. of Rochester, Rochester, NY.* Sponsor: G. Berg
- 355 **Induction of Microsomal Mixed-Function Oxidase Activity in Carp.** M.J. Melancon, C.R. Elcombe, M.J. Vodcnik and J.J. Lech, *Dept. of Pharmacol. & Toxicol., Med. Coll. of Wisconsin, Milwaukee, WI*
- 356 **Comparison of Polychlorinated Biphenyl Distribution and Short Term Elimination in Yellow Perch and Rainbow Trout.** P.D. Guiney and R.E. Peterson, *Sch. of Pharm., Univ. of Wisconsin, Madison, WI*

POSTER SESSION 11: Metals II

Wednesday Afternoon, March 12, 1980

Exhibition Hall B

**Chairmen: J.J. Kocsis, Thomas Jefferson University,
Phildelphia, PA**

R.C. Schnell, University of Nebraska Medical Center, Omaha, NE

Paper No.	Time (P.M.)	
357	1:30 - 3:30	Effect of Methylmercury on Transplacental Tumors Induced by Sodium Nitrite and Ethylurea in Rats. L.D. Koller, <i>Vet. Med., Univ. of Idaho, Moscow, ID</i>

- 358 **Interactions: Effect of Lead-Cadmium on Viral-Induced Mortality and Methylmercury-Selenium on Antibody Formation in Mice.** L.D. Koller, *Vet. Med., Univ. of Idaho, Moscow, ID*
- 359 **Cadmium Uptake by Isolated Rat Hepatocytes.** N.H. Stacey and C.D. Klaassen, *Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS*
- 360 **Synthesis and Pharmacological Study of A New Thio-dicarboxylic Acid Which Antagonizes Methyl Mercury-Induced Toxicity.** B.R. Jernigan, W.G. Mitchel, D.R. Goodman, M.M. Jones and R.D. Harbison, *Depts. of Pharmacol. & Chem., Vanderbilt Univ., Nashville, TN*
- 361 **Chelation of Cadmium From Metallothionein in Chronic Exposures With BAL and DTPA.** M.G. Cherian, *Dept. of Pathol., Hlth. Sci. Centre, Univ. of Western Ontario, London, Canada*
- 362 **Bioavailability of Fish Arsenic to Humans,** S.M. Charbonneau, G.K.H. Tam, F. Brvce and E. Sandi, *Bur. of Chem. Saf., Food Res. Labs., Hlth. Protection Br., Hlth. and Welfare Canada, Ottawa, Canada*
- 363 **Effect of Cadmium on Hepatic Microsomal Enzyme Induction by Phenobarbital and 3-Methylcholanthrene in Male and Female Rats.** G.G. Stebbins and R.C. Schnell, *Dept. PCOL-TOX, Sch. of Pharm., Purdue Univ. West Lafayette, IN*
- 364 **Age and Sex Dependence of Whole Body Methyl Mercury Clearance in Rats.** D.J. Thomas, P. Mushak and L.L. Hall, *Dept. Pathol., Univ. North Carolina Sch. Med., Chapel Hill, NC and USEPA, RTP, NC*
- 365 **Partial Characterization of Native Metallothionein in the Liver of the Sheep Fetus.** J.U. Bell, *Dept. of Pharmacol. & Toxicol., West Virginia Univ. Med. Ctr., Morgantown, WV*
- 366 **Effect of Maternal Cadmium Exposure on Fetal Rat Hepatic Metallothionein,** M.P. Waalkes and J.U. Bell, *Dept. of Pharmacol. & Toxicol., West Virginia Univ. Med. Ctr., Morgantown, WV*
- 367 **The Effect of Ethylenediaminetetraacetic Acid (EDTA) and EDTA Plus Salicylate on Acute Cadmium Toxicity and Distribution.** L.R. Cantilena, Jr. and C.D. Klaassen, *Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS*
- 368 **Binding of Glutathione (GSH) Depleting Agents to Metallothionein (MT).** S.Z. Cagen and C.D. Klaassen, *Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS*
- 369 **Effect of Gold on Mammalian Cells in Culture.** R.L. Goldberg, D.P. Parrott, S.R. Kaplan & G.C. Fuller, *Dept. of Pharmacol. & Toxicol., Univ. of Rhode Island, Kingston, RI and Roger Williams General Hospital & Brown Univ. Prog. in Med., Providence, RI*

- 370 **The Relationship of Histological Changes to Parameters of Collagen Synthesis in Dibutyltin-Induced Liver Injury.** J.K. Yermakoff, J.V. Rodil and G.C. Fuller, *Dept. of Pharmacol. & Toxicol., Univ. of Rhode Island, Kingston, RI & V.A. Hospital, Providence, RI*
- 371 **The Role of Taste in Cadmium Toxicity.** D.A. Cory-Slechta and B. Weiss, *Environ. Hlth. Sci. Ctr., Dept. of Rad. Biol. & Biophys., Univ. of Rochester Sch. of Med. and Dent., Rochester, NY.* Sponsor: T. Clarkson
- 372 **Pituitary Regulation of the Sexual Dimorphic Response to Cadmium.** G.W. Lucier, O.S. McDaniel and E.M.K. Lui, *Natl. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC*
- 373 **Alteration in Urinary Coproporphyrin and Coproporphyrinogen III Oxidase Activity Following Exposure to Toxic Metals.** R. Kardish, B.A. Fowler and J.S. Woods, *Natl. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC*
- 374 **Cytotoxicity of Selenium Compounds Released During Fossil Fuel Combustion.** M.A. Burkstaller, R.O. McClellan, R.G. Cuddihy and J.O. Hill, *Lovelace Inhal. Toxicol. Res. Inst. and The Univ. of New Mexico, Albuquerque, NM*
- 375 **Distribution and Retention of Inhaled Selenium Compounds.** S.H. Weissman, R.G. Cuddihy and M.A. Burkstaller, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.* Sponsor: R.O. McClellan
- 376 **The Specificity of Uptake of Metal Ions by the Lung.** R.F. Henderson and T.R. Henderson, *Lovelace Inhal. Toxicol. Res. Inst., Albuquerque, NM.* Sponsor: R.O. McClellan
- 377 **Effects of Mercuric Oxide on Female Mice and Their Litters.** B.S. Smith and G.G. Berg, *Dept. of Rad. Biol. & Biophys. and Environ. Hlth. Sci. Ctr., Univ. of Rochester, Rochester, NY*
- 378 **In Vitro Red Cell Uptake of Lead-203 Incubated in Plasma.** M.A. Coombs and R.W. Kilpper, *Dept. of Rad. Biol. and Biophys., Environ. Hlth. Sci. Ctr., Univ. of Rochester Sch. of Med. & Dent., Rochester, NY.* Sponsor: P.E. Morrow
- 379 **Establishment of Radioimmunoassay for Human Metallothionein.** C. Tohyama and Z.A. Shaikh, *Dept. of Pharmacol. & Toxicol., Univ. of Rochester Sch. of Med. & Dent., Rochester, NY*
- 380 **Hemolytic Toxicity of Arsine Gas.** B.D. Goldstein, C.A. Snyder, M.G. Rozen, I. Bromberg and B. Lippmann, *Dept. of Environ. Med., New York Univ. Med. Ctr., New York, NY*
- 381 **Percutaneous Absorption of Lead.** J.G. Pounds and S.R. Hooper, *Natl. Ctr. for Toxicolog. Res., FDA/DHEW, Jefferson, AR and Univ. of Arkansas for Med. Sci., Little Rock, AR.* Sponsor: J.F. Holson

Biotransformation of Sodium Arsenate by the Gastrointestinal Flora of the Rat. I.R. Rowland and M.J. Davies, *The British Ind. Biolog. Res. Assoc., Carshalton, Surrey UK.* Sponsor: L. Golberg

Metals Club Meeting

Wednesday Evening, March 12, 1980

Delaware Suite

7:00 P.M.

Chairman: Bruce J. Kelman

Open to all attendees and guests

Cash Bar

PLATFORM SESSION 15: Bioactivation

Thursday Morning, March 13, 1980

Washington Room

**Chairman: J.R. Gillette, National Institute of Health,
Bethesda, MD**

**Assistant: J.A. Hinson, National Institute of Health,
Bethesda, MD**

Assistant: L.R. Pohl, National Institute of Health, Bethesda, MD

Paper No.	Time (A.M.)	
383	8:30	Direct Evidence that an Arene Oxide is a Metabolic Intermediate of 2,2',5,5'-Tetrachlorobiphenyl. S.T. Fogue, B.D. Preston, W.A. Hargraves, I.L. Reich ¹ and J.R. Allen, <i>Dept. of Pathol. and Wisconsin Regional Primate Res. Ctr., and Dept. of Chem.,¹ Univ. of Wisconsin, Madison, WI</i>
384	8:45	Covalent Interactions of Bromobenzene with Hepatic Macromolecules. J.D. Sun and J.G. Dent, <i>Chem. Ind. Inst. Toxicol. Research Triangle Park, NC.</i> Sponsor: J.E. Gibson
385	9:00	Covalent Binding of ¹⁴C-Benzene to Cellular Organelles and Bone Marrow DNA. D.P. Gill and A.E. Ahmed, <i>Depts. of Pathol., Pharmacol. & Toxicol., and Med., Univ. of Texas Med. Br., Galveston, TX.</i> Sponsor: E.S. Reynolds
386	9:15	Effect of N-Acetylation on Procainamide Covalent Binding to Mouse Microsomal Protein <i>In Vitro</i>. R.W. Freeman, J.P. Uetrecht, R.L. Woosley, J.A. Oates and R.D. Harbison, <i>Dept. of Pharmacol., Vanderbilt Med. Ctr., Nashville, TN</i>
387	9:30	Studies on the Formation of GSH Conjugates with Reactive Metabolites of 4-Ipomeanol. A.R. Buckpitt

			and M.R. Boyd. <i>Molecular Toxicol. Sect., Clin. Pharmacol. Br., Natl. Cancer Inst., Bethesda, MD</i>
388	9:45		Sex Differences in Renal Alkylation and Toxicity by 4-Ipomeanol in the Mouse. N.S. Longo and M.R. Boyd. <i>Molecular Toxicol. Sect., Clin. Pharmacol. Br., Natl. Cancer Inst., Bethesda, MD</i>
389	10:00		Protective Role of Glutathione in the Alkylation and Hepatotoxicity by 4-Ipomeanol in the Bird. A.R. Buckpitt, C.N. Statham and M.R. Boyd, <i>Molecular Toxicol. Sect., Natl. Cancer Inst., Bethesda, MD</i>
390	10:15		Disposition of the Toxic Metabolite of Acetaminophen in the Mouse. L.T. Wong, L.W. Whitehouse, G. Solomonraj and C.J. Paul. <i>Drug Res. Labs., Hlth. Protection Br., Ottawa, Canada.</i> Sponsor: H.S. Buttar
391	10:30		Studies on the Mechanism of Coumarin Hepatotoxicity in the Rat. B.G. Lake, M.A. Collins, J.C. Phillips, J.G. Evans and S.D. Gangolli, <i>The British Ind. Biolog. Res. Assoc., Carshalton, Surrey, UK.</i> Sponsor: L. Golberg
392	10:45		Role of Metabolism in the Toxic Interaction Between Disulfiram (DS) and Dibromoethane (EDB) A.M. El-hawari, M.S. Hainje, C.D. Boysen and M.D. Sayer, <i>Midwest Res. Inst., Kansas City, MO.</i> Sponsor: R.D. Short
393	11:00		Metabolism of Acrylonitrile to Cyanide: <i>In Vitro</i> Studies. M. Abreu and A.E. Ahmed, <i>Dept. of Pharmacol. & Toxicol. and Dept. of Pathol., Univ. of Texas Med. Br., Galveston, TX.</i> Sponsor: J. Palmer Saunders
394	11:15		Metabolism of Carbon Tetrachloride (CC14) to Phosgene. M.W. Anders and V.L. Kubic, <i>Dept. of Pharmacol., Univ. of Minnesota, Minneapolis, MN</i>
395	11:30		Excretion and Binding of Hexachloro-1,3-Butadiene (HCBd). M.E. Davis, W.O. Berndt and H.M. Mehendale, <i>Dept. of Pharmacol. and Toxicol., Univ. Mississippi Med. Ctr., Jackson, MS</i>
396	11:45		Studies of the Possible Mechanisms of Triiodothyronine Enhancement of Halothane Induced Hepatic Necrosis. A. Smith, R. James, L. Berman and R. Harbison, <i>Depts. of Pharmacol. and Anesthesiol., Vanderbilt Med. Ctr., Nashville, IN</i>

PLATFORM SESSION 16: General Toxicology IV

Thursday Morning, March 13, 1980

Sheraton Room

**Chairman: S.D. Aust, Ph.D., Michigan State University,
East Lansing, MI**

Assistant: F. Guengerich, Vanderbilt University, Nashville, TN

Paper No.	Time (A.M.)	
397	8:30	Toxicological Guidelines for Automatic Evaluation of Fragrance Ingredients and Formulations. I. Contact

- Sensitization.** G.R. Thompson, A. Bryant, F.H. Stults, K. Tyburcy, D.M. Ford and L.G. Scharpf, Jr., *Int'l. Flavors and Fragrances Inc., Union Beach, NJ*
- 398 8:45 **Experimental Photosensitization.** C.K. Wood and J.W. McAlack, *Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.* Sponsor: J.R. Gibson
- 399 9:00 **Mechanisms of Quenching of Contact Dermatitis Due to Some Aldehydes in Perfumes,** E.P. Pittz, E.J. Singer, P. Stankavich and B. Drewnowski, *Res. Div., Lever Bros. Co., Edgewater, NJ*
- 400 9:15 **Comparative Acute Toxicities of Thiofanox Formulations.** G.A. Wright and D.M. Serrone, *Dept. of Saf. Assessment, A.F. Marks and J.T. Brennan, Life Sci. Res., Diamond Shamrock Corp. and T.R. Evans Res. Ctr., Painesville, OH*
- 401 9:30 **Functionality of Splenic Lymphocytes and Bone Marrow Cells From Mice Exposed to Polybrominated Biphenyls.** W.R. Aldrich, P.J. Fraker and S. Aust, *Dept. of Biochem., Michigan State Univ., East Lansing, MI*
- 402 9:45 **Reversibility of the Toxicological Changes Induced by Photomirex.** D.C. Villeneuve, B.L. MacDonald, I. Chu, V.E. Secours and V.E. Valli, *Bur. of Chem. Hazards, Hlth. Protection Br., Ottawa, Canada and BioPath Analysts Ltd., Guelph, Ontario*
- 403 10:00 **Health Implications of Aroclor 1016 on Nursing Rhesus Monkey Infants.** D.A. Barsotti and J.R. Allen, *Dept. of Pathol., Univ. of Wisconsin, Madison, WI*
- 404 10:15 **The Acute Toxicity of 2- and 3-Hydroxynonachlorodiphenyl Ether — Contaminants of Technical Pentachlorophenol (PCP) — In Mice.** T.L. Miller, D.J. Lorusso and M.L. Deinzer, *Environ. Hlth. Sci. Ctr. and Dept. of Agric. Chem., Oregon State Univ., Corvallis, OR.* Sponsor: F. Dost
- 405 10:30 **Evaluation of Polychlorinated Biphenyl in Humans Exposed to Contaminated Fish.** H.E.B. Humphrey, *Michigan Dept. of Pub. Hlth., Lansing, MI.* Sponsor: S.D. Aust
- 406 10:45 **Effects of Chronic Inhibition of Angiotensin-Converting Enzyme by Captopril in Normotensive Animals.** G.R. Keim, P.L. Sibley, I.H. Zaidi, C.H. Keysser, J.S. Kulesza, Y.H. Yoon and F.G. Zaki, *Div. of Drug Saf. Eval., Squibb Inst. for Med. Res., New Brunswick, NJ*
- 407 11:00 **Effect of Concurrent Chlorphentermine and Oxyeen Treatment on Newborn Lung Morphology and Biochemistry.** S. Kacew and R. Narbaitz, *Dept. of Pharmacol. and Anat., Faculty of Hlth. Sci., Univ. of Ottawa, Ottawa, Ontario, Canada*
- 408 11:15 **See Poster Session #8, "General Toxicology III", Wednesday Morning, March 12, 1980**
- 409 11:30 **Nephrotoxicity of Bis(p-Chlorophenyl)Acetic Acid (DDA) in the Rat.** F.J. Koschier and S.K. Hong, *Med. Sch., SUNY, Buffalo, NY; and Food & Drug Res. Labs., Inc., Waverly, NY*

- 410 11:45 **Effect of 2,4,5-Trichlorophenoxyacetate (2,4,5-T) on Renal Function.** F.J. Koschier and S.K. Hong, *Med. Sch. SUNY, Buffalo, NY; and Food & Drug Res. Labs., Inc., Waverly, NY*

POSTER SESSION 12: Oncogenesis II

Thursday Morning, March 13, 1980

Exhibition Hall B

**Chairmen: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

R.C. Schnell, University of Nebraska Medical Center, Omaha, NE

- | Paper No. | Time (A.M.) | |
|-----------|--------------|--|
| 411 | 8:30 - 10:30 | Comparative Chronic Toxicity of DDT in Rats and Hamsters. J.R.P. Cabral, R.K. Hall, L. Rossi, S. Bronczyk and P. Shubik, <i>Eppley Inst. for Res. in Cancer, Univ. of Nebraska Med. Ctr., Omaha, NE</i> |
| 412 | | The Effect of Partial Hepatectomy on the Response of Rat Liver to Aflatoxin B₁. G.E. Neal and J.R.P. Cabral, <i>MRC Toxicol. Unit, Med. Res. Council Labs., Woodmansterne Rd., Carshalton, Surrey.</i> Sponsor: J. Higginson |
| 413 | | Carcinogenic Bioassay of DDE in Hamsters. L. Rossi, O. Barbieri, J.R.P. Cabral, M. Sanguinetti and L. Santi, <i>Inst. of Oncol., Univ. of Genova, Genova, Italy.</i> Sponsor: J. Higginson |
| 414 | | Enhancement of Lung Tumor Formation in Mouse Lung by Various Treatments with Butylated Hydroxytoluene (BHT). H.P. Witschi, <i>Biol. Divs., Oak Ridge Natl. Lab., Oak Ridge, TN</i> |
| 415 | | Effect of Phorbol Esters on the Murine Mixed Lymphocyte Response. L.A. Fish, C.S. Baxter and J.A. Bash, <i>Depts. of Environ. Hlth. & Microbiol., Univ. of Cincinnati Coll. of Med., Cincinnati, OH.</i> Sponsor: P.B. Hammond |
| 416 | | Tumor Promoting Phorbol Esters are Chemotactic for Mouse Peritoneal Macrophages. D. Laskin, J. Laskin, I. Weinstein, R. Bradley and R. Carchman, <i>Med. Coll. of Virginia, Richmond, VA and Columbia Univ., Coll. of Physicians and Surgeons, New York, NY.</i> Sponsor: J.F. Borzelleca |
| 417 | | Macromolecular Effects of Vinylidene Chloride in Rats and Mice: Implications for Carcinogenic Risk Estimation. R.H. Reitz, P.G. Watanabe, M.J. McKenna, J.F. Quast and P.J. Gehring, <i>Toxicol. Res. Lab., Hlth. & Environ. Sci., U.S.A., Dow Chem. U.S.A., Midland, MI</i> |
| 418 | | Dermal Carcinogenesis Induced by Diethyl Sulfate (DS) in Male C3H Mice. L.G. Peterson, L.R. DePass, R.R. Maronpot and C.S. Weil, <i>Mellon Inst., Carnegie-Mellon Univ., Pittsburgh, PA</i> |
| 419 | | Mouse Skin Painting Initiation-Promotion Tests with Synthetic Crude Oils. J.W. McAlack, M. Sippel, D.F. |

- Krahn and R.W. Hartgrove, Jr., *E.I. Du Pont de Nemours & Co., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE.*
Sponsor: J.R. Gibson
- 420 **Long-Term Feeding Study With 4,4'-Oxydianiline (ODA) in Rats.** A.M. Kaplan, L.W. Smith, J.R. Barnes and E.F. Stula, *E.I. Du Pont de Nemours and Co., Haskell Lab. for Toxicol. & Ind. Med., Newark, DE*
- 421 **Rat Strain Differences in Response to Mammary Carcinogenesis Induced by 7,12-Dimethylbenzanthracene (DMBA).** A.M. El-hawari, M.D. Sawyer, C.D. Boysen and M.S. Hainje, *Midwest Res. Inst., Kansas City, MO.* Sponsor: R.D. Short
- 422 **Effects of Dietary Diethylstilbestrol on Balb/c Mice.** D.L. Greenman, B. Highman and G. Gass, *Nat'l. Ctr. Toxicol. Res., Jefferson, AR, and Univ. of Arkansas for Med. Sci., Little Rock, AR, and Southern Illinois Univ., Carbondale, IL*
- 423 **Modulation of Benzo(a)pyrene (BP) Pharmacokinetics and DNA Binding by Mixed Function Oxidases (MFO) Inducers.** A.G.E. Wilson, H.C. Kung, M. Boroujerdi and M.W. Anderson, *Lab. of Pharmacokinetics, Nat'l. Inst. of Environ. Hlth. Sci., Research Triangle Park, NC.* Sponsor: H.B. Matthews

POSTER SESSION 13: Nervous System II

Thursday Morning, March 13, 1980

Exhibition Hall B

**Chairmen: J.J. Kocsis, Thomas Jefferson University,
Philadelphia, PA**

R.C. Schnell, University of Nebraska Medical Center, Omaha, NE

- | Paper No. | Time (A.M.) | |
|-----------|--------------|---|
| 424 | 8:30 - 10:30 | Effects of Early Lead Exposure on Electroshock Seizure Thresholds in Developing Rats. D.A. Fox and D.E. Woolley, <i>Dept. of Animal Physiol., Univ. of California, Davis, CA</i> |
| 425 | | Behavioral Toxicity Screening of Several Haloalkane Water Contaminants. M.J. Kallman and R.L. Balster, <i>Dept. of Pharmacol., Med. Coll. of Virginia, Richmond, VA.</i> Sponsor: J. Borzelleca |
| 426 | | Nicotine Potentiates Sodium Pentobarbital but not Ethanol Induced Sleep. D. Saucedo, A.T. Modak and W.B. Stavinoha. <i>Div. of Toxicol., The Univ. of Texas Hlth. Sci. Ctr., San Antonio, TX</i> |
| 427 | | A Method for Detecting Somatosensory Disorders in Monkeys. J.P.J. Maurissen and P.J. Conroy, <i>Environ. Hlth. Sci. Ctr., Dept. of Rad. Biol. & Biophys., and Cancer Ctr. Univ. of Rochester Sch. of Med. & Dent., Rochester, NY.</i> Sponsor: T.W. Clarkson |

- 428 **Allura Red Dye Study in Mice.** A.T. Modak, D. Cantu and W.B. Stavinoha. *Div. of Toxicol., The Univ. of Texas Hlth. Sci. Ctr., San Antonio, TX*
- 429 **Protective Effect of Propranolol Pretreatment on Intravenous Morphine Lethality in Mice.** D.G. Lange, J.M. Fujimoto and R.B. Franklin. *Dept. of Pharmacol. & Toxicol., Med. Coll. of Wisconsin, Milwaukee, and Toxicol. Res. Lab., V.A. Admin. Ctr., Woods, WI*
- 430 **Effect of a Single Administration of Phencyclidine on Total Spontaneous Activity in Rats.** G.C. Haggerty, A.H. Abdallah, R.B. Forney, and W.S. Dalton. *Dept. of Pharmacol. & Toxicol., Indiana Univ. Sch. of Med. and the Dow Chem. Co., Indianapolis, IN*
- 431 **Behavioral Effects of Polyurethane Foam Combustion Products.** P.S. McGuire and Z. Annau. *Dept. of Environ. Hlth. Sci., The Johns Hopkins Univ. Sch. of Hyg. & Pub. Hlth., Baltimore, MD.* Sponsor: A. Goldberg
- 432 **Inhibition of Neurotoxic Esterase (NTE) and Other Enzymes During Chronic Feeding of A Neurotoxic Organophosphate.** M. Lotti & M.K. Johnson. *Instituto di Medicina del Lavoro, Padova, Italy & M.R.C. Toxicol. Unit, Carshalton, Surrey, England.* Sponsor: M.S. Rose, I.C.I. Central Toxicol. Lab., Alderley Park, Macclesfield, Cheshire, England
- 433 **Human Leucocyte Neurotoxic Esterase: Potential Biomonitor for Neurotoxic Organophosphorus Compounds.** B.R. Dudek and R.J. Richardson. *Toxicol. Res. Lab., Dept. of Environ. & Ind. Hlth., Sch. of Pub. Hlth., The Univ. of Michigan, Ann Arbor, MI*
- 434 **Delayed Neurotoxicity of O-Ethyl O-4-Nitrophenyl Phenylphosphonothioate (EPN): Subchronic (90 days) Dermal Administration in Hens.** M.B. Abou-Donia, D.G. Graham, H.M. Makkawy and K.M. Abdo. *Depts. of Pharmacol. & Pathol., Duke Univ. Med. Ctr., Durham, NC*
- 435 **Neurotoxic Effects of Various Levels of Tri-ORTHO-Cresyl Phosphate (TOCP) in Hens.** C.S. Schwartz, K.R. Stevens, G.E. Cox, C.C. Brown and P.J. Becci. *Food & Drug Res. Labs., Inc., Waverly, NY and Natl. Cancer Inst., Bethesda, MD.* Sponsor: F.J. Koschier
- 436 **Late Acute, Cholinergic and Delayed Neurotoxic Effects of S,S,S-Tributyl Phosphorotrithioate (DEF): Subchronic (90 days) Administration in Hens.** M.B. Abou-Donia, D.G. Graham and P.R. Timmons. *Depts. of Pharmacol. & Pathol., Duke Univ. Med. Ctr., Durham, NC*
- 437 **Delayed Neurotoxicity of Subchronic Oral Administration of Leptophos to Hens: Recovery During Four Months After Exposure.** M.B. Abou-Donia and D.G. Graham. *Depts. of Pharmacol. and Pathol., Duke Univ. Med. Ctr., Durham, NC*
- 438 **Effect of Toxaphene on Rat Brain Synaptosomal ATPases and Binding of ³H-Ouabain and ³H-Dopamine.** C. Trotman and D. Desai. *Dept. Chem., Jackson State Univ., and Dept. Neurol. Univ. Mississippi Med. Ctr., Jackson, MS*

- 439 **Reduced 3-H Quinuclidinyl Benzilate (3H-QNB) Binding in the CNS but not Periphery After Induction of Anticholinesterase Tolerance.** B.W. Schwab, H. Hand and S.D. Murphy, *Div. of Toxicol., Dept. of Pharmacol., Univ. of Texas Med. Sch. at Houston, Houston, TX*
- 440 **Effects of Acute and Subacute Exposure to Dichloroethylene and Trichloroethylene on Central Neurotransmitter Systems in the Mouse.** G. Patrick, W. Dewey, H. Tripathi and B. Martin, *Dept. of Pharmacol., Med. Coll. of Virginia, Virginia Commwlth. Univ., Richmond, VA.* Sponsor: J.L. Egle, Jr.
- 441 **Solubilization of Neurotoxic Esterase.** C.S. Davis and R.J. Richardson, *Toxicol. Res. Lab., Dept. of Environ. & Ind. Hlth., Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI*
- 442 **Reverse-Phase High Pressure Liquid Chromatography (HPLC) of Neurotoxic Phenylphosphonothioate and Related Compounds.** J. Lasker, K. Sivarajah, T.E. Eling and M.B. Abou-Donia, *Dept. of Pharmacol., Duke Univ., Durham, NC and NIEHS, Research Triangle Park, NC*
- 443 **Axonal Blocking, Myocardial Depressant, and Convulsant Actions of Disopyramide Phosphate.** M.P. Holsapple, A. Malave and G.K.W. Yim, *Dept. of Pharmacol. & Toxicol., Purdue Univ., West Lafayette, IN*
- 444 **Phencyclidine (PCP) - Induced Apneusis and Respiratory Arrest in Anesthetized Rats.** G.K.W. Yim, M.P. Holsapple and D.J. Ritter, *Dept. Pharmacol. & Toxicol., Sch. of Pharm. and Pharmacal Sci., West Lafayette, IN*
- 445 **Neuronal Morphology Following Acute Embryonic Exposure to Carbon Monoxide.** W.C. Daughtrey and S. Norton, *Dept. of Pharmacol., Univ. of Kansas Med. Ctr., Kansas City, KS*
- 446 **A Neurobehavioral Screen for the Early Detection of Neurotoxicity.** E.J. Moran, D.M. Ford, F.H. Stults, D.A. Gray, M. Gallo and J. Griffiths, *International Flavors and Fragrances Inc., Union Beach, NJ and Food and Drug Res. Labs., Inc., Waverly, NY.* Sponsor: O.D. Easterday

Annual Business Meeting

Tuesday, March 11, 1980

3:00 P.M.

Sheraton Room

Open to all SOT members

ISSUES SESSION

Wednesday, March 12, 1980

Sheraton Room

12 Noon - 1:15 P.M.

Bring a sandwich from the snack bar and participate in an open forum discussion of SOT affairs.

Chaired by President Tom S. Miya

ANNUAL BANQUET

Tuesday,, March 11,1980

7:00 P.M.

Washington Room

Open to all attendees and guests.

\$19.25

Complimentary wine,
courtesy Charles River Breeding Laboratories, Inc.