

18th ANNUAL MEETING

March 11-15, 1979

**Marriott Hotel
New Orleans, Louisiana**

PROGRAM

EIGHTEENTH ANNUAL MEETING

sponsored by

Society of Toxicology

Marriott Hotel - New Orleans, Louisiana

March 11 - 15, 1979

REGISTRATION FEES*

	<u>Member</u>	<u>Non- Member</u>	<u>Student, Full-time, Predoctoral</u>
Preregistration	\$30.00	\$40.00	\$ 5.00
At Conference	40.00	50.00	10.00
Banquet	16.00	16.00	16.00

*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

<u>Day</u>	<u>Topic</u>	<u>Platform</u>	<u>Room</u>	<u>See Page</u>
Monday A.M.	Inhalation Toxicology I		Mardi Gras Ballroom A, B, C, D	14
	Metabolism I		Mardi Gras Ballroom E, F, G, H	16
	Mycotoxins		Grand Ballroom (Acadia)	17
Monday P.M.	General Toxicology I		Mardi Gras Ballroom E, F, G, H	22
	Mutagenesis I		Mardi Gras Ballroom A, B, C, D	24
	Nervous System I		Grand Ballroom (Acadia)	25
Tuesday A.M.	Inhalation Toxicology III		Mardi Gras Ballroom A, B, C, D	31
	Immunotoxicology		Mardi Gras Ballroom E, F, G, H	34
	Metabolism II		Grand Ballroom (Acadia)	35
Wednesday A.M.	Halogenated Hydrocarbons I		Mardi Gras Ballroom A, B, C, D	40
	Metals II		Mardi Gras Ballroom E, F, G, H	41
	Reproduction & Development II		Grand Ballroom (Acadia)	42
Wednesday P.M.	Agricultural Chemicals I		Mardi Gras Ballroom A, B, C, D	47
	Drug Toxicology		Mardi Gras Ballroom E, F, G, H	48
	Oncogenesis		Grand Ballroom (Acadia)	49
Thursday A.M.	Environmental & Industrial II		Mardi Gras Ballroom A, B, C, D	56
	Halogenated Hydrocarbons III		Mardi Gras Ballroom E, F, G, H	57
	Hepatic & Gastrointestinal		Grand Ballroom (Acadia)	59

Symposia

Sunday P.M.	Industrial Symposium (Environmental Mutagens Society - SOT Registrants invited)		Monteleone Hotel	13
Monday A.M.	Animal Models in Human Risk Estimation (Jointly with Environ- mental Mutagens Society & Society of Teratology)		Grand Ballroom (Carondelet)	14
Tuesday A.M.	Aquatic Toxicology		Grand Ballroom (Carondelet)	30
Tuesday P.M.	Arias on TOSCA		Grand Ballroom (Carondelet)	39
Wednesday P.M.	Who Needs Toxicologists? (Jointly with American Academy of Clinical Toxicology, American Association of Poison Control Centers, American Board of Medical Technology, and Canadian Academy of Clinical and Analytical Toxicology)		Grand Ballroom (Carondelet)	46
Thursday A.M.	Novel Analytical Support for Clinical Toxicology (Jointly with American Academy of Clinical		Grand Ballroom (Carondelet)	55

Toxicology, American Association of Poison Control Centers, American Board of Medical Technology, and Canadian Academy of Clinical and Analytical Toxicology)

Poster

<u>Day</u>	<u>Topic</u>	<u>Room</u>	<u>See Page</u>
Monday	Cardiovascular & Renal	— NOTE —	18
A.M.	Environmental & Industrial I	All Poster Sessions are in the	19
	Reproduction & Development I	East End of the Exhibit Hall.	21
Monday	Inhalation Toxicology II	(Second Floor)	26
P.M.	Metals I		29
Tuesday	General Toxicology II		37
A.M.			
Wednesday	General Toxicology III		43
A.M.	Mutagenesis II		45
Wednesday	Halogenated Hydrocarbons II		50
P.M.	Metabolism III		52
Thursday	Agricultural Chemicals II		60
A.M.	Nervous System II		61

Annual Business Meeting

Tuesday, March 13, 1979

3:30 P.M.

Grand Ballroom

Open to all SOT Members

—GENERAL MEETING INFORMATION—

Abstracts of Papers

Distributed without charge to all members of the Society of Toxicology and to all preregistrants in advance of the meeting. Those registering at the meeting will be given the abstracts with their registration. Additional copies available at conference registration desk (Second Floor) at \$5 each.

Hotel Accommodations

The Marriott 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	\$48-\$60
Twin or Double	\$58-\$70

The Marriott accepts the following credit cards:

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

Sessions

All held on the second and third floors of the Marriott Hotel. Ladies Hospitality Room - Mardi Gras Balcony; L, M, N

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

Second Floor, Registration Area

—SPECIAL EVENTS AND SERVICES—

Annual Banquet

Grand Ballroom, 7:00 p.m., Wednesday, March 14, \$16. Complimentary wine, courtesy, Charles River Breeding Laboratories.

Annual Business Meeting

Grand Ballroom, 3:30 P.M. Tuesday. Open to all Society of Toxicology members.

“Issues” Session

Mardi Gras Ballroom A, B, C, D, Wednesday 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

Mardi Gras Balcony L, M, N (Fourth Floor), 9 A.M. - 4 P.M., Monday, Tuesday, Wednesday; 9 A.M. - Noon, Thursday.

Mixer and Reception

Grand Ballroom, 6:30 - 8 P.M. Sunday, Cash Bar. Jointly with Environmental Mutagens Society, Teratology Society.

Placement Service

Iberville and Bacchus Rooms (Fourth Floor),
10 A.M. - Noon, Monday, Tuesday, Wednesday
2 P.M. - 4 P.M., Monday, Tuesday
Co-Chairmen: Mark Hite, W.E. Rinehart

Press Room

Regent Room (Fourth Floor),
8 A.M. - 9 P.M., Monday, Tuesday, Wednesday
8 A.M. - Noon, Thursday

NOTE

The Environmental Mutagens Society Industrial Symposium, Sunday afternoon, March 11, in the Monteleone Hotel is open to all SOT members provided you wear your registration badge. The members of EMS are invited to participate in our Monday morning sessions. The Wednesday afternoon symposium is a joint activity with the American Academy of Clinical Toxicology, American Association of Poison Control Centers, American Board of Medical Technology, and Canadian Academy of Clinical and Analytical Toxicology, as are the Thursday morning sessions. The joint meeting of these four Societies will continue through March 16 at the Marriott. Society of Toxicology registrants may attend at no additional charge by displaying their registration badge.

———— COUNCIL (1978-1979) ————
**(Composed of the Officers and four
elected Councilors)**

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Gale C. Boxill, Secretary
Harold N. MacFarland, Treasurer
Harold M. Peck, Past President

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Herbert H. Cornish (1977-1979)
Robert A. Neal (1977-1979)
Charles F. Reinhardt (1978-1980)

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

1979 CONFERENCE

General Manager: Gale C. Boxill
Assistant: William E. McCormick
Registrar: Steven D. Cohen
Arrangements Chairman: Fred W. Oehme

PROGRAM COMMITTEE

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Ian C. Munro
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APPOINTMENTS

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Harry W. Hays

Placement

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

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Seymour L. Friess

**Representative to American Association for
Accreditation of Laboratory Animal Care**

Irwin A. Heyman

††Liaison with European Society of Toxicology

Robert A. Scala
Bo Holmstedt

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†Liaison with Environmental Mutagen Society

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Paul J. Garvin

***Liaison with Teratology Society**

Robert E. Staples

* Appointment for 1 year, ends April 30, 1979

** Appointment for 5 years, ends April 30, 1979

† Continuing appointment

†† Annual reappointment on a continuing basis

———— FUTURE MEETINGS - SOCIETY OF TOXICOLOGY ————

Meeting	Year	Dates	Location
19	1980	March 9-13	Sheraton Park Hotel Washington, DC
20	1981	March 8-12	Washington Hilton Washington, DC
21	1982	March 7-11	Sheraton Boston Boston, MA
22	1983	March	Las Vegas, NV (Hotel not selected)
23	1984	March 11-15	Atlanta Hilton Atlanta, GA

———— PAST PRESIDENTS ————

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

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	

Frank R. Blood

1974	.....	Y. Alarie	•
1975	.....	D.J. Ecobichon	
		G.J. Johnstone	
		O. Hutzinger	
1976	.....	R.D. Brown	
1977	.....	J. Dedinas	
		G.D. DiVincenzo	
		C.J. Kaplan	
1978	.....	P.J. Gehring	
		E.O. Madrid	
		G.R. McGowan	
		P.G. Watanabe	

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	

Education

1975	.....	H.C. Hodge	•
1976	.....	T.A. Loomis	
1977	.....	R.B. Forney	
1978	.....	(No Award)	

**Industrial Symposium:
Mutagens and Carcinogens in Food**

(Environmental Mutagens Society)

Sunday Afternoon, March 11, 1979

2:00 P.M. - 5:00 P.M.

Monteleone Hotel

***Chairperson: M. J. Prival, U. S. Food and Drug Administration,
Washington, DC***

(All SOT registrants are invited. Show your registration badge)

Mutagenic Testing of Generally Recognized as Safe (Gras) Additives in Food. M. J. Prival, *U.S. Food & Drug Admin., Washington, DC*

In Vitro and In Vivo Mutagenicity of Selected Pesticides. G. W. Newell, *National Academy of Sciences/National Research Council, Washington, DC*

Nitrate, Nitrite, and Nitrosamines: Intake Versus Endogenous Formation. S. R. Tannenbaum, *Massachusetts Institute of Technology, Cambridge, MA*

Mutagens in Cooked Foods and Their Implication for Cancer Prevention. Takashi Sugimura, *National Cancer Center Research Institute, Tokyo, Japan*

Mixer and Reception

Sunday, March 11, 1979

6:00 - 7:30 P.M.

Grand Ballroom

Marriott Hotel

Cash Bar

open to all attendees and guests

SYMPOSIUM*:

Animal Models in Human Risk Estimation

Monday Morning, March 12, 1979

8:30 - 10:30 A.M.

Grand Ballroom (Carondelet)

**Chairperson: J.J. McPhillips, Astra Pharmaceutical, Products,
Framingham, MA**

Introductory Remarks - J.J. McPhillips

- | | |
|-------|--|
| 8:30 | Animal Models for Mutagenesis. M.A. Bender, <i>Brookhaven National Laboratory, Upton, NY</i> |
| 9:00 | Model Systems For Assessment of Teratogenetic Effects in Humans: Nature of the Problem. E.M. Johnson, <i>Daniel Baugh Inst., Thomas Jefferson Univ., Philadelphia, PA</i> |
| 9:30 | Decision Points in Carcinogenesis Testing. J.H. Weisberger, (Co-arthured by G.M. Williams), <i>The Naylor Dana Institute for Disease Prevention, American Health Foundation, Valhella, NY</i> |
| 10:00 | Discussion |

*Jointly with Environmental Mutagens Society and Teratology Society.

PLATFORM SESSION 1: Inhalation Toxicology I

Monday Morning, March 12, 1979

Mardi Gras Ballroom A, B, C, D

**Co-Chairpersons: R.J. Jaeger, Harvard School of Public Health,
Boston, MA; E.W. Van Stee, NIEHS, Research Triangle Park, NC**

- | Paper No. | Time (A.M.) | |
|------------------|--------------------|---|
| 1 | 8:30 | The Importance and Results of Proper Morphologic Evaluation of the Nasal Turbinates in Inhalation Toxicity Studies. G.C. Jersey and R.J. Kociba, <i>Toxicology Research Laboratory, Dow Chemical U.S.A., Midland, MI</i> |
| 2 | 8:45 | Sensory Irritation with Toluene Diisocyanate in Single and Repeated Exposures. G.K. Sangha and Y. Alarie, <i>University of Pittsburgh, Dept. of Ind. Env. Hlth. Sci., Pittsburgh, PA</i> |

3	9:00	Interactions of Sulfur Dioxide and Acrolein as Sensory Irritants During Inhalation Studies in Mice. L.E. Kane and Y. Alarie <i>University of Pittsburgh, Dept. of Ind. Env. Hlth. Sci., Pittsburgh, PA</i>
4	9:15	Deposition of Sulfuric Acid Mist in the Respiratory Tract of the Dog, Rat and Guinea Pig. A.R. Dahl, B.A. Muggenburg and S.A. Felicetti, <i>Inhal. Tox. Res. Inst., Albuquerque, NM.</i> Sponsor: W.C. Dauterman
5	9:30	Differing Toxicity of 0.4 and 0.8 μm Sulfuric Acid Aerosols in Guinea Pigs. R.K. Wolff, S.A. Silbaugh, D.G. Brownstein and J.L. Mauderly. <i>Inhalation Toxicology Res. Inst. Albuquerque, NM.</i> Sponsor: R.O. McClellan
6	9:45	A Simulation Model For Describing The Metabolism of Inhaled and Ingested Selenium Compounds. M.A. Burkstaller, R.G. Cuddihy, R.O. McClellan and S. Heisler-Weissman. <i>Dept. of Biol., Univ. of New Mexico and Inhal. Tox. Res. Inst., Albuquerque, NM.</i>
7	10:00	The Pulmonary Retention of Coal Dusts in Dogs P.E. Morrow, F.R. Gibb, H. Beiter and F. Amato. <i>Department of Radiation Biology and Biophysics, Univ. of Rochester, Rochester, NY</i>
	10:15	Break - 15 minutes
8	10:30	Inhalation and Retention of Neutron-Activated Fly Ash in the Rat. L.C. Griffis and M.B. Snipes. <i>Inhal. Tox. Res. Inst., Albuquerque, NM.</i> Sponsor: R.O. McClellan
9	10:45	Deposition and Distribution of Total Particulate Matter (TPM) in BC3F1 Mice After Exposure to Cigarette Smoke. C.J. Henry, A. Lopez, C.E. Whitmire, J.E. Caton, K.M. Henderson and R.E. Kouri, <i>Depts. of Exper. & Biochem. Oncology, Microbiological Associates, Bethesda, MD & Anal. Chem. Div., Oak Ridge Natl. Labs, Oak Ridge, TN.</i> Sponsor: A. Pallotta
10	11:00	Acute Mortality Due to Inhalation of Thermal Decomposition Products of Synthetic and Natural Polymers. R.C. Anderson and Y. Alarie <i>University of Pittsburgh, Dept. of Ind. Env. Hlth. Sci., Pittsburgh, PA</i>
11	11:15	The Effects of Methylene Chloride Inhalation on Lung Phospholipids in the Rat. P.L. Wiesenfeld and A.G. Ulsamer, <i>Directorate for Engineering and Science, Consumer Product Safety Commission, Bethesda, MD</i>
12	11:30	A Closed Recirculating Inhalation Metabolism Chamber for Radiotracer Studies. J.A. McKelvey and T.R. Tyler, <i>Chemical Hygiene Fellowship, Carnegie-Mellon Inst. of Research, Pittsburgh, PA.</i> Sponsor: R.S.H. Yang
13	11:45	Human Pulmonary and Clinical Health Effect Studies of Exposure of Volunteers to Ammonium Nitrate Aerosol Under Simulated Worst Case Ambient Conditions. M.T. Kleinman, W.S. Linn, M.P. Jones, E.L. Avol, R.M. Bailey, J.D. Hackney. <i>Env. Hlth. Lab., Rancho Los Amigos Campus, U.S.C. School of Medicine, Downey, CA.</i> Sponsor: N. Jain

PLATFORM SESSION 2: Metabolism I

Monday Morning, March 12, 1979

Mardi Gras Ballroom E, F, G, H

Co-Chairpersons: C.F. Wilkinson, Cornell Univ., Ithaca, NY

R.I. Krieger, Univ. of California, Davis, CA

Paper No.	Time (A.M.)	
14	8:30	The Biotransformation and Biliary Excretion of Ethalfluralin in Male Rats. G.K. Hanasono and C.L. Moss, <i>Toxicology Division, Lilly Research Laboratories, Greenfield, IN.</i> Sponsor: J.S. Wold
15	8:45	Comparative Metabolism of Lindane in Rats Following Administration by Two Oral Routes. M.F. Copeland and R.W. Chadwick <i>Environmental Protection Agency, HERL, Research Triangle Park, NC</i>
16	9:00	Pharmacokinetic Studies on a New Candidate Antimalarial 3-DI-n-Butylamino-1-[2,6-Bis(4-Trifluoromethylphenyl)-4-Pyridyl] Propanol Methanesulfonate., WR-172435. CH₃SO₃H, In Rhesus Monkeys. J.R. Hodgson, J.L. Minor, C.C. Lee and H. Chung, <i>Midwest Research Institute, Kansas City, MO and Walter Reed Army Institute of Research, Washington, DC</i>
17	9:15	Pharmacokinetics and Metabolism of Metronidazole (Flagyl) in Rat After Intravenous and Intravaginal Administration. H.S. Buttar, W.H. Siddiqui and J.H. Moffatt, <i>Drug Research Laboratories, Health Protection Branch, Ottawa, Canada.</i> Sponsor: K.S. Khera
18	9:30	Pharmacokinetics and Metabolism of Ethylenediamine in the Rat Following Oral, Endotracheal and Intravenous Dosing. R.S.H. Yang, M.J. Tallant, and D.N. O'Malley. <i>Chemical Hygiene Fellowship, Carnegie-Mellon Inst. of Research, Pittsburgh, PA</i>
19	9:45	The Pharmacokinetics and Metabolism of Inhaled Methylene Chloride in Rats. M.J. McKenna, J.A. Zempel and W.H. Braun, <i>Toxicology Research Laboratory, Health and Environmental Research, Dow Chemical USA, Midland, MI</i>
	10:00	Break - 30 minutes
20	10:30	The Disposition of Threo- α -(2-Piperidyl)-2,8-Bis(Tri-fluoromethyl)-4-Quinolinemethanol Hydrochloride (WR 177, 602.HC1) in Mice. H. Chung, V. Jimmerson, D. Bounds, R. Keller and R. Rozman, <i>Dept. of Pharmacology, Walter Reed Army Inst. of Research, Washington, DC</i>
21	10:45	Metabolism of Ethyleneurea and Ethylene Thiourea in the Rat. F. Iverson, J. Lawrence and W. Marshall, <i>Foods Directorate, Health Protection Branch, Ottawa, Canada, and Chemistry and Biology Research Institute, Agriculture Canada, Ottawa, Canada</i>
22	11:00	Carbon Disulfide and Carbonyl Sulfide Metabolism in Isolated Hepatocytes. C.P. Chengelis and R.A. Neal

Center in Environmental Toxicology, Dept. of Biochemistry, Vanderbilt Univ., Nashville, TN

- 23 11:15 **Metabolism of 1,3-Benzodioxoles to Carbon Monoxide.** C.F. Wilkinson, L.S. Yu and M.W. Anders, *Dept. Entomology, Cornell Univ., Ithaca, NY and Dept. Pharmacology, Univ. of Minnesota, Minneapolis, MN*
- 24 11:30 **Metabolism of 17 alpha-Ethynylestradiol (EE2) in the Rhesus Monkey.** L.A. Raitano, W. Slikker, D.E. Hill, T.J. Szigak and E.D. Helton. *NCTR, Jefferson, AR and Univ. of Arkansas Medical School, Little Rock, AR.* Sponsor: T.E. Shellenberger

PLATFORM SESSION 3: Mycotoxins

Monday Morning, March 12, 1979

Grand Ballroom (Acadia)

**Co-Chairpersons: A.W. Hayes, Univ. Mississippi Med. Center,
Jackson, MS**

D.P.H. Hsieh, Univ. of California, Davis, CA

Paper No.	Time (A.M.)	
25	8:30	In Vitro and in Vivo Effects of Penicillic Acid on Adenosine Triphosphatase Activities in Mouse. P.K. Chan, T.D. Phillips and A.W. Hayes. <i>Dept. of Pharmacol. and Toxicol., Univ. of Mississippi Medical Center, Jackson, MS</i>
26	8:45	Inhibitory Characteristics of the Mycotoxin Penicillic Acid on (Na⁺-K⁺)-Activated Adenosine Triphosphatase. T.D. Phillips, P.K. Chan and A.W. Hayes. <i>Dept. of Pharmacol. & Toxicol., Univ. Mississippi Medical Center, Jackson, MS</i>
27	9:00	Renal and Hepatic Clearance Studies of Citrinin in Rats. R.D. Phillips, W.O. Berndt and A.W. Hayes. <i>Dept. of Pharmacol. & Toxicol., Univ. Mississippi Medical Center, Jackson, MS</i>
28	9:15	Toxicity of Secalonic Acid-D. C.S. Reddy, A.W. Hayes, W.L. Williams & A. Ciegler. <i>Dept. Pharmacol. & Toxicol. and Dept. of Anatomy. Univ. Mississippi Medical Center Jackson, MS</i>
29	9:30	Comparative Effects of Toxins from Clostridium Difficile and Clostridium Sordellii. M. Ehrich, R. Van Tassell, J.E. Aswell, and T.D. Wilkins, <i>Anaerobe Laboratory, Virginia Polytechnic Inst. and State Univ., Blacksburg, VA</i> Sponsor: S.D. Cohen
30	9:45	T-2 Mycotoxicosis in Male Broiler Chickens. F.J. Hoerr and W.W. Carlton, <i>Dept. of Vet. Micro. Path. and Pub. Hlth., Purdue Univ., West Lafayette, IN</i>
31	10:00	Alterations in Covalent Binding of Aflatoxin B₁ to Liver Macromolecules as Influenced by Route of Administration. J.R. Hayes and T.C. Campbell <i>Div. of Nutri. Sci., Cornell Univ. Ithaca, NY</i>

	10:15	Break - 15 minutes
32	10:30	The <i>In Vivo</i> and <i>In Vitro</i> Effects of Rubratoxin B on Hepatic Microsomal Enzymes in Male Mice. M.Y. Siraj and A.W. Hayes. Dept. Pharmacol. & Toxicol., Univ. Mississippi Medical Center, Jackson, MS
33	10:45	Effect of Altered Microsomal Metabolism on Rubratoxin Toxicity. S.A. Watson and A.W. Hayes, Dept. Pharmacol. & Toxicol., Univ. Mississippi Medical Center, Jackson, MS
34	11:00	The Aflatoxin Intake of Various Age Groups of Canadians. T. Kuiper-Goodman, D.C. Kirkpatrick and D. Krewski. Health Protection Branch, Ottawa, Canada
35	11:15	Factors Related to the Nephrotoxicity Produced by Certain Mycotoxins. W.O. Berndt and A.W. Hayes. Dept. Pharmacol. and Toxicol., Univ. Mississippi Medical Center, Jackson, MS

POSTER SESSION 1: Cardiovascular and Renal

Monday Morning, March 12, 1979

Exhibit Hall (East End)

Co-Chairpersons: J. J. Kocsis, Thomas Jefferson Univ.,

Philadelphia, PA

J. J. McPhillips, Astra Pharmaceutical Products,

Framingham, MA

Paper No.	Time (A.M.)	
36	8:30 - 10:30	Allylamine Inhibition of Monoamine Oxidase: Antagonism by Semicarbazide. T.J. Nelson and P.J. Boor. Dept. of Pathol., Univ. of Texas Medical Branch, Galveston, TX. Sponsor: M.T. Moslen
37		Pathophysiologic Profile of Acute Phencyclidine Lethality in the Conscious Dog. R.B. Hackett, I.W. Waters, K.W. Obrosky and R.F. Borne, Departments of Pharmacol. and Med. Chem., Sch. Pharmacy, Univ. of Mississippi, University, MS. Sponsor: W.M. Davis
38		Acetaminophen (APAP) - Induced Glutathione Depletion in the Isolated Perfused Kidney (IPK). J.F. Newton, W.M. Kluwe and J.B. Hook. The Toxicology Program and Dept. of Pharmacol. & Tox., Michigan State Univ., East Lansing, MI
39		The Comparative Nephrotoxicity of Aminoglycoside Antibiotics in the Rat. J.S. Wold, D.O. Robbins, C.L. Gries, B.L. Miller and S.A. Turnipseed. Toxicology Div., Lilly Research Laboratories, Greenfield, IN
40		Renal Functional Changes Associated With the Nephrotoxicity of Cis-Dichlorodiammineplatinum (CDDP). R.S. Goldstein, B. Noordewier, J.T. Bond, J.B. Hook and G.H. Mayor. The Toxicol. Program, Depts. of

- Food Sci. and Human Nutr., Pharmacol. & Toxicol., Human Develop., and Med., Michigan State Univ., East Lansing, MI*
- 41 **The Toxic Effects of Hexachlorobutadiene on the Rat Kidney.** E.A. Lock and J. Ishmael, *Imperial Chemical Industries Ltd., Central Toxicology Lab., Alderley Park, Nr. Macclesfield, Cheshire, SK10 4TJ, UK.* Sponsor: M.S. Rose
- 42 **Cardiovascular Toxicity of BHT (Butylated Hydroxytoluene) and BHA (Butylated Hydroxyanisole) -** S.C. Gad, B.H. Chin, J.A. McKelvey, D.A. Acosta and S.W. Leslie. *Chem. Hygiene Fellowship, Carnegie-Mellon Inst. Research, Pittsburgh, PA and Univ. of Texas Austin, TX.* Sponsor: C.S. Weil
- 43 **Biphasic Response of Renal 5'Phosphodiesterase Following Folic Acid Administration in the Rat.** R.R. Gaddis and R.T. Louis-Ferdinand. *College of Pharmacy and Allied Health Professions, Wayne State Univ., Detroit, MI*
- 44 **A Comparative Study of the Effects of Three Halogenated Methanes on Cardiovascular Dynamics and Myocardial Energy Metabolism.** R.N. Terpolilli, R.A. Davis, and K.C. Back. *Toxic Hazards Division, 6570th Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, OH*

POSTER SESSION 2: Environmental and Industrial I

Monday Morning, March 12, 1979

Exhibit Hall (East End)

Co-Chairpersons: J. J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA

J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

- | Paper No. | Time (A.M.) | |
|-----------|--------------|--|
| 45 | 8:30 - 10:30 | Effects of Inhaled Ethylene Dibromide (EDB) on Reproduction in Rats. R.D. Short, J.M. Winston, C.B. Hong, J.L. Minor, C.C. Lee and J. Seifter. <i>Midwest Research Inst., Kansas City, MO and EPA, Washington, DC</i> |
| 46 | | Effects of Polybrominated Biphenyls on Microsomal Enzyme Activity and Action of Exogenous Steroid Hormones During Development. K.M. McCormack and J.B. Hook. <i>The Tox. Program and Dept. of Pharmacol. & Tox., Michigan State Univ., East Lansing, MI</i> |
| 47 | | Some Non "Priority Pollutants" Commonly Found in Industrial Effluents. S.M. Somani, R.G. Teece, and D. Schaeffer. <i>School of Medicine, Southern Illinois Univ., and Illinois Environmental Protection Agency, Springfield, IL</i> |

- 48 **Biological Variation in the Reproductive Capacities of Control Mallard Ducks (*Anas Platyrhynchos*) During One-Generation Reproduction Studies.** V.J. Piccirillo, *Hazelton Laboratories America, Inc., Vienna, VA* and R.P. Quesenberry, *Truslow Farms, Inc., Chestertown, MD*. Sponsor: H.A. Rutter
- 49 **Effect of 3- or 6-Month Inhalation of 1,2-Dibromoethane in Rats Treated With Disulfiram.** J.M. Winston, C.B. Hong, C.C. Lee, and L.C.K. Wong, *Pharmacol. & Tox., Midwest Research Institute, Kansas City, MO*
- 50 **Acute and Subchronic Toxicity of Solvent Refined Coal-Related Hydrocarbons.** D.D. Mahlum and F.D. Andrew, *Biology Department, Battelle Pacific Northwest Laboratory, Richland, WA*.
- 51 **Comparative Mutagenesis of Solvent Refined Coal and Shale Oil Samples From Pilot Plant Operations.** R.A. Pelroy and M.R. Petersen, *Biology Department, Battelle Pacific Northwest Laboratory, Richland, WA* Sponsor: D.D. Mahlum
- 52 **Use of Mammalian Cell Culture Techniques For Determining the Toxic and Carcinogenic Potential of Complex Organic Mixtures.** M.E. Frazier, T.K. Andrews, B.B. Thompson, M.R. Petersen, and M.J. Hooper. *Biology Dept., Battelle Pacific Northwest Laboratory, Richland, WA*. Sponsor: D.D. Mahlum
- 53 **Developmental Toxicity of Solvent Refined Coal-Related Hydrocarbons.** F.D. Andrew, D.D. Mahlum, and M.R. Petersen. *Biology Dept., Battelle Pacific Northwest Laboratory, Richland, WA*
- 54 **Disposition of Process Solvent From Solvent Refined Coal in Tissues of the Rat After Oral Dosing.** F.G. Burton, R.E. Schirmer, D.D. Mahlum and F.D. Andrew. *Biology Department, Battelle Pacific Northwest Laboratory, Richland, WA*
- 55 **Fate of N-Butanol in Rats After Oral Administration and Its Uptake by Dogs After Inhalation or Skin Application.** G.D. DiVincenzo and M.L. Hamilton. *Health, Safety & Human Factors Laboratory, Eastman Kodak Co., Rochester, NY*.
- 56 **Niax Catalyst ESN - Subchronic Neuropharmacology and Neurotoxicology.** S.C. Gad, R.R. Maronpot, J.A. McKelvey, and R.A. Turney. *Chemical Hygiene Fellowship, Carnegie-Mellon Inst. Research, Pittsburgh, PA*. Sponsor: C.S. Weil
- 57 **Toxicology of Heat Transfer Fluids Proposed For Use In Solar Energy Applications.** C.R. Clark, T.C. Marshall, B.S. Merickel and C.H. Hobbs. *Inhalation Tox. Research Inst., Albuquerque, NM*. Sponsor: R.O. McClellan
- 58 **An Assessment of the Carcinogenic and Mutagenic Potential of Methylmethacrylate.** D. Anderson, E. Longstaff and J. Ashby. *Imperial Chemical Industries, Limited, Central Tox. Laboratory, Alderly Park, Nr. Macclesfield, Cheshire, SK10 4TJ, UK*. Sponsor: J. Smith

- 59 **Methyl Methacrylate: Subchronic, Chronic and Oncogenic Inhalation Safety Evaluation Studies.** J.M. Smith, G. Cruzan, J.A. Drees, M.F. Tansy, W.B. Coate, and F.E. Reno. *Rohm and Haas Co., Spring House, PA; Temple Univ., Philadelphia, PA; and Hazelton Laboratories America, Inc., Vienna, VA*
- 60 **Diethanolamine Induced Changes in the Neonatal Rat.** G.A. Burdock and L.W. Masten. *Dept. of Pharmacol., Sch. of Pharmacy, Univ. of Mississippi, University, MS.* Sponsor: W.M. Davis
- 61 **Disposition Processes in Mussels *Mytilus Californianus*.** S.J. Gee, R.I. Krieger, L.O. Lim and S.R. Wellings, *Depts. Env. Tox. and Med. Pathol., Univ. Calif., Davis, CA*
- 62 **A Unique System For Quantification of Incapacitation Time For Rats Exposed to Products of Combustion.** J.B. Reid and T.F. Brecht. *Chemical Hygiene Fellowship, Carnegie-Mellon Institute Research, Pittsburgh, PA* Sponsor: E.R. Homan

POSTER SESSION 3: Reproduction and Development I

Monday Morning, March 12, 1979

Exhibit Hall (East End)

Co-Chairpersons: J. J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

- | Paper No. | Time (A.M.) | |
|-----------|-------------|--|
| 63 | 8:30-10:30 | Teratogenicity of Diphenylhydantoin in New Zealand White Rabbits. R. M. McClain and L. Langhoff, <i>Dept. of Tox., Hoffmann-La Roche Inc., Nutley, New Jersey</i> Sponsor: E. A. Pfitzer. |
| 64 | | Teratogenic Effects of Aspirin in the Fischer 344 Rat. L. R. DePass, W. M. Snellings, and M. D. Woodside, <i>Chemical Hygiene Fellowship, Carnegie-Mellon Institute Research, Pittsburgh, PA.</i> Sponsor: E. R. Homan. |
| 65 | | Effects of Monoethylhexyl Phthalate (MEHP) on Pregnant Rabbits and Their Offspring. J. A. Thomas, P. R. Felice, L. G. Schein, P. K. Gupta and R. E. McCafferty, <i>West Virginia Univ. Medical Center, Morgantown, WV.</i> |
| 66 | | Assessment of the Teratogenic Potential of Biphenyl, Ethoxyquin, Piperonyl Butoxide, Diuron, Thiabendazole, Phosalone, and Lindane in Rats. K. S. Khera, C. Whalen, G. Trivett, and G. Angers, <i>National Health and Welfare, New Research Centre, Tunney's Pasture, Ottawa, Canada.</i> |
| 67 | | Teratogenicity Evaluation of Commercial Formulation of Dimethoate (Cygon 4E) in the Cat and Rat. K. S. Khera, <i>New Research Centre, National Health and Welfare, Tunney's Pasture, Ottawa, Canada.</i> |

- 68 **A Correlation Between Elevated Amniotic Fluid Osmolality and the Developmental Toxicity of Trypan Blue.** J. Rogers, *Dept. of Biology, Univ. of Miami, Coral Gables, FL.* Sponsor: J. Radomski.
- 69 **The Effects of 2-Nitropropane, Naphthalene, and Hexachlorobutadiene on Fetal Rat Development.** S. J. Harris, G. P. Bond, and R. W. Niemeier, *ASTS, DBBS, NIOSH, Cincinnati, OH.* Sponsor: T. R. Lewis.
- 70 **Teratology Studies of Benzethonium Chloride, Cetyl Pyridinium Chloride and Chlorhexidine in Rats.** M. R. Gilman, S. J. De Salva, *Colgate-Palmolive Company, Piscataway, NJ.*
- 71 **Reversal of Streptomycin-Induced Dyskinesia in Rats by Dopaminergic Agonists.** F. R. Alleva, T. Balazs, S. O. Morris, W. R. Crowley, T. L. O'Donohue, and D. M. Jacobowitz, *Bureau of Drugs, FDA, Washington, DC and Laboratory of Clinical Science, NIMH, Bethesda, MD.*
- 72 **Characterization of a Diethylstilbestrol (DES) Binding Component in Fetal Rat Uteri.** G. L. Kimmel and J. R. Harmon, *National Center for Toxicological Research, Jefferson, AR.* Sponsor: L. Fishbein.
- 73 **Craniofacial Teratogenicity of an Experimental Anti-allergy Agent.** F. Martz, L. Arslanoglou, and R. D. Hemm, *Toxicology Section, Ayerst Research Laboratories, Chazy, NY.*
- 74 **Studies on the Embryotoxicity of Phosphonacetyl-L-Aspartic Acid (PALA) in Mice.** S. M. Sieber, D. Cooney, C. Botkin and R. H. Adamson, *National Cancer Institute, Bethesda, MD.*

PLATFORM SESSION 4: General Toxicology I

Monday Afternoon, March 12, 1979

Mardi Gras Ballroom E, F, G, H

**Co-Chairpersons: R. C. Schnell, Purdue Univ., West Lafayette, IN
D. B. Menzell, Duke Univ. Med. Center, Durham, NC**

Paper No.	Time (P.M.)	
75	1:30	Disposition of an Oral Dose of O-Ethyl-O-p-Nitrophenyl Phenylphosphonothioate (EPN) in the Rat. J. M. Charles and J. Farmer, <i>Toxic Effects Branch, HERTL, Environmental Protection Agency, Research Triangle Park, NC.</i> Sponser: M. B. Abou-Donia.
76	1:45	The Oral and Dermal Uptake of Radiolabeled Fyrol FR-2 by Rats and Rabbits. A. G. Ulsamer, P. L. Weisenfeld, and R. G. Collins, <i>Consumer Product Safety Commission, Bethesda, MD.</i>
77	2:00	Effects of N-(Phosphonomethyl)Glycine on Some Energy-Linked Functions of Rat Liver Mitochondria. O. O. Olorunsogo, E. A. Bababunmi, and O. Bassir, <i>Dept. of Biochemistry, Univ. of Ibadan, Ibadan, Nigeria.</i>

- 78 2:15 **Effect of Partial Hepatectomy on Benzene Metabolism and Toxicity.** D. Sammett, E. W. Lee, J. J. Kocsis and R. Snyder, *Dept. of Pharmacol., Thomas Jefferson Univ., Philadelphia, PA.*
- 79 2:30 **Benzene Inhibits Ovarian Hypertrophy in the Hemispayed Rat.** M. D'Souza, R. Snyder and J. J. Kocsis, *Thomas Jefferson Univ., Philadelphia, PA.*
- 80 2:45 **The Kinetics and Effects of Chlorine Dioxide in Drinking Water on Rat and Chicken Blood.** M. S. Abdel-Rahman and D. Couri, *Ohio State Univ. Toxicology, Columbus, OH.*
- 81 3:00 **Separation of the Active Components of an African Arrow Poison.** E. B. Cook, M. Dennis and R. F. Ochillo, *College of Pharmacy, Xavier Univ., New Orleans, LA.* Sponsor: B. V. R. Sastry.
- 3:15 Break - 15 Minutes
- 82 3:30 **Toxicological Studies of an African Arrow Poison.** M. O. Smith, H. Busby, G. J. McCreary and R. F. Ochillo, *College of Pharmacy, Xavier Univ., New Orleans, LA.* Sponsor: B. V. R. Sastry.
- 83 3:45 **The Importance of Dose Frequency to Zinc Pyridinethione-Induced Paralysis.** W. B. Gibson, *Miami Valley Laboratories, The Procter & Gamble Co., Cincinnati, OH.* Sponsor: E. V. Buehler.
- 84 4:00 **The Effect of the Acidic and Basic Fractions of Marihuana Whole Smoke Condensate on THC-Induced Hypothermia in Mice.** J. M. Johnson, L. Lemberger, W. S. Dalton, and R. B. Forney, *Dept. of Pharmacol. and Tox., Indiana Univ. Sch. of Med. and Lilly Research Laboratories, Indianapolis, IN.*
- 85 4:15 **A 90-Day Inhalation Toxicity Study of Epichlorohydrin in Laboratory Rodents.** J. F. Quast, J. W. Henck, M. J. McKenna, *Toxicology Research Lab., Dow Chemical U.S.A., Midland, MI.* Sponsor: P. J. Gehring.
- 86 4:30 **Comparative Toxicology of Butyl Nitrites in Mice.** D. P. McFadden and R. P. Maickel, *Dept. of Pharmacol. & Tox., Purdue Univ., West Lafayette, IN.*
- 87 4:45 **Acute and Subchronic Toxicity of Alpha-Picoline in Rats.** P. G. Watanabe, R. J. Kociba, D. G. Keyes, R. M. Carreon and H. O. Yakel, *Health and Environmental Research, Dow Chemical Company, Midland, MI.*

PLATFORM SESSION 5: Mutagenesis I

Monday Afternoon, March 12, 1979

Mardi Gras Ballroom A, B, C, D

Co-Chairpersons: S. D. Cohen, Univ. of Connecticut, Storrs, CT

E. D. Gralla, Chemical Ind. Inst. Toxicology,

Research Triangle Park, NC

Paper No.	Time (P.M.)	
88	1:30	Measurement of Chemical Induced DNA Damage in Cultured Mammalian Cells: A Comparison of Three Methods. G. S. Probst, L. E. Hill and B. J. Bewsey, <i>Lilly Research Laboratories, Greenfield, IN.</i> Sponsor: J. S. Wold.
89	1:45	Characterization of Ames Mutagen Assay Using Aflatoxin B₁ as a Model Carcinogen. Cheng-I Wei and D. P. H. Hsieh, <i>Dept. of Environ. Tox., Univ. of California, Davis, CA.</i>
90	2:00	Mutagenic N-Nitroso Amadori Compounds Formed From Model Maillard Non-Enzymatic Browning Products in the Presence of Nitrite. J. R. Coughlin, G. F. Russell, <i>Dept. Food Sci. & Tech.,</i> and C. I. Wei, D. P. H. Hsieh, <i>Dept. Env. Tox., Univ. of California, Davis, CA.</i>
91	2:15	Mutagenicity of 1,2-Dibromo-3-Chloropropane (DBCP): In Vivo Cytogenetics Study in the Rat. R. W. Kapp, Jr., <i>Hazleton Lab. America, Inc., Vienna, VA.</i> Sponsor: M. Steinberg.
92	2:30	Disposition of Benzo(a)Pyrene in a Bacterial Cell Suspension Containing Rat Hepatic Microsomal Protein. J. Lasker, D. E. Rickert, J. G. Dent, <i>Duke Univ., Durham, NC, and Chem. Ind. Inst. of Tox., Research Triangle Park, NC.</i> Sponsor: J. E. Gibson.
93	2:45	Mutagenicity of Halogenated and Oxygenated 3-Carbon Compounds. S. J. Stolzenberg and C. H. Hine, <i>Dept. of Pharmacol., Univ. of California, School of Medicine, San Francisco, CA.</i>
	3:00	Break - 15 Minutes
94	3:15	Mutagenicity Studies of Flavonoids In Vivo and In Vitro. J. T. MacGregor, <i>USDA, Western Regional Research Center, Berkeley, CA.</i>
95	3:30	Mutagenesis of 2-Nitrofluorene (NF), 2-Nitrosofluorene (NOF) and 2-Hydroxylaminofluorene (NHOHF) for Salmonella TA 100 and TA 100 FR. L. S. Andrews, L. R. Pohl, J. A. Hinson and J. R. Gillette, <i>Lab. Chem. Pharm., NHLBI, Bethesda, MD</i>
96	3:45	The Mutagenic Property of Chamuvaritin, A Chemical Isolated From an African Medicinal Plant. A. O. Uwaifo, D. A. Okorie, and E. A. Bababunmi, <i>Depts. of Biochemistry and Chemistry, Univ. of Ibadan, Ibadan, Nigeria.</i>

- 97 4:00 **The Mutagenicity of Palmotoxin B₀ Relative to Aflatoxins B₁ and M₁.** A. O. Uwaifo, G. O. Emerole, O. Bassir, and E. A. Bababunmi, *Dept. of Biochemistry, Univ. of Ibadan, Ibadan, Nigeria.*
- 98 4:15 **Mutagenic Evaluation of Oxidation Products of p-Phenylenediamene — A Hair Dye Component.** M. J. Shah and A. W. Andrews, *Clement Associates, Inc., Washington, DC and Frederick Cancer Research Center, Frederick, MD.* Sponsor: Y. K. Luthra.
- 99 4:30 **Enzymatic Alteration of the Mutagenicity of Extracts from Human Fecal Samples.** J. E. Aswell, M. Ehrich, and T. D. Wilkins, *Anaerobe Laboratory, Virginia Polytechnic Inst. and State Univ., Blacksburg, VA.* Sponsor: S. D. Cohen.

PLATFORM SESSION 6: Nervous System I

Monday Afternoon, March 12, 1979

Grand Ballroom (Acadia)

**Co-Chairpersons: D. E. Woolley, Univ. of California, Davis, CA,
T. O. McDonald, Tulane Univ., New Orleans, LA**

Paper No.	Time (P.M.)	
100	1:30	The Effects of Ethanol on Human Psychomotor Performance: I Calibration of a Behavioral Toxicology Test Battery. S. J. Baker and M. B. Chenoweth, <i>Bio-Med. Res., The Dow Chemical Co., Midland, MI.</i>
101	1:45	Brain Glucose and Lactate Levels in Offsprings of Fisher Dams Treated with Δ 9-Tetrahydrocannabinol (Δ 9-THC). Y. K. Luthra, H. Rosenkrantz, P. A. Hughes and R. E. Haskell, <i>Clement Assoc., Inc., Washington, DC, Mason Res. Inst., Worcester, MA.</i>
102	2:00	Effects of d-Amphetamine and Paraquat on Single Spatial Alternation Performance. J. A. Dougherty and W. J. Brock, <i>Graduate Center for Tox., Univ. of Kentucky, Lexington, KY.</i> Sponsor: H. W. Dorough.
103	2:15	Pharmacokinetics and Behavioral Effects of Cocaine in the Horse. T. Shults, J. Combie, J. Dougherty, and T. Tobin, <i>Graduate Center for Tox., Univ. of Kentucky, Lexington, KY.</i> Sponsor: H. W. Dorough.
104	2:30	Necrosis Produced in Fetal Mouse Brain by Transplacental Exposure to the Mycotoxin, Ochratoxin A. G. M. Szczech and R. D. Hood, <i>The Upjohn Co., Kalamazoo, MI and The University of Alabama, Tuscaloosa, AL.</i>
105	2:45	Protective Effects of Atropine and/or Morphine Against the Lethality Due to dl-Muscarine and Furan Analogs of Muscarine. O. S. Tayeb and B. V. R. Sastry, <i>Dept. of Pharmacol., Vanderbilt Univ. Sch. Med., Nashville, TN.</i>

106	3:00	The Beagle Dog as an Indicator of Experimentally-Induced Retinopathy. U. Schaeppi, <i>Ciba-Geigy Limited, CH-4002 Basle, Switzerland</i>
107	3:15	Studies on Hexane 2,5-Dione Neurotoxicity: No Effect on Microtubular Properties. J. P. Nachtman and D. Couri. <i>Ohio State Univ. Toxicology, Columbus, OH.</i>
	3:30	Break - 15 Minutes
108	3:45	Studies on the Mechanism of Acrylonitrile Neurotoxicity. M. Abreu and A. E. Ahmed, <i>Dept. of Pathol., Univ. of Texas Medical Branch, Galveston, TX.</i> Sponsor: W. Decker.
109	4:00	The Structure-Activity Relationship of Aliphatic Diketones and Their Potential Neurotoxicity. J. L. O'Donoghue and W. J. Krasavage, <i>Health, Safety, and Human Factors Lab., Eastman Kodak Company, Rochester, NY.</i>
110	4:15	Comparative Neurotoxicity and Metabolism of Ethyl Butyl Ketone and Methyl N-Butyl Ketone of Rats. G. V. Katz, J. L. O'Donoghue, G. D. DiVincenzo and C. J. Terhaar, <i>Health, Safety, and Human Factors Lab., Eastman Kodak Company, Rochester, NY.</i>

POSTER SESSION 4: Inhalation Toxicology II

Monday Afternoon, March 12, 1979

Exhibit Hall (East End)

Co-Chairpersons: J. J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

Paper No.	Time (P.M.)	
111	1:30-3:30	Simulation Studies of Blood Carboxyhemoglobin Levels Associated with Inhalation Exposure to Methylene Chloride. C. L. Hake, <i>Dept. of Env. Med., Medical College of Wisconsin, Milwaukee, WI.</i>
112		Adaptive Reaction to Carbon Monoxide-Induced Hypoxia. J. J. McGrath, K. C. Chen, J. J. Vostal, <i>Biomed. Science Dept., General Motors Corp. Research Laboratories, Warren, MI.</i>
113		Acute Inhalation Toxicity of Pyrolysis Products of Polymeric Cables, R. R. Raje, <i>Arnold & Marie Schwartz College of Pharmacy and Health Science, Long Island Univ., Brooklyn, NY.</i> Sponsor: W. H. Lawrence.
114		Pulmonary Mechanics in Unanesthetized Guinea Pigs After Acute Exposure to Plastics Combustion Products. W. Skornik, R. Heimann and R. J. Jaeger, <i>Harvard School of Public Health, Boston, MA.</i>
115		Biochemical Changes in Guinea Pig Lungs Following Exposure to Plastics Combustion Products, Paraquat, or Antu. R. Heimann, W. Skornik, and R. J. Jaeger, <i>Harvard School of Public Health, Boston, MA.</i>

- 116 **Accumulation of Paraquat and Diquat by Cultured Type II Pneumocytes.** K. Saito, W. B. Parker, and D. B. Menzel. *Dept. of Pharmacol. and Med., Duke Univ. Medical Center, Durham, NC.*
- 117 **The Effect of High Concentrations of Oxygen on the Toxicity of Paraquat and Diquat in Rats.** I. S. Pratt, P. L. Keeling & L. L. Smith, *Imperial Chemical Industries Ltd., Central Toxicology Lab., Alderley Park, Nr. Macclesfield, Cheshire, UK.* Sponsor: M. S. Rose.
- 118 **Peracute Toxicity of Paraquat and Diquat in 100% Oxygen.** J. P. Kehrer, *Univ. of Tenn-Oak Ridge Graduate School of Biomedical Sci.,* W. Haschek and H. P. Witschi, *Biology Division, Oak Ridge National Laboratory, Oak Ridge, TN*
- 119 **Oxygen Toxicity in the Rat: Correlation Between Age-Dependent Histochemical Findings and Enzyme Induction.** J. B. Stevens and A. P. Autor. *The Toxicology Center, Dept. of Pharmacol., Univ. of Iowa, Iowa City, IA.*
- 120 **Effect of Ozone on Respiratory Response of Guinea Pigs to Histamine.** T. Gordon and M. O. Amdur, *Dept. Nutr. and Food Sci., Massachusetts Institute of Technology, Cambridge, MA.*
- 121 **Smoke Exposure in Rodents: Responses of Hepatic, Renal and Pulmonary Aryl Hydrocarbon Hydroxylase in Males and Females of Three Species.** M. H. Bilimoria and D. J. Ecobichon, *Path. Inst. and Dept. of Pharmacol. and Therap., McGill Univ., Montreal, Canada.*
- 122 **Sensory Irritation Tolerance Development to Chlorine in Rats Following Repeated Inhalation.** C. S. Barrow, W. Steinhagen, and M. Phelps, *Chemical Ind. Inst. of Tox., Research Triangle Park, NC.* Sponsor: J. E. Gibson.
- 123 **Lung Sulfhydryl Content in Rats Following Chlorine Inhalation.** D. E. Dodd, J. S. Bus, and C. S. Barrow, *Chemical Ind. Inst. of Tox., Research Triangle Park, NC.* Sponsor: J. E. Gibson.
- 124 **Identification of Two Forms of Fluoride in Plasma of Rats Inhaling Hydrogen Fluoride.** J. B. Morris and F. A. Smith. *School of Medicine and Dentistry, Univ. of Rochester, Rochester, NY.*
- 125 **The Effect of SO₂ on the Upper Respiratory Tract of Rats.** L. L. Smith, L. M. Cobb, *Huntingdon Research Centre,* and K. Barrett-Bee, *ICI Ltd., CTL, Alderley Park, Nr. Macclesfield, Cheshire, UK.*
- 126 **Chlorphentermine (CP)-Induced Phospholipidosis in Rats: Fractionation of Alveolar Macrophage (AM)-Derived Cells by Centrifugal Elutriation.** M. J. Reasor, R. A. Koshut, and V. Castranova. *W.Va. Univ. Med. Ctr. and ALOSH/NIOSH, Morgantown, WV.* Sponsor: J. U. Bell.
- 127 **Endobronchial Lavage Fluid as an Indicator of Acute Lung Damage: Effect of Species, Age and Method of**

- Lavage on Baseline Values.** R. F. Henderson, A. H. Rebar, J. A. Pickrell, D. G. Brownstein and H. Muhle. *Inhal. Tox. Res. Inst., Albuquerque, NM.* Sponsor: R. O. McClellan.
- 128 **Removal of Ni(II) from the Isolated Perfused Rat Lung in the Presence of Sulfate.** S. J. Williams and D. B. Menzel. *Dept. of Pharmacol. and of Med., Duke Univ. Medical Center, Durham, NC.*
- 129 **Effect of Pre-Exposure of Rabbits to Morpholine on Imipramine Pharmacokinetics in the Isolated Perfused Lung (IPL).** H. C. Kung, E. G. Tombropoulos, and A. G. E. Wilson, *Lab. of Pharmacokinetics and Env. Biol. & Chem. Branch, NIEHS, Research Triangle Park, NC.* Sponsor: E. W. Van Stee.
- 130 **Transient and Prolonged Responses to Subchronic Administration of Permethrin.** L. W. Metker, M. H. Weeks, A. H. McCreesh, and A. W. Singer, *US Army Env. Hyg. Agency, Aberdeen Proving Ground, MD.*
- 131 **Possible Protective Role of Glutathione in Pulmonary Toxicity by 4-Ipomeanol.** M. Boyd., C. Statham, A. Stiko, J. Mitchell, and R. Jones, *National Inst. of Health, Bethesda, MD.*
- 132 **Studies on the Mechanism of the Pulmonary and Lethal Effects of Intravenous Di(2-Ethylhexyl) Phthalate (DEHP).** J. C. F. Chang and R. J. Rubin, *Sch. of Hyg. & Pub. Hlth., Johns Hopkins Univ., Baltimore, MD.*
- 133 **The Effects of Delta-9-Tetrahydrocannabinol and Nabilone on the Isolated Guinea Pig Bronchus.** R. M. Orzelek, F. R. Goodman, and R. B. Forney. *Dept. of Pharmacol. and Tox., Indiana Univ. School of Medicine and The Dow Chemical Co., Indianapolis, IN.*
- 134 **The Effects of Inhaled Sulfuric Acid Aerosols on Alveolar Macrophage Phagocytosis.** S. R. Gomez, *Avon Products, Inc., J. W. Clayton, Jr., Univ. of Arizona, Tucson, AZ.*
- 135 **The Contribution of Carbon Monoxide to the Toxicity of Pyrolysis/Combustion Products.** J. V. Dilley, D. Palmer, and R. McKee, *Tox. Laboratory, SRI International, Menlo Park, CA.* Sponsor: G. W. Newell.

POSTER SESSION 5: Metals I

Monday Afternoon, March 12, 1979

Exhibit Hall (East End)

Co-Chairpersons: J. J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

Paper No.	Time (P.M.)	
136	1:30-3:30	Interaction of Cobalt and Iron on Hepatic Cytochrome P-450 System. K. N. Chetty, L. Drummond, D. S. V. Subba Rao and D. Desaiiah. <i>Div. Biol. Sci., Mississippi Industrial College, Holly Springs, MS and Depts. Surgery & Neurology, Univ. Mississippi Medical Center, Jackson, MS.</i>
137		Effects of Cadmium on Hepatic Microsomal Cytochrome P-450 Content and Substrate Spectral Binding in Male and Female Rats. D. H. Pence and R. C. Schnell, <i>Hazleton Labs America, Vienna, VA, and School of Pharmacy, Purdue University, W. Lafayette, IN.</i>
138		Biliary Excretion of Cadmium and Intracellular Metal Binding Ligands. M. G. Cheria, Dept. of Pathology, Univ. of Western Ontario, London, Ontario, Canada.
139		The Effects of Heavy Metals (HMs) on the Alveolar Macrophage (AM), In Vitro. M. J. Reasor and P. R. Miles. <i>West Virginia Univ. Medical Center and ALOSH/NIOSH, Morgantown, WV.</i> Sponsor: J. U. Bell.
140		Heavy Metals Affect Rod, But Not Cone Photoreceptors. D. A. Fox and A. J. Sillman, <i>Dept. Animal Physiology, Univ. California, Davis, CA.</i> Sponsor: D. E. Woolley.
141		Effect of Age and Dose on Lead Retention. C. A. Keller, R. A. Doherty, A. H. Gates. <i>Environ. Health Sciences Center, Univ. of Rochester, Rochester, NY.</i> Sponsor: T. W. Clarkson.
142		Synthesis and Pharmacological Study of a New Metal Chelating Agent. D. R. Goodman, D. E. Pearson, and R. D. Harbison, <i>Depts. of Pharmacol. and Chem., Vanderbilt Medical Center, Nashville, TN.</i>
143		Long Term Behavioral Effects Resulting from Gestational Exposure to Cd. L. Hastings, H. Choudhury, and G. P. Cooper, <i>Dept. of Env. Hlth., Univ. of Cincinnati, Cincinnati, OH.</i>
144		Alteration of Mammalian Uroporphyrinogen Decarboxylase (UD) by Heavy Metals. R. Kardish, B. A. Fowler and J. S. Woods. <i>NIH, Research Triangle Park, NC.</i>
145		Perinatal Development of Hepatic Metallothionein in the Rat. J. U. Bell, <i>Medical Center, West Virginia Univ., Morgantown, WV.</i>
146		Fetal to Maternal Cadmium Movements Across the Perfused Hemochorial Placenta of the Guinea Pig. B.

- 147 J. Kelman and B. K. Walter, *Comparative Animal Res. Lab., Oak Ridge, TN*. Sponsor: M. A. Evans.
Increased Methylmercury Removal in the Dog During Extracorporeal Complexing Hemodialysis Using Dimercaptosuccinic Acid (DMSA). P. J. Kostyniak, *Dept. Pharmacol. & Ther., State University of New York at Buffalo, Buffalo, NY*. Sponsor: T. W. Clarkson.
- 148 **Absorption, Retention and Excretion of Orally Administered ¹⁰⁹Cd in Rats**. Z. A. Shaikh, *Dept. of Pharmacol. & Tox., Univ. of Rochester, Rochester, NY*. Sponsor: T. W. Clarkson.
- 149 **Affinity of Methylmercury for Sites of Growth Inhibition in Cultured Cells**. L. E. Sheck and G. G. Berg, *Dept. of Rad. Biol. & Biophys. and Env. Hlth. Sci., Univ. of Rochester School of Medicine, Rochester, NY*.
- 150 **In Vitro Binding of Cadmium, Zinc and Copper to Rat and Human Plasma Proteins**. J. M. Frazier, *Dept. of Env. Hlth. Sci., Johns Hopkins Univ., Baltimore, MD*. Sponsor: R. J. Rubin.
- 151 **Effects of Prolonged Oral Methylmercury Exposure on the Structure and Function of Mouse Liver Mitochondria**. B. A. Fowler and J. S. Woods. *NIEHS, NIH, Research Triangle Park, NC*.
- 152 **Early Actions of Methylmercury and Their Use in Treatment Evaluation**. C. A. Lapin and D. E. Carter, *Haskell Lab. for Tox. and Ind. Med., E. I. du Pont de Nemours & Co., Newark, DE, and Toxicology Program, Univ. Arizona, Tucson, AZ*. Sponsor: I. G. Sipes.
- 153 **Evidence for Metallothionein in Syrian Hamster Lung**. J. M. Benson and R. F. Henderson. *Inhal. Tox. Res. Inst., Albuquerque, NM*. Sponsor: R. O. McClellan.
- 154 **Altered Regulation of Hepatic Heme Metabolism by Indium Chloride**. J. S. Woods, G. T. Carver, and B. A. Fowler. *NIEHS, NIH, Research Triangle Park, NC*.

***SYMPOSIUM: Aquatic Toxicology**

Tuesday Morning, March 13, 1979

Grand Ballroom (Carondelet)

Co-Chairpersons: M. W. Anders, Univ. of Minnesota, Minneapolis, MN; J. L. Laseter, Univ. of New Orleans, New Orleans, LA

- 8:30 a.m. M. W. Anders, *Univ. of Minnesota, Minneapolis, MN*
Introduction.
- 8:35 a.m. J. L. Laseter, *Univ. of New Orleans, New Orleans, LA*
Contamination of the Aquatic Environment.
- 9:05 a.m. J. J. Lech, *Medical College of Wisconsin, Milwaukee, WI*.
Metabolism and Disposition of Xenobiotics in Fish.

- 9:35 a.m. F. L. Mayer, *U. S. Fish and Wildlife Service, Columbia, MO* **Clinical Tests in Aquatic Toxicology: State of the Art.**
- 10:05 a.m. Questions/Break
- 10:30 a.m. D. R. Branson, *Dow Chemical Company, Midland, MI* **Hazard Assessment of Chemicals in the Aquatic Environment.**
- 11:00 a.m. J. F. Stara, *Environmental Protection Agency, Cincinnati, OH* **Human Health Hazards Associated with Chemical Contamination of the Aquatic Environment.**
- 11:30 Kenneth J. Macek, *E. G. & G., Bionomics, Wareham, MA* **Aquatic Toxicology: Fact or Fiction?**

*Jointly with Toxicology Study Section, Division of Research Grants, National Institute of Health.

PLATFORM SESSION 7: Inhalation Toxicology III

Tuesday Morning, March 13, 1979

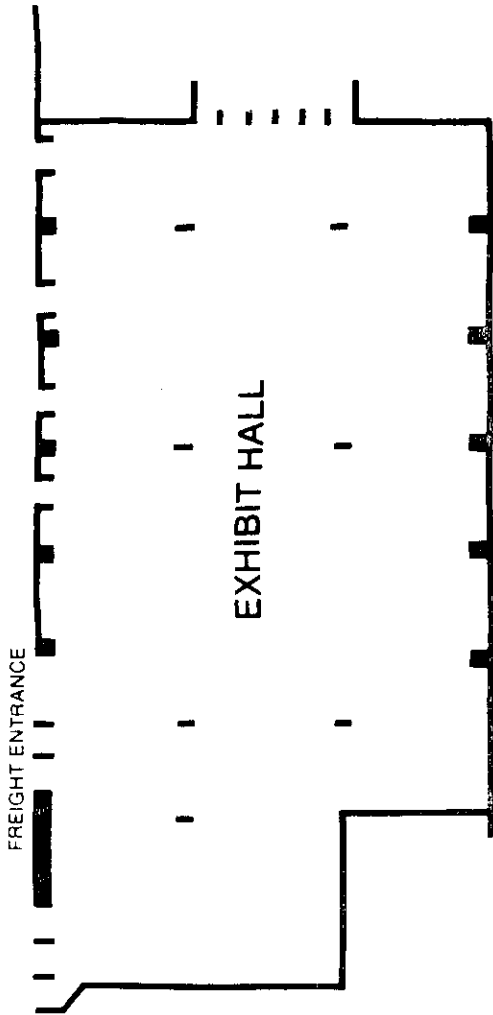
Mardi Gras Ballroom A, B, C, D

Co-Chairpersons: P. E. Morrow, Univ. of Rochester Med. Center, Rochester, NY; R. S. Chhabra, NIEHS, Research Triangle Park, NC

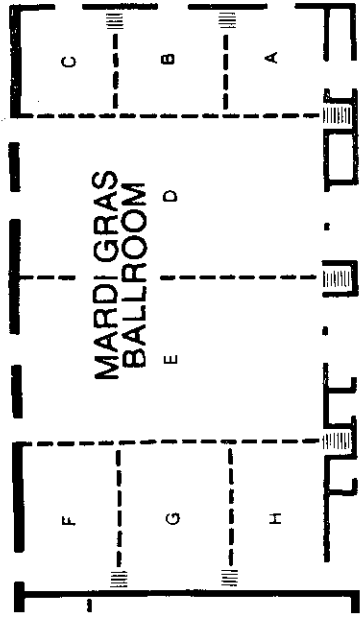
Paper No.	Time (A.M.)	
155	8:30	Chlorphentermine Uptake by Isolated Perfused Rabbit Lung. L. S. Angevine and H. M. Mehendale. <i>Dept. of Pharmacol. and Tox., Univ. of Mississippi Medical Center, Jackson, MS.</i>
156	8:45	Sequential Exposure to Oxygen and Chlorphentermine: Metabolic and Ultrastructural Consequences. S. Kacew and R. Narbaitz. <i>Dept. of Pharmacol. and Anat., Univ. of Ottawa, Ont., Canada.</i>
157	9:00	Oxygen Effects on Active Uptake and Metabolism in Rat Lung Slices. M. R. Montgomery, I. Wyatt and L. Smith, <i>VA Hosp. & Univ. Minnesota, Minneapolis, MN, and ICI, Ltd., Cheshire, England.</i>
158	9:15	Paraquat (PQ) Treatment Alters Disposition of 5-Hydroxytryptamine (5-HT) and Angiotensin I (AI) by Rat Lung. R. A. Roth, K. B. Wallace, R. H. Alper and M. D. Bailie, <i>Depts. of Pharmacol. & Tox., Physiology, Michigan State Univ., East Lansing, MI.</i> Sponsor: T. M. Brody.
159	9:30	Structure-Activity Correlations of Paraquat Homologues in the Inhibition of Aldrin Epoxidation by Rat Liver Microsomes J. H. Ross, S. J. Gee and R. I. Krieger, <i>Dept. Env. Tox., Univ. California, Davis, CA.</i>
160	9:45	Detection of a Lipophilic Antioxidant Factor in Lung Microsomes. D. J. Kornbrust and R. D. Mavis. <i>Univ. of</i>

HOTEL FLOOR PLANS

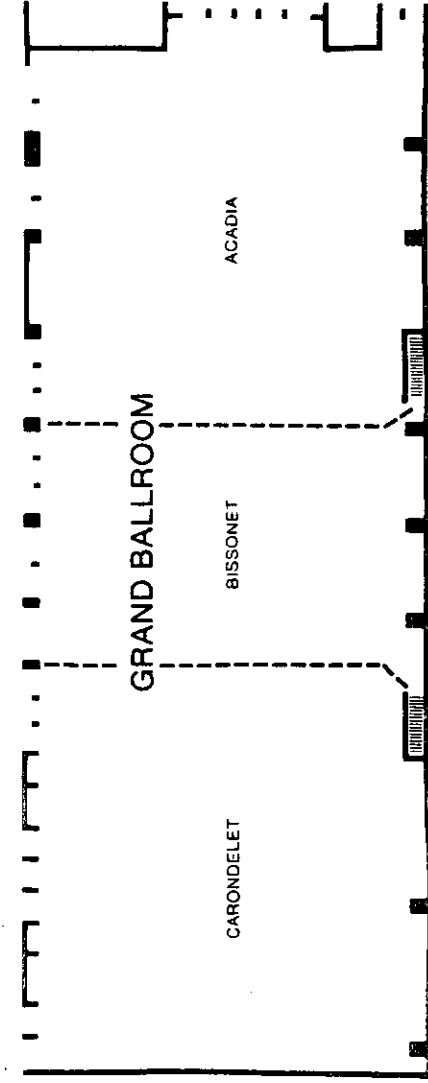
SECOND FLOOR



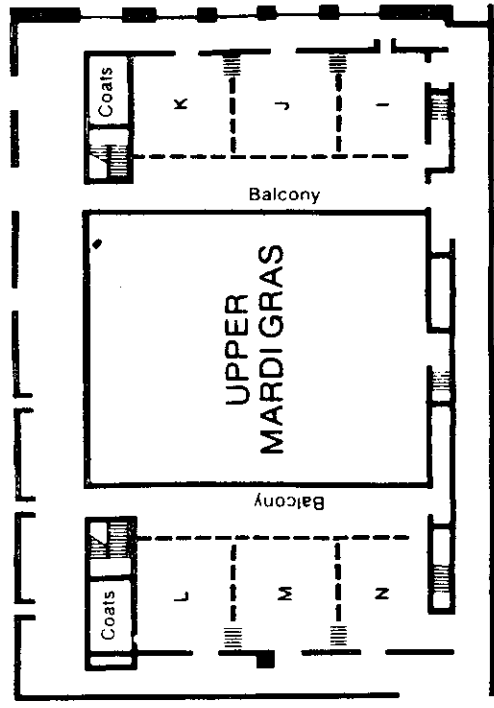
THIRD FLOOR



THIRD FLOOR



FOURTH FLOOR



Rochester School of Med. and Dent., Rochester, NY.
Sponsor: F. A. Smith.

- 161 10:00 **The Effect of Alcohol on the Uptake of Xenobiotics by the Isolated Perfused Rabbit Lung.** S. Lock, H. P. Witschi and G. L. Plaa, *Dépt. de Pharmacologie, Univ. de Montréal, Montreal, Canada.*
- 10:15 Break - 15 Minutes
- 162 10:30 **Structure-Toxicity Studies on 3-Substituted Furans: Role of the Side Chain in the Pulmonary Toxicity.** J. E. Garst and B. J. Wilson, *Dept. Biochem., Vanderbilt Univ. Medical School, Nashville, TN.*
- 163 10:45 **Structure-Toxicity Studies on 3-Substituted Furans: Role of the Carbonyl Group in the Lung Toxicity.** J. E. Garst and B. J. Wilson, *Dept. Biochem., Vanderbilt Univ. Medical School, Nashville, TN.*
- 164 11:00 **Structure-Toxicity Studies of 3-Substituted Furans: Role of the Aromatic Ring and Possible Mechanisms for Toxic Pulmonary Bioactivation.** J. E. Garst and B. J. Wilson, *Dept. Biochem., Vanderbilt Univ. Medical School, Nashville, TN.*
- 165 11:15 **On the Pathogenesis of Toxic Lung Fibrosis.** W. Haschek and H. P. Witschi, *Biology Division, Oak Ridge National Laboratory, Oak Ridge, TN.*
- 166 11:30 **The Relationship Between Fibre Diameter and Toxic Properties.** G. H. Pigott and J. Ishmael, ICI, CTL, *Alderley Park, Macclesfield, Cheshire, UK.* Sponsor: I. F. H. Purchase.
- 167 11:45 **Teratology and Reproduction Studies with Rats Exposed to 10, 33 or 100 ppm of Ethylene Oxide (EO).** W. M. Snellings, J. L. Pringle, J. D. Dorko and W. J. Kintigh, *Chemical Hygiene Fellowship, Carnegie-Mellon Institute Research, Pittsburgh, PA.* Sponsor: C. S. Weil.

PLATFORM SESSION 8: Immunotoxicology

Tuesday Morning, March 13, 1979

Mardi Gras Ballroom E, F, G, H

Co-Chairpersons: S. D. Aust, Michigan State Univ., East Lansing, MI;

R. P. Sharma, Utah State Univ., Logan, UT

Paper No.	Time (A.M.)	
168	8:30	Preclinical Toxicologic Evaluation of 2'-Deoxycoformycin in Mice. S. D. Harrison, Jr., V. Askew, A. M. Cusic, H. D. Giles, and E. P. Denine, <i>Southern Res. Inst., Birmingham, AL.</i>
169	8:45	Toluene Di-Isocyanate (TDI) and p,p-Di-Phenyl Methane Di-Isocyanate (MDI) on Guinea Pig Respiratory Smooth Muscle. J. E. Doe and Gillian M. Horspool, <i>ICI, CTL, Alderley Park, Macclesfield, Ches., UK.</i> Sponsor: I. F. H. Purchase.

170	9:00	<i>In Vitro Complement Consumption by Fossil Fuel Effluents.</i> J. O. Hill, <i>Inhal. Tox. Res. Inst., Albuquerque, NM.</i> Sponsor: R. O. McClellan.
171	9:15	<i>Hexyl Isocyanate Pulmonary Hypersensitivity in Guinea Pigs.</i> M. H. Karol, B. A. Hauth, and Y. Alarie, <i>Univ. of Pittsburgh, Graduate School Public Health, Pittsburgh, PA.</i>
172	9:30	<i>PCB and HCB Induced Alteration of Lymphocyte Blastogenesis.</i> J. B. Silkworth and L. D. Loose, <i>Inst. Comparative and Human Tox., Albany Medical College, Albany, NY,</i> Sponsor: F. Coulston.
173	9:45	<i>Influence of Polybrominated Biphenyl on Immunological and Host Defense Parameters.</i> S. Mudzinski, J. B. Silkworth, N. M. Wilson and L. D. Loose. <i>Inst. of Comparative and Human Tox., Albany Medical College, Albany, NY,</i> Sponsor: F. Coulston.
174	10:00	<i>The Antibody and Delayed Type Hypersensitivity Response of Mice Fed Polybrominated Biphenyls.</i> P. J. Fraker and S. Aust, <i>Dept. of Biochemistry, Michigan State Univ., East Lansing, MI.</i>
	10:15	Break - 15 Minutes
175	10:30	<i>Effect of Acute Nitrogen Dioxide Exposure on Lung Immunity in the Rat.</i> C. T. Schnizlein, D. E. Bice and R. J. Cox, <i>Inhal. Tox. Res. Inst., Albuquerque, NM.</i> Sponsor: R. O. McClellan.
176	10:45	<i>Persistent Postnatal Effects on the Immune System Following Prenatal Exposure to the Anticholinesterase Pesticides Diazinon or Carbofuran.</i> J. S. Cranmer, D. L. Avery and J. B. Barnett, <i>Dept. of Pharmacol. and Dept. of Microbiology and Immunology, Univ. of Arkansas for Medical Sciences, Little Rock, AR.</i>
177	11:00	<i>Influence of Polybrominated Biphenyl on the Splenic Antibody Response in the Mouse.</i> N. Wilson, S. Mudzinski, J. Silkworth, and L. D. Loose. <i>Inst. of Comparative and Human Tox., Albany Medical College, Albany, NY,</i> Sponsor: K-F. Benitz.

PLATFORM SESSION 9: Metabolism II

Tuesday Morning, March 13, 1979

Grand Ballroom (Acadia)

Co-Chairpersons: J. S. Woods, Battelle Human Affairs Research Centers, Seattle, WA; M. A. Evans, Univ. Illinois Medical Center, Chicago, IL

Paper No.	Time (A.M.)	
178	8:30	<i>Species Differences Between Rats and Mice on the Metabolism and Hepatic Macromolecular Binding of Tetrachloroethylene.</i> A. M. Schumann, P. G. Watanabe, <i>Dow Chemical Co., Health and Envir. Research, Midland, MI.</i>

179	8:45	Covalent Binding of Halogenated Volatile Solvents to Subcellular Macromolecules in Hepatocytes. M. L. Cunningham, A. J. Gandolfi, K. Brendel, and I. G. Sipes, <i>Univ. of Arizona, Health Sciences Center, Tucson, AZ.</i>
180	9:00	Effect of Substituents on <i>in vitro</i> Metabolism and Covalent Binding of Substituted Bromobenzenes. R. A. Wiley, R. P. Hanzlik, and T. Gillesse, <i>Dept. of Medicinal Chemistry, The Univ. of Kansas, Lawrence, KS.</i>
181	9:15	Studies on the Metabolism of Aliphatic Nitriles. A. E. Ahmed and K. Patel, <i>Dept. of Pathol., Univ. of Texas Medical Branch, Galveston, TX.</i> Sponsor: J. Palmer Saunders.
182	9:30	Toxicodynamics of Acrylamide in Rats. J. D. Young, R. W. Slauter, S. J. Gorzinski, and C. W. Wade, <i>Tox. Res. Lab., Dow Chemical U.S.A., Midland, MI</i> Sponsor: W. H. Braun.
183	9:45	Decreased Inductive Response of Microsomal Enzymes to Phenobarbital (PB) in Genetically Obese Rats. C. L. Litterst, <i>Lab. Toxicol., National Cancer Inst., Bethesda, MD.</i>
	10:00	Break - 15 Minutes
184	10:15	Inactivation of Esterases by Impurities Isolated from Technical Malathion. R. E. Talcott and N. M. Mallipudi, <i>Div. Tox. and Physiol., Dept. Entomology, Univ. California, Riverside, CA.</i> Sponsor: E. T. F. Wei.
185	10:45	The Involvement of the Lymphatic System in the Absorption, Transport, and Excretion of Hexachlorobenzene in Rats and Rhesus Monkeys. K. Rozman, W. F. Mueller, F. Coulston, F. Korte, <i>Institut fuer Oekologische Chemie, Gesellschaft fuer Strahlen - und Umweltforschung mbH, Munich - D-8042; International Ctr. of Environ. Safety, Albany Med. College, Holloman Air Force Base, NM.</i>
186	11:00	Dose-response Effect from Kepone Exposure During Gestation and Lactation on the Metabolism of Lindane by Weanling Rats. R. W. Chadwick, M. F. Copeland and L. Rosenstein, <i>Environmental Protection Agency, HERL, BB, Research Triangle Park, NC.</i>
187	11:15	Allylamine Cardiotoxicity and Cardiac MAO: Modulation by MAO Inhibitors. P. J. Boor and T. J. Nelson, <i>Dept. of Pathol., Univ. of Texas Medical Branch, Galveston, TX.</i> Sponsor: M. T. Moslen.
188	11:30	Transport of Bis-(p-Chlorophenyl)-Acetic Acid (DDA) in the Isolated, Perfused Rat Kidney. F. J. Koschier, M. F. Stokols, P. Cattrall, M. Acara and S. K. Hong, <i>School of Medicine, State Univ. of New York at Buffalo, Buffalo, NY.</i>
189	11:45	Kidney Lesions in Hamsters Fed Modified Food Starch M. L. Buttolph and P. M. Newberne, <i>Dept. of Nutr. and Food Sci. MIT, Cambridge, MA.</i>

POSTER SESSION 6: General Toxicology II

Tuesday Morning, March 13, 1979

Exhibit Hall (East End)

**Co-Chairpersons: J. J. Kocsis, Thomas Jefferson Univ.,
Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products,
Framingham, MA**

Paper No.	Time (A.M.)	
190	8:30-10:30	Preclinical Toxicology of (8βbeta)-8-[(Methylthio)Methyl]-6-Propylergoline Methanesulfonic Acid Salt (MPE) - A New Prolactin Inhibitor. N. V. Owen, B. H. Arthur, W. R. Gibson, D. G. Hoffman, and D. M. Morton, <i>Lilly Research Laboratories, Eli Lilly and Company, Greenfield, IN.</i>
191		Effects of Diethylstilbestrol and Cholesterol on the Aortic Media of Rats. M. J. Iatropoulos and G. S. Delides, <i>Intern. Cent. Environ. Safety, Holloman AFB, NM, and Metaxas Mem. Canc. Inst., Piraeus, Greece.</i> Sponsor: C. F. Chesney.
192		Enhancement of Hexobarbital Hypnosis by Diphenhydramine Methylammonium Bromide and Diphenhydramine R. T. Louis-Ferdinand, F. Beuthin, E. Roginski and M. Stout. <i>College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, MI.</i>
193		Studies of Aniline HCl in Rats. E. J. Gralla, J. S. Bus, F. Reno, J. R. Cushman, and B. N. Ulland, <i>Chem. Ind. Inst. of Tox., Research Triangle Park, NC and Hazleton Laboratories America, Inc., Vienna, VA.</i>
194		Light Microscopic and Ultrastructural Changes in Mouse Liver After Repeated Oral LAAM Administration. R. S. Nair, I. T. McClurkin, and L. W. Masten, <i>Depts. of Pharmacol. and Biol., Univ. of Mississippi, University, MS.</i> Sponsor: W. M. Davis.
195		Eight Year Toxicity Study in Monkeys and Reproduction Studies in Rats and Rabbits With a New Hypocholesterolemic Agent, Probucol. J. A. Molello, D. J. Thompson, and J. E. LeBeau, <i>Health and Consumer Products Dept., Dow Chemical U.S.A., Indianapolis, IN.</i>
196		Effects of the Hypocholesterolemic Agents Probucol and Clofibrate on Hepatic Ultrastructure. S. D. Barnard, J. A. Molello, J. E. LeBeau, <i>Health and Consumer Products Dept., Dow Chemical U.S.A., Indianapolis, In.</i> Sponsor: D. J. Thompson.
197		Histopathological Evaluation of First-Aid Effectiveness After Alkali Poisoning. V. M. Seabaugh, L. R. Weiss, S. Krop, R. A. Orzel and J. McLaughlin, <i>FDA and Consumer Products Safety Commission, Washington, DC.</i>
198		A Test Procedure for Evaluating Irritancy in the Rodent Vagina, and the Effects of Model Irritants. G. S. Wagner, W. D. Kerns, and D. P. Moorhead. <i>The Proctor & Gamble Co., Cincinnati, OH.</i> Sponsor: E. V. Buehler.

- 199 **Quality Control of Rodent Diets.** J. C. Topham, *ICI (Pharmaceuticals Division), Alderley Park, Macclesfield, Cheshire, UK*, and J. K. Eva, *BP Nutrition (UK) Ltd., Witham, Essex, UK*. Sponsor: M. S. Rose.
- 200 **A Comparative Study of the Effect of Various Bleeding Techniques on Hematology and Serum Biochemistry Parameters in Rats.** L. A. Pence, D. G. Serota, and F. E. Reno, *Hazleton Laboratories America, Inc., Vienna, VA*.
- 201 **The Use of Ventilated Cages in Rat Studies.** E. R. Adams, K. S. Newman, W. R. Gibson, D. G. Hoffman, and D. M. Morton, *Toxicology Division, Lilly Research Laboratories, Greenfield, IN*.
- 202 **The Toxicology Data Bank - Evaluation of Data for an On-Line Data Retrieval Service.** H. M. Kissman, *National Library of Medicine, Bethesda, MD*.
- 203 **A Data Acquisition System for Toxicology Laboratories.** R. Kahlow and L. Parker, *Hazleton Laboratories America, Inc., Vienna, VA*. Sponsor: M. Steinberg.
- 204 **A New Approach to an Old Method - A Basic Program for the Calculation of the ED₅₀ or LD₅₀ Using Probit Analysis.** J. D. O'Neil, D. J. Brown, and R. B. Forney, *Dept. of Pharmacol. and Tox., Indiana Univ. School of Medicine, Indianapolis, IN*.
- 205 **US Environmental Protection Agency's Data Quality Assurance Program.** C. R. Morris, and D. M. Reisa, *Office of Toxic Substances, EPA, Washington, DC*. Sponsor: N. Page.
- 206 **Computerization of Preclinical Toxicity Studies. I. Animal Weights and Food Consumption.** D. E. Johnson, F. R. Springman, N. F. Bukva, W. P. Reynolds, J. A. Kasner, C. M. Julian, D. M. Devlin, C. T. Mickey and B. I. Doerr. *Hoechst-Roussel Pharmaceuticals, Inc. Somerville, NJ*. Sponsor: G. C. Boxill.
- 207 **Computerization of Preclinical Toxicity Studies. II. Clinical Observation of Animals.** D. E. Johnson, F. R. Springman, N. F. Bukva, W. P. Reynolds, J. A. Kasner, C. M. Julian, D. M. Devlin, C. T. Mickey, and B. I. Boerr. *Hoechst-Roussel Pharmaceuticals, Inc. Somerville, N.J.* Sponsor: G. C. Boxill.
- 208 **Receptor Supersensitivity in the Dam and Adrenergic Preponderance in the Progeny After Treatment with Atropine in Pregnant Rats.** Y. F. Grunfeld and T. Balazs, *Bureau of Drugs, FDA, Washington, DC*.

Annual Business Meeting

Tuesday, March 13, 1979

3:30 P.M.

Grand Ballroom

Open to all SOT Members

PLENARY SESSION: *ARIAS on TOSCA*

Tuesday Afternoon, March 13, 1979

1:30-3:00 P.M.

Grand Ballroom (Carondelet)

A panel production of the Toxic Substances Control Act, with varying themes that present harmonies and discords, strengths and weaknesses. Audience participation obligato.

Moderator: M. M. Joselow
College of Medicine and Dentistry of New Jersey
Newark, NJ.

The Cast

Warren Muir, *Office of Toxic Substances, US Environmental Protection Agency, Washington, DC.*

Current Status and Issues in TOSCA Implementation

Peter Preuss, *New Jersey Department of Environmental Protection, Trenton, NJ.*

Federal-State Interaction

Robert A. Scala, *Exxon Corporation, Linden, NJ.*

Approaches by Industry to Toxic Substances Control

Sheldon Samuels, *Industrial Union Department, AFL-CIO, Washington, DC.*

Regulatory Options in Toxic Substances Control

Morton Corn, *University of Pittsburgh, School of Public Health, Pittsburgh, PA.*

TOSCA - Only part of the Total Management of Toxic Substances

David Comey, *Citizens for a Better Environment Chicago, IL.*

The Cost of Not Testing New Chemicals

PLATFORM SESSION 10: Halogenated Hydrocarbons I

Wednesday Morning, March 14, 1979

Mardi Gras Ballroom A, B, C, D

Co-Chairpersons: *F. A. Smith, Univ. of Rochester Med. School, Rochester, NY; R. J. Jaeger, Harvard Univ. School Public Health, Boston, MA*

Paper No.	Time (A.M.)	
209	8:30	Exposure of Mice to CH₂Cl₂ and CH₃OH Alone and in Combination J. B. Scott, F. A. Smith and R. H. Garman. <i>Dept. Rad. Biol. and Biophys. Univ. of Rochester Sch. of Med. and Dent., Rochester, NY.</i>
210	8:45	Glutathione, Epoxides and Multiple Detoxification Pathways in the Metabolism of 1,1-Dichloroethylene. M. Andersen, O. Thomas and L. Jenkins, <i>NMRI/TD, Wright-Patterson AFB, OH.</i>
211	9:00	Inferences Concerning Metabolism of Inhaled Toxicants Based on Rates of Toxicant Depletion from Recirculated Atmospheres. M. E. Andersen, M. L. Gargas and L. J. Jenkins, Jr., <i>NMRI/TD, Wright-Patterson AFB, OH.</i>
212	9:15	Potentialiation of Carbon Tetrachloride-Induced Hepatotoxicity by 1,3-Butanediol. G. L. Plaa, W. R. Hewitt, and M. G. Coté. <i>Dépt. de Pharmacol., Univ. de Montréal, Montréal, Canada.</i>
213	9:30	Hepatotoxicity of Carbon Tetrachloride (CCl₄) During Development. S. Z. Cagen and C. D. Klaassen <i>Dept. of Pharmacol., Univ. of Kansas Med. Center, Kansas City, Kansas.</i>
214	9:45	Protection of Carbon Tetrachloride (CCl₄)-Induced Hepatotoxicity by Zinc: Role of Metallothionein (MT) S. Z. Cagen and C. D. Klaassen <i>Dept. of Pharmacol. Univ. Kansas Med. Center, Kansas City, Kansas.</i>
215	10:00	Results of a Subchronic⁶ Dietary Study of Hexachloroethane in Rats with Preliminary Data on Clearance from Selected Tissues. S. J. Gorzinski, R. J. Nolan, R. J. Kociba, R. J. Karbowski, C. E. Wade, D. C. Morden, E. A. Hermann, and B. A. Schwetz, <i>Health and Environ. Research, Dow Chemical U.S.A., Midland, MI.</i>
	10:15	Break - 15 Minutes
216	10:30	Toxicology of 2-Chloro-1,3-Butadiene (Chloroprene): Acute Effects in Liver and Lung After Inhalation Exposure in Rats H. Plugge and R. J. Jaeger, <i>Harvard School of Public Health, Boston, MA.</i>
217	10:45	Inhalation Toxicity of Monochloromonofluoromethane. W. B. Coate, R. Voelker and R. W. Kapp, Jr., <i>Hazleton Laboratories America, Inc., Vienna, VA;</i> J. Anderson and J. Charm, <i>Allied Chemical Company, Morristown, NJ.</i> Sponsor: M. Steinberg.
218	11:00	Protective Effects of (+)-Cyanidanol-3 Against CCl₄-Induced Hepatotoxicity. H. Kappus and J. Zentner,

Med. Institut f. Lufthygiene und Silikoseforschung, Universitat, D 4000 Dusseldorf, Germany. Sponsor: M. W. Anders.

- 219 11:15 **Phosgene: An In Vivo Metabolite of Chloroform.** L. R. Pohl, J. W. George, J. L. Martin, and G. Krishna, *Lab. Chem. Pharm. NHLBI, Bethesda, MD.* Sponsor: S. L. Friess.

PLATFORM SESSION 11: Metals II

Wednesday Morning, March 14, 1979

Mardi Gras Ballroom E, F, G, H

**Co-Chairpersons: B. A. Fowler, NIEHS, Research Triangle Park, NC
C. M. Cherian, Univ. Western Ontario, London, Ont., Canada**

Paper No.	Time (A.M.)	
220	8:30	Effect of Cadmium, Cobalt, Lead and Selenium on Hepatic Microsomal Monooxygenase System and Glutathione in Mice. R. R. Dalvi and T. J. Robbins, <i>Toxicol. Lab., Sch. of Vet. Med., Tuskegee Inst., AL.</i> Sponsor: R. A. Neal.
221	8:45	Dose-Related Distribution of Vanadium in Rat Tissues. R. P. Sharma, S. G. Oberg, and R. D. R. Parker, <i>Toxicology Program, Utah State Univ., Logan, UT.</i>
222	9:00	Time- and Dose-Dependent Distribution of Vanadium in Mouse Tissues: R. D. R. Parker, R. P. Sharma, and S. G. Oberg, <i>Toxicology Program, Utah State Univ., Logan, UT.</i>
223	9:15	Acute Toxicity of Ruthenium Salts and Complexes. R. P. Smith, H. Kruszyna and J. H. Hurst. <i>Dept. Pharmacol. and Tox., Dartmouth Medical School, Hanover, NH.</i>
224	9:30	Effective Concentrations of Mercurials in Enzyme Inhibition G. G. Berg, <i>Dept. of Rad. Biol. Biophys. and Env. Health Science Center, Univ. of Rochester, Sch. of Medicine, Rochester, NY.</i>
225	9:45	Modifications of Testicular Toxicity of Cadmium (Cd) by Neonatal Exposure to Hormonally-Active Chemicals. E. M. K. Lui, E. E. McConnell, I. P. Lee and G. W. Lucier. <i>NIEHS, Research Triangle Park, NC.</i>
226	10:00	Toxic Effects of Cadmium on the Development of the Rat Lung and Pulmonary Surfactant System, G. P. Daston, <i>Dept. of Biology, Univ. of Miami, Coral Gables, FL.</i> Sponsor: J. Radomski.
	10:15	Break - 15 Minutes
227	10:30	Mobilization of Liver Cd by Bal. R. Von Burg and J. C. Smith. <i>Dept. of Pharmacol. & Tox., Univ. of Rochester, Rochester, NY</i> Sponsor: T. W. Clarkson.
228	10:45	Characterization of Metallothionein in a Human Cell Line. C. J. Rudd and H. R. Herschman, <i>Mol. Biol. Inst., Dept. of Biol. Chem. and Lab of Nuc. Med. and Rad. Biol., UCLA, Los Angeles, CA.</i> Sponsor: J. J. Vostal.

- 229 11:00 **Rabbit Anti-Rat Hepatic Cd-Metallothionein Antibody and Its Cross-Reactivity with Other Metallothioneins.** C. Tohyama and Z. A. Shaikh, *Dept. of Pharmacol. and Tox., Univ. of Rochester, Rochester, NY.* Sponsor: T. W. Clarkson.
- 230 11:15 **Isolation and Characterization of Liver Metallothionein in Newborn Rats.** K. L. Wong and C. D. Klaassen, *Dept. of Pharmacology, Univ. of Kansas Med. Center, Kansas City, KS.*
- 231 11:30 **Low Level Lead: Concurrence of Thresholds for Hematologic Toxicity - P5N, Na/K ATPase, FEP and ALA-D.** C. R. Angle and M. S. McIntire, *Dept. of Ped., Univ. of Nebraska Coll. of Med. and Creighton Univ. Sch. of Med., Omaha, NB.* Sponsor: T. S. Miya.
- 232 11:45 **Age Differences in Mouse Methylmercury (MeHg) Retention and Demethylation.** T. D. Landry, R. A. Doherty, and A. H. Gates; *Tox. Program & Environ. Health Sciences Center, Univ. of Rochester, Rochester, NY.* Sponsor: T. W. Clarkson

PLATFORM SESSION 12: Reproduction and Development II

Wednesday Morning, March 14, 1979

Grand Ballroom (Acadia)

Co-Chairpersons: J. Spyker Cranmer, Univ. Arkansas Med. Sciences, Little Rock, AR; K. S. Khera, Bureau Chemical Safety, Ottawa, Ont., Canada

Paper No.	Time (A.M.)	
233	8:30	Influence of Nicotine and Tobacco Gases on the Uptake of Neutral Amino Acids by Isolated Human Placental Villus. S. L. Barnwell and B. V. R. Sastry, <i>Dept. of Pharmacol., Vanderbilt Univ. Sch. Med., Nashville, TN.</i>
234	8:45	Effects of Prenatal Exposure to Chlorpromazine on Postnatal Development and Behavior of Rats. R. Robertson, J. Majka, D. Bokelman, <i>Merck Sharp & Dohme Res. Labs, West Point, PA.</i>
235	9:00	Biochemical Indicators of Developmental Toxicity. W. S. Bradshaw, S. D. Allen, G. M. Booth, and R. E. Seegmiller, <i>Dept. Zoology, Brigham Young Univ., Provo, UT.</i> Sponsor: G. Lucier.
236	9:15	Prenatal Detection of Cardiac Pathology in Mirex-Fed Rats Using Fetal Electrocardiography. C. T. Grabowski, <i>Dept. of Biology, Univ. of Miami, Coral Gables, FL.</i> Sponsor: J. Radomski.
237	9:30	Functional Teratology of the Gastrointestinal Tract Resulting from Fetal Insult in the Rat. M. S. Christian and E. M. Johnson, <i>McNeil Labs., Ft. Washington, PA and Thomas Jefferson Univ., Philadelphia, PA</i> Sponsor: R. L. Steelman.

238	9:45	Reproduction Studies on Nabilone, A Synthetic 9-Ketocannabinoid. J. K. Markham, G. K. Hanasono, E. R. Adams, N. V. Owen. <i>Tox. Div., Lilly Research Laboratories, Greenfield, IN.</i>
239	10:30	Studies on the Mechanism of Neonatal Toxicity in Rats Induced by Nabilone, a Synthetic 9-Ketocannabinoid. C. L. Moss, J. K. Markham, G. K. Hanasono, <i>Tox. Div., Lilly Research Laboratories, Greenfield, IN.</i> Sponsor: J. S. Wold
	10:15	Break - 15 Minutes
240	10:30	Pre- and Postnatal Effects of Chlordiazepoxide (Librium) in Rats. H. S. Buttar, I. Dupuis and J. H. Moffatt, <i>Drug Research Laboratories, Health Protection Branch, Ottawa, Ont., Canada.</i> Sponsor: K. S. Khera.
241	10:45	Pathogenesis of Inhaled 1,2-Dibromo-3-Chloropropane (DBCP) Induced Testicular Atrophy in Rats and Rabbits. J. D. Burek, F. J. Murray, K. S. Rao, A. A. Crawford, J. S. Beyer, R. R. Albee and B. A. Schwetz, <i>Tox. Research Laboratory, Dow Chemical U.S.A., Midland, MI.</i>
242	11:00	Validation of a Pharmacokinetic Model for Rat Embryonal Dosimetry of Salicylates During a Teratogenically Susceptible Period. J. F. Young, C. A. Kimmel, and J. F. Holson. <i>National Center for Toxicological Research, Jefferson, AR.</i>
243	11:15	Some Effects of Short-Term Chronic Feeding of Caffeine to Rats. L. Friedman, M. S. Weinberger, T. M. Farber, F. M. Moreland, M. A. Kahn, J. E. Keys, and C. S. Stone, <i>Bureau of Foods, FDA, Washington, DC.</i>
244	11:30	Unusual Expression of Teratogenicity in the Rat. J. L. Schardein and J. A. Petreire, <i>Dept. of Tox., Warner-Lambert/Parke-Davis, Ann Arbor, MI.</i>
245	11:45	Teratogenicity of Pyrimethamine S. Schvartsman, <i>Instituto da Crianca Hospital das Clinicas, School of Medicine Sao Paulo, Brazil.</i>

POSTER SESSION 7: General Toxicology III

Wednesday Morning, March 14, 1979

Exhibit Hall (East End)

Chairpersons: J. J. Kocsis, Thomas Jefferson Univ.,

Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

Paper No.	Time (A.M.)	
246	8:30-10:30	The Site of Action of SKF525A on Morphine Disposition Studied by Segmented Retrograde Intrahepatic Injection (SRI) in the Isolated In Situ Perfused Rat Liver (IPL). T. Imamura, J. A. Wass and J. M. Fujimoto, <i>Dept. of Pharmacol. Med. Col. of Wisconsin, Milwaukee, WI.</i>

- 247 **Effects of High Levels of Dietary Vitamin A on Drug Metabolism in Guinea Pig and Rabbit.** R. S. Chhabra and C. L. Miranda, *Lab. of Pharmacol., National Inst. of Environ. Health Sciences, Research Triangle Park, NC.*
- 248 **Effect of Caprolactam on Hepatic Tyrosine Amino-transferase and Tryptophan Oxygenase Activities.** M. A. Friedman and A. J. Salerno, *Corporate Medical Affairs, Allied Chemical Corp., Morristown, NJ.*
- 249 **Effects of Dietary Di(2-Ethylhexyl)Phthalate (DEHP), and its Primary Metabolites, Mono(2-Ethylhexyl) Phthalate (MEHP) and 2-Ethyl Hexanol (2-EH) on Hepatic Lipid Metabolism.** S. J. Morton and R. J. Rubin, *Johns Hopkins Univ., Sch. of Hyg. & Pub. Hlth., Baltimore, MD.*
- 250 **Induction of Hepatic Alpha-Glycerophosphate Dehydrogenase and Peroxisomal Enzymes by Hypolipidaemic Agents.** B. R. Holloway and J. M. Thorp, *ICI Pharmaceuticals, Alderley Park, Macclesfield, Cheshire, U.K.* Sponsor: M. S. Rose.
- 251 **The Effect of Hypolipidaemic Agents on Liver Drug Metabolising Enzyme System.** T. C. Orton and J. E. Higgins, *ICI Pharmaceuticals, Alderley Park, Macclesfield, Cheshire, U.K.* Sponsor: M. S. Rose.
- 252 **The Role of Microsomal Mixed Function Oxidase Systems in Hepatic Toxicity of Cocaine.** M. A. Evans, *Dept. of Pharmacol., Univ. of Illinois Medical Center, Chicago, IL.*
- 253 **Stimulation of p-Nitroanisole O-Demethylation in Perfused Rat Liver by Low Concentrations of Ethanol and Sorbitol.** L. A. Reinke, C. Ballow, R. G. Thurman, and F. C. Kauffman. *Dept. of Pharmacol., Univ. of North Carolina, Chapel Hill, NC and Univ. of Maryland, Baltimore, MD* Sponsor: T. S. Miya.
- 254 **Selective Changes in the Hepatic Microsomal Electron Transport System (HMETS) Following Repeated Oral Methadone Administration in the Mouse.** T. B. Barnes and L. W. Masten, *Dept. of Pharmacol., Univ. of Mississippi, University, MS.* Sponsor: W. M. Davis.
- 255 **Effects of Ethylaminoethanol on Phospholipid Metabolism and Hepatic Microsomal Enzyme Activity.** A. C. Stevens and R. Hartung, *Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI.*
- 256 **A Comparative Study of the Patterns of Distribution and Excretion of Acrylamide Monomer in Beagle Dogs and Miniature Swine.** G. J. Ikeda, E. Miller, P. P. Sapienza, T. C. Michel, and P. B. Inskeep, *Metabolism Branch, FDA, Washington, DC.*
- 257 **Predictive Value of Covalent Binding in Target Organ Toxicity: Age-Related Differences in Target Organ Alkylation and Toxicity by 4-Ipomeanol.** R. Jones, C. Allegra, and M. Boyd. *NIH, Bethesda, MD.*

- 258 **Covalent Interactions of Bromobenzene with Hepatic Macromolecules.** J. D. Sun and J. G. Dent, *Chem. Ind. Inst. of Tox., Research Triangle Park, NC.* Sponsor: J. E. Gibson.
- 259 ***In Vitro* Metabolic Activation of the Pulmonary Toxin, 4-*Ipomeanol*, by Lung Slices and Isolated Whole Lungs.** N. Longo and M. Boyd, *NIH, Bethesda, MD.*
- 260 **Covalent Binding and Tissue Distribution of ¹⁴C-Acetaminophen in Overdosed Mice: Effects of N-Acetylcysteine Treatment.** R. B. Smith and E. Piperno, *Toxicology Research Unit, McNeil Laboratories, Fort Washington, PA.* Sponsor: R. L. Steelman.
- 261 **Eye Contamination: A Poison Center Protocol for Management.** K. M. Rost, R. W. Jaeger, and F. J. deCastro, *Cardinal Glennon Hospital, St. Louis Poison Center, St. Louis, MO.*
- 262 **Cauliflower-Containing Diets Inhibit Hepatic Toxicities of Polybrominated Biphenyls and Aflatoxin B₁ in Rats.** J. G. Babish, H. C. Wimberly and G. S. Stoewsand. *Institute of Food Science, Cornell Univ., Geneva, NY and Dept. of Vet. Pathology, Cornell Univ., Ithaca, NY.*
- 263 **Nonperfused Hepatocyte Preparations for Assessing Acute Hepatotoxicity.** C. A. Tyson, and C. Mitoma, *SRI International, Menlo Park, CA.* Sponsor: G. W. Newell.

POSTER SESSION 8: Mutagenesis II

Wednesday Morning, March 14, 1979

Exhibit Hall (East End)

Chairpersons: J. J. Kocsis, Thomas Jefferson Univ.,

Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

Paper No.	Time (A.M.)	
264	8:30-10:30	Mutagenicity Testing of Industrial Waste Water Effluents by Ames' <i>S. typhimurium</i> Method. S. M. Somani, J. Mack, and D. Schaeffer, <i>School of Medicine, Southern Illinois Univ., and Illinois Environmental Protection Agency, Springfield, IL.</i>
265		Studies with Inhibitors of Epoxide Hydratase in Forward and Reversion Bacterial Mutagenesis Assay Systems. D. Guest and J. G. Dent, <i>Chem. Industry Inst. of Tox., Research Triangle Park, NC.</i> Sponsor: J. E. Gibson.
266		Ames Mutagenic Assay of a Series of Phthalic Acid Esters: Positive Response of the Dimethyl and Diethyl Esters in TA 100. R. J. Rubin, W. Kozumbo and R. Kroll, <i>Johns Hopkins Univ., Sch. of Hyg. & Pub. Hlth., Baltimore, MD.</i>

- 267 **Effects of Acetone or Aroclor-1254 on Microsomal Mediated DMN Mutagenesis.** S. Haag and I. G. Sipes. *Toxicology Program, Univ. of Arizona, Tucson, AZ.*
- 268 **Enhancement of Chemically Induced Mutagenesis in Cultured V79 Chinese Hamster Cells by Certain Fatty Acid Methyl Esters.** H. E. Wey and C. S. Baxter, *Univ. of Cincinnati Medical School, Cincinnati, OH.* Sponsor: C. C. Smith.

ISSUES SESSION

Mardi Gras Ballroom A, B, C, D
Wednesday, March 14, 1979
12 Noon - 1:15 P.M.

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

Chaired by President Leon Golberg

SYMPOSIUM*: Who Needs Toxicologists?

Wednesday Afternoon, March 14, 1979
1:30 - 5:00 P.M.

Grand Ballroom (Carondelet)

Chairperson: F.W. Oehme, Kansas State University, Manhattan, KS

- 1:30 - 1:45 **Toxicology Is A Bastard!** F.W. Oehme, *Kansas State University, Manhattan, KS*
- 1:45 - 2:15 **Who Wants Toxicologists?** M. Hite, *Merck Institute for Therapeutic Research, West Point, PA*
- 2:15 - 2:50 **We Train Toxicologists For A Mission.** C. Schonwalder, *NIEHS, Research Triangle Park, NC*
- 2:50 - 3:25 **We Want To Train Toxicologists For A Need!** C.L. Winek, *Duquesne University, Pittsburgh, PA*
- 3:25 - 4:00 **We Must Keep Toxicology Current!** J.E. Gibson, *Chemical Industry Institute of Toxicology, Research Triangle Park, NC*
- 4:00 - 4:25 **Who Is A Toxicologist?** C. Farlee, *Office of Toxic Substances EPA, Washington, DC*
- 4:25 - 5:00 **Let's Standardize The Final Product!** T.R. Tephly, *The University of Iowa, Iowa City, IA*

*Jointly with American Academy of Clinical Toxicology, American Association of Poison Control Centers, The American Board of Medical Toxicology, and The Canadian Academy of Clinical and Analytical Toxicology.

PLATFORM SESSION 13: Agricultural Chemicals I

Wednesday Afternoon, March 14, 1979

Mardi Gras Ballroom A, B, C, D

**Co-Chairpersons: K. D. Courtney, U. S. Environmental Agency,
Research Triangle Park, NC; D. J. Ecobichon, McGill Univ.,
Montreal, P.Q., Canada**

Paper No.	Time (P.M.)	
269	1:30	A Comparison of Aryl Hydrocarbon Hydroxylase (AHH) Activity in Spontaneous and Chemically Induced Mouse Hepatic Nodules. E. M. Essigmann, R. G. McConnell and P. M. Newberne, <i>Dept. of Nutrition & Food Science, MIT, Cambridge, MA.</i>
270	1:45	Influence of Hepatic Microsomal Enzyme Inducers on the Acute Toxicity of Monensin in Rats. G. S. Probst, and L. E. Hill, <i>Lilly Research Laboratories, Greenfield, IN.</i> Sponsor: J. S. Wold.
271	2:00	A Two-Year Chronic Toxicity and Oncogenic Study of 2,4,5-Trichlorophenoxyacetic Acid (2,4,5-T) in Rats. R. J. Kociba, D. G. Keyes, C. E. Wade, R. Kalnins, R. W. Lisowe and D. D. Dittenber. <i>Health & Environmental Research, The Dow Chemical Company, Midland, MI.</i>
272	2:15	The Subacute and Chronic Toxicity of Fenitrothion to Male Rats. D. J. Ecobichon and D. Zelt, <i>Dept. of Pharmacol. & Therapeutics, McGill Univ., Montreal, Que., Canada.</i>
273	2:30	Effects of Inhaled 1,2-Dibromo-3-Chloropropane (DBCP) on the Semen of Rabbits and the Fertility of Male and Female Rats. K. S. Rao, F. J. Murray, A. A. Crawford, J. A. John, W. J. Potts, B. A. Schwetz, J. D. Burek, and C. M. Parker, <i>Tox. Res. Lab., Dow Chemical U.S.A., Midland, MI.</i>
274	2:45	Comparative Absorption and Disposition of Carbofuran, 3-Hydroxycarbofuran and the Glucoside of 3-Hydroxycarbofuran. T. C. Marshall and H. W. Dorough, <i>Grad. Cen. for Tox., Univ. of Kentucky, Lexington, KY.</i>
	3:00	Break - 15 Minutes
275	3:15	Formation and Fate of Nitrosamides in Animals. R. W. Rickard and H. W. Dorough. <i>Grad. Center for Tox., Univ. of Kentucky, Lexington, KY.</i>
276	3:30	Quantitative Administration of Insecticide Vapors to Rats. W. A. Stubblefield and H. W. Dorough. <i>Grad. Center for Tox., Univ. of Kentucky, Lexington, KY.</i>
277	3:45	Comparative Carbamate Ester Hydrolysis in Four Mammalian Species. W. H. Benson and H. W. Dorough. <i>Grad. Center for Tox., Univ. of Kentucky, Lexington, KY.</i>
278	4:00	Postpartum CPK and LDH Cardiac and Serum Isozymes after 2,4,5-T, Carbaryl or Aniline Treatment. K. D. Courtney, <i>Environmental Protection Agency, Research Triangle Park, NC.</i>

- 279 4:15 **Carboxylamidase Inhibition by Dasanit and Interaction with Acetanilide in the Rat.** R. E. Ouellette and S. D. Cohen, *Sect. of Pharmacology and Toxicology, School of Pharmacy, Univ. of Connecticut, Storrs, CT.*
- 280 4:30 **The Effects of Parathion and Carbofuran on Cholinesterase Activity in Plasma, Erythrocytes and Saliva.** H. L. Skalsky, B. M. Keeling and J. F. Borzelleca, *Dept. of Pharmacol., Medical College of Virginia, Richmond, VA.*

PLATFORM SESSION 14: Drug Toxicology

Wednesday Afternoon, March 14, 1979

Mardi Gras Ballroom E, F, G, H

**Co-Chairpersons: M. A. Friedman, Allied Chem. Co.,
Morristown, NJ; R. T. Louis-Ferdinand, Wayne State Univ.,
Detroit, MI**

Paper No.	Time (P.M.)	
281	1:30	Ethanol Potentiation of Cocaine-Induced Hepatic Necrosis. A. C. Smith, R. W. Freeman and R. D. Harbison, <i>Dept. of Pharmacol., Vanderbilt Med. Center, Nashville, TN.</i>
282	1:45	Pharmacokinetic Interaction Between Isoniazid and Ethanol in the Guinea Pig. B. H. Thomas, L. W. Whitehouse, and A. R. Beaubien, <i>Drug Research Labs., H.P.B., Health & Welfare Canada, Ottawa, Ont.</i> Sponsor: K. Khera.
283	2:00	Seizures and Lactic Acidosis in Acute Isoniazid Toxicity. L. Chin, M. L. Sievers, R. N. Herrier and A. L. Picchioni, <i>Dept. of Pharmacol. & Tox., Univ. of Arizona College of Pharm., Tucson, AZ and Phoenix Indian Med. Center, Phoenix, AZ.</i>
284	2:15	Potentiation of Halothane-Induced Hepatic Necrosis by Triiodothyronine Pretreatment. M. Wood, L. Berman, A. J. Wood, J. M. Phythyon, P. Hoyle, and R. D. Harbison. <i>Depts. of Anesthesiology and Pharmacol., Vanderbilt Univ. Med. Center, Nashville, TN.</i>
285	2:30	Lethal Synergism of Cholinesterase Inhibitors by Lithium. N. Hatoum and W. M. Davis, <i>Dept. of Pharmacol., Univ. of Mississippi, University, MS.</i>
286	2:45	Potentiation of Pharmacologic Responses to Barbiturates by Dopram® and its Preservative. I. K. Ho, B. A. Flint and K. Onoda. <i>Dept. Pharmacol. and Tox., Univ. Miss. Med. Center, Jackson, MS.</i>
287	3:00	Rat Liver Microsomes Metabolize Pargyline to Propionaldehyde, a Potent Irreversible Inhibitor of Aldehyde Dehydrogenase (A1DH). F. N. Shirota, E. G. DeMaster and H. T. Nagasawa, <i>Medical Research Laboratories, VA Hospital, Minneapolis, MN and Dept. of Medicinal Chemistry, Univ. of Minnesota, Minneapolis, MN.</i>

288	3:15	Possible Involvement of Prostaglandins in Expression of Retinoid Toxicity. E. J. Hixson, M. W. Arthur, R. B. Boozer, S. D. Harrison, Jr., and E. P. Denine, <i>Southern Res. Inst., Birmingham, AL.</i>
	3:30	Break - 15 Minutes
289	3:45	Insulin Refractoriness in Depo Provera® Treated Dogs M. E. Coleman, D. Frank, W. Quinlan, T. E. Murchison and R. G. Carlson. <i>Dawson Research Corp., Orlando, FL and the Upjohn Co., Kalamazoo, MI.</i> Sponsor: T. E. Murchison.
290	4:00	The Effects of Autolytic Change in Animals on Histologic Interpretation. R. P. Kupp, Jr. and L. A. Strolle, <i>Smith Kline & French Labs, Philadelphia, PA.</i> Sponsor: K. T. Szabo.
291	4:15	Cinoxacin Induced Arthropathy in Juvenile Beagle Dogs. L. C. Howard, D. C. VanSickle, K. Deshmukh, W. J. Griffing and N. V. Owen, <i>Lilly Research Laboratories, Greenfield, IN and Dept. of Anatomy, Purdue Univ., West Lafayette, IN.</i>
292	4:30	Marihuana Smoke: Chronic Toxicity Evaluation of Marihuana Smoking in the Cynomolgus Monkey. W. B. Coate and R. W. Voelker, <i>Hazleton Laboratories America, Inc. Vienna, VA</i> Sponsor: M. Steinberg.
293	4:45	Sulphone Methemoglobinemia S. Schvartsman, <i>Instituto da Crianca Hospital das Clinicas, School of Medicine, Sao Paulo, Brazil.</i> Sponsor: F. W. Oehme.

PLATFORM SESSION 15: Oncogenesis

Wednesday Afternoon, March 14, 1979

Grand Ballroom (Acadia)

Co-Chairpersons: P. M. Newberne, Mass. Inst. Technology, Cambridge, MA; G. M. Szczech, The Upjohn Co., Kalamazoo, MI

Paper No.	Time (P.M.)	
294	1:30	Inhibition by Bran of the Colonic Cocarcinogenicity of Bile Salts in Rats Given Dimethylhydrazine. T. A. Barbolt, J. B. Rodgers, and R. Abraham, <i>Inst. of Comparative and Human Toxicology and the Dept. of Medicine, Albany Medical College, Albany, NY.</i>
295	1:45	Dose-Response, Sex Differences, and the Effect of Bran in Dimethylhydrazine-Induced Intestinal Tumorigenesis in Rats. T. A. Barbolt and R. Abraham, <i>Inst. of Comparative and Human Toxicology, Albany Medical College, Albany, NY.</i>
296	2:00	Sodium Nitrite Promotes Lymphoreticular Tumors. P. M. Newberne, <i>Dept. Nutrition and Food Science, M.I.T., Cambridge, MA.</i>
297	2:15	Carcinogenic Risk Estimation for Chloroform: Incorporation of Pharmacokinetic Data. R. H. Reitz, P.

- J. Gehring, P. G. Watanabe, and C. N. Park, *Toxicology Research Laboratory, Dow Chemical Company, Midland, MI.*
- 298 2:30 **Relationship Between Metabolism of Methylazoxy-Methanol (MAM) Acetate, Inhibition of Macromolecule Synthesis and Tumor Induction.** M. S. Zedeck and Q. H. Tan, *Memorial Sloan-Kettering Cancer Center, New York, NY.* Sponsor: H. Marquardt.
- 299 2:45 **Carcinogenicity and Metabolism of 5-F-DMBA and its 7-Hydroxymethyl (5-F-7-HO-DMBA) and 7-Acetoxy-methyl (5-F-7-Ac-DMBA) Derivatives.** M. Chien and J. W. Fleisher, *College of Medicine and the Graduate Center for Toxicology, Univ. of Kentucky, Lexington, KY.* Sponsor: M. Vore.
- 3:00 Break - 15 Minutes
- 300 3:15 **Computer Modeling of Carcinogenesis Mechanisms Including Dose-Response Relationships.** J. B. Reid, *Chemical Hygiene Fellowship, Carnegie-Mellon Inst. Research, Pittsburgh, PA;* E. Bingham, *Univ. of Cincinnati, Cincinnati, OH;* and B. Chertow, *Carnegie-Mellon Univ. Pittsburgh, PA.*
- 301 3:30 **The Effect of Dietary Protein Level on the Subcellular Distribution and Binding of Aflatoxin in Rat Liver.** K. D. Mainigi and T. C. Campbell, *Div. of Nutr. Sci., Cornell Univ., Ithaca, NY.*
- 302 3:45 **Co-Mitogenicity of Tumor Promoting Agents.** L. A. Fish, C. S. Baxter, and J. A. Bash, *Depts. of Env. Hlth. and Microbiology Univ. of Cincinnati Col. of Med., Cincinnati, OH.* Sponsor: P. B. Hammond.
- 303 4:00 **Assessment of Tumor Initiating and Promoting Activity of the Flame Retardant Chemical Tris (2,3-dibromopropyl)phosphate (TRIS).** R. K. Haroz, *Battelle Research Center, Geneva, Switzerland.* Sponsor: S. D. Aust.
- 304 4:15 **The Problem of Environmental Carcinogens in Tropical Africa.** E. A. Bababunmi, *Dept. of Biochemistry, Univ. of Ibadan, Ibadan, Nigeria.*

POSTER SESSION 9: Halogenated Hydrocarbons II

Wednesday Afternoon, March 14, 1979

Exhibit Hall (East End)

Chairpersons: J. J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

- | Paper No. | Time (P.M.) | |
|-----------|-------------|---|
| 305 | 1:30-3:30 | Depression of ATPase Activity in Hepatocyte Surface Membranes of Rats by 2,3,7,8-Tetrachlorodibenzo-p-Dioxin Treatment. B. V. Madhukar, F. Matsumura, K. H. Yang and R. E. Peterson, <i>Univ. of Wisconsin, Madison, WI.</i> |

- 306 **Effects of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin on Liver Function in Rats, Rabbits and Guinea Pigs.** M. D. Seefeld, K. H. Yang and R. E. Peterson, *School of Pharmacy, Univ. of Wisconsin, Madison, WI.*
- 307 **Pharmacokinetics of 1,2,4-Tribromobenzene and 1,2,4-Trichlorobenzene.** E. N. Smith and G. P. Carlson, *Sch. of Pharmacy and Pharmacal Sciences, Purdue Univ., West Lafayette, IN.*
- 308 **The Effect of Alcohols and Toluene Upon Methylene Chloride Induced Carboxyhemoglobin in the Rat and Monkey.** H. P. Ciuchta, G. M. Savell and R. C. Spiker, Jr., *Gillette Medical Evaluation Laboratories, Rockville, MD.*
- 309 **4,4'-Dichlorobiphenyl: Distribution, Excretion, and Metabolism in Dogs and Monkeys.** M. Slocumb, D. Perry, D. E. Carter, and I. G. Sipes, *Tox. Prog., Univ. Arizona, Tucson, AZ.*
- 310 **Excretion of Hexachlorobiphenyls and 2,4,5,2',4',5'-Hexabromobiphenyl in the Dog.** I. G. Sipes, D. H. McKelvie, and R. Collins, *Tox. Prog., Univ. of Arizona, Tucson, AZ.*
- 311 **The Role of 2-Butanone Metabolism in the Potentiation of CCl₄-Induced Hepatotoxicity.** F. K. Dietz, G. J. Traiger and V. Stella. *Sch. of Pharmacy, Univ. of Kansas, Lawrence, KS.*
- 312 **Potentiation of CHCl₃-Induced Hepato- and Nephrotoxicity by n-Hexane (H), Methyl n-Butyl Ketone (MBK), and 2,5-Hexanedione (HD).** W. R. Hewitt, M. G. Coté, and G. L. Plaa. *Dépt. de Pharmacol., Univ. de Montréal, Montréal, Canada.*
- 313 **Acute Alteration of Chloroform-Induced Hepatotoxicity by Mirex and Kepone.** D. J. Cianflone, W. R. Hewitt and G. L. Plaa, *Dépt. de Pharmacol., Univ. de Montréal, Montréal, Canada.*
- 314 **Toxicological Evaluation of Polybrominated Biphenyls in Developing Male Rats.** W. M. Kluwe, K. M. McCormack, J. Bernstein and J. B. Hook. *The Tox. Program and Dept. of Pharmacol. & Tox., Mich. State Univ., E. Lansing, Mich. and Dept. Anatomic Pathol., Wm. Beaumont Hospital, Royal Oak, MI.*
- 315 **Effects of Purified and Crude Hexabromobenzene (HB) on Hepatic Monooxygenation Reactions in Rat and Rainbow Trout.** R. B. Franklin, D. E. Rickert, J. J. Lech and C. R. Elcombe. *Dept. of Pharmacol., Med. Col. of Wisconsin, Milwaukee, WI and CIIT, Raleigh, NC.*
- 316 **Methanol Potentiation of Carbon Tetrachloride (CCl₄)-Induced Hepatotoxicity in Rats.** L. R. Cantilena, Jr., S. Z. Cagen, and C. D. Klaassen. *Dept. of Pharmacology, Univ. of Kansas Medical Center, Kansas City, KS.*
- 317 **Assessment of Tumor Initiating and Promoting Activity of a Mixture of Polybrominated Biphenyls (Firemaster BP-6), and Certain Purified Isomers of PBB.** R. K. Haroz and S. D. Aust, *Battelle Research*

Center, Geneva, Switzerland, and Michigan State Univ., East Lansing, MI.

- 318 **Malondialdehyde(MDA)-Generating Capacity of Brain and Liver of Mice and Rats Given DMSO, CCl₄, and DMSO With CCl₄.** R. E. Mancini, J. J. Kocsis, *Dept. Pharmacology, Thos. Jefferson Univ., Philadelphia, PA.*
- 319 **Effects of Mirex and Dechlorinated Mirex Derivatives on Relative Organ Weights and Liver Chemistry in Rats.** J. E. Chambers, K. M. Robinson, and J. D. Yarbrough. *Dept. of Biol. Sci., Miss. State Univ., Miss. State, MS* Sponsor: C. L. Litterst.
- 320 **Time Course of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) Effects on Liver Function in Rhesus Monkeys.** M. D. Seefeld and R. E. Peterson, *Univ. of Wisconsin, Madison, WI.*

POSTER SESSION 10: Metabolism III

Wednesday Afternoon, March 14, 1979

Exhibit Hall (East End)

Chairpersons: J. J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

- | Paper No. | Time (P.M.) | |
|-----------|-------------|--|
| 321 | (1:30-3:30) | Species Differences in the Excretion of Mercapturic Acids Between Rats and Chimpanzees Dosed with Various Amounts of Naphthalene and Diethylmaleate. K. H. Summer, K. Rozman, F. Coulston and H. Greim, <i>Institut fur Toxikologie und Biochemie, Abteilung fur Toxikologie, Gesellschaft fur Strahlen- und Umweltforschung mbH, Munchen, D-8042 Neuherberg, Germany. International Center of Environ. Safety, Albany Medical College, Holloman AFB, New Mexico.</i> |
| 322 | | Pharmacokinetics of Uptake and Metabolism of alpha-Naphthol by the Isolated Perfused Lung. A. G. E. Wilson, P. C. Hiron and H. C. Kung, <i>Lab. of Pharmacokinetics, NIEHS, Research Triangle Park, NC.</i> Sponsor: H. B. Matthews. |
| 323 | | Isolation and Identification of Urinary Metabolites of Vinyl-Type Compounds: Application to Metabolites of Acrylonitrile and Acrylamide. P. W. Langvardt, C. L. Putzig, J. D. Young, and W. H. Braun, <i>Tox. Res. Lab., Dow Chemical Co., Midland, MI.</i> |
| 324 | | The In Vivo Biotransformation of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) in the Rat. J. C. Ramsey, J. G. Hefner, R. J. Karbowski, W. H. Braun and P. J. Gehring, <i>Tox. Res. Lab., The Dow Chemical Co., Midland, MI.</i> |
| 325 | | Elimination and Tissue Distribution of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) in Female Guinea Pigs Following a Single Oral Dose. R. J. Nolan, F. A. |

- Smith and J. G. Hefner. *Tox. Res. Lab., Dow Chemical U.S.A. Midland, MI.* Sponsor: W. H. Braun.
- 326 **Enantiomers of Warfarin and Phenprocoumon as Model Substrates for Distinguishing Inducible Forms of Hepatic Microsomal Cytochrome P-450.** W. R. Porter, C. Wheeler and W. F. Trager, *Univ. of Wisconsin, Madison, WI and Univ. of Washington, Seattle, WA.* Sponsor: R. E. Peterson.
- 327 **Partial Metabolic Fate of ¹⁴C-RH-787 (Vacor® Rodenticide) in Dogs, Rats and Humans.** F. W. Deckert, W. Geyer, W. J. Godfrey, D. C. Lisk, R. B. Steigerwalt and J. R. Udinsky, *Rohm and Haas Co., Spring House, PA.* Sponsor: J. M. Smith.
- 328 **A General Method for the *In Vitro* Production and Identification of N-Dealkylated Metabolites.** J. Jernigan, D. Taber, and R. D. Harbison, *Dept. of Pharmacol., Vanderbilt Medical Center, Nashville, TN.*
- 329 **Effects of Species and Exposure Concentration on the Kinetics of Inhaled Tertiary Amyl Alcohol (TAA).** R. J. Nolan, P. W. Langvardt and G. E. Blau, *Tox. Res. Lab., Dow Chemical U.S.A. Midland, MI.* Sponsor: W. H. Braun.
- 330 **Intra-Tracheal Absorption and Distribution of ¹⁴C Labeled C. I. Solvent Red 24 in Rats.** R. A. Parent and I. Dressler, *Xerox Corp., Rochester, NY and Industrial Bio-Test Laboratories, Decatur, IL.* Sponsor: B. L. Van Duuren.
- 331 **Protection Against Alloxan-Induced Alterations in Hepatic Drug Metabolism and Plasma Glucose Levels in the Male Rat.** G. W. Wolfe and R. C. Schnell, *Dept. PCOL/TOX, School of Pharmacy, Purdue Univ., Lafayette, IN.*
- 332 **Pharmacokinetics of Epichlorohydrin (EPI) Administered to Rats by Gavage or Inhalation.** F. A. Smith, P. W. Langvardt and J. D. Young, *Tox. Res. Lab., Dow Chemical U.S.A., Midland, MI.* Sponsor: W. H. Braun.
- 333 ***In Vivo* Metabolism and Covalent Binding of Benzene in Bone Marrow.** R. D. Irons, J. G. Dent, T. S. Edgar, and D. E. Rickert, *Chemical Industry Inst. of Toxicology, Research Triangle Park, NC.* Sponsor: J. E. Gibson.
- 334 **Disposition of n-Hexane in Rats After Single and Repeated Inhalation Exposure.** J. S. Bus, E. L. White, and C. S. Barrow, *Chemical Industry Inst. of Toxicology, Research Triangle Park, NC.* Sponsor: J. E. Gibson.
- 335 ***In Vitro* Interactions of 1,2-Alkene Oxides with Epoxide Hydratase.** J. G. Dent and S. Schnell, *Chemical Industry Inst. of Toxicology, Research Triangle Park, NC.* Sponsor: J. E. Gibson.
- 336 **High Pressure Liquid Chromatography of 2,6- and 2,4-Toluenediamine (TDA) and its Application to the Analysis of 2,4 TDA in Urine and Plasma.** P. D. Unger

- and M. A. Friedman, *Dept. Biochemical Tox., Corporate Medical Affairs, Allied Chemical Corp., Morristown, NJ.*
- 337 **Metabolism of 2,4-Dinitrotoluene in Adult Rat Primary Hepatocyte Cultures.** G. M. Decad, J. G. Dent, and D. E. Rickert, *Chemical Industry Inst. of Toxicology, Research Triangle Park, NC.* Sponsor: J. E. Gibson.
- 338 **Partial Purification of Hepatic Glutathione S-Transferases of the Little Skate, *Raja erinacea*: Alkene and Arene Oxide Metabolism.** G. L. Foureman and J. R. Bend, *Lab. Pharm., NIEHS/NIH, Research Triangle Park, NC and Mt. Desert Island Biol. Lab., Salsbury Cove, ME.* Sponsor: R. L. Dixon.
- 339 **Effects of Metabolism on the Mutagenicity of the Nitronaphthalenes in Salmonella Typhimurium.** C. Benkendorf, D. Johnson, and H. Cornish, *Sch. of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI.*
- 340 **Effect of Cobaltous Chloride Treatment on 2-Methylnaphthalene Disposition and Hepatic Cytochrome P-450 Content in Carp.** P. D. Guiney, M. Dickins and R. E. Peterson, *Univ. of Wisconsin, Madison, WI.*
- 341 **The Uptake, Elimination and Metabolism of 1,2,4-Trichlorobenzene in Rainbow Trout.** M. J. Melancon Jr., D. R. Branson and J. J. Lech, *Dept. of Pharmacol., Med. Col. of Wisconsin, Milwaukee, WI and Dow Chemical USA, Midland, MI.*
- 342 **Monooxygenase Activity in Rainbow Trout. Effects of Selected PCB Isomers.** C. R. Elcombe, R. B. Franklin and J. J. Lech. *Dept. of Pharmacol., Med. Col. of Wisconsin, Milwaukee, WI.*
- 343 **Metabolism of 2-Naphthylamine Sulphonic Acids.** P. L. Batten, *Imperial Chemical Industries Ltd., Central Tox. Lab, Alderley Park, Macclesfield, Cheshire SK10 4TJ. UK.* Sponsor: I. F. H. Purchase.
- 344 **Application of High Pressure Liquid Chromatography (HPLC) to Characterize Diethylstilbestrol (DES) Metabolites in the *Macaca Mulatta*.** W. Slikker, G. D. Newport, D. E. Hill, P. Y. Lau, and E. D. Helton *NCTR, Jefferson, AR and Univ. of Arkansas Medical Sciences, Little Rock, AR.* Sponsor T. E. Shellenberger.
- 345 **Some Observations on Bovine Microsomal Mixed Function Oxidases,** L. R. Shull, S. K. McCarthy, R. Gartner, *Dept. of Dairy Science, Michigan State Univ., E. Lansing, MI.* Sponsor: S. D. Aust.

PRE-BANQUET MIXER

Wednesday Evening, March 14, 1979

5:30 - 7:00 P.M.

Mardi Gras Ballroom

For all attendees and guests. Jointly with American Academy of Clinical Toxicology, American Association of Poison Control Centers, American Board of Medical Technology, and Canadian Academy of Clinical and Analytical Toxicology.

Cash Bar

ANNUAL BANQUET

Wednesday Evening, March 14, 1979

7:00 P.M.

Grand Ballroom

Open to all attendees and guests. Members and guests of American Academy of Clinical Toxicology, American Association of Poison Control Centers, American Board of Medical Technology, and Canadian Academy of Clinical and Analytical Toxicology are especially invited.

\$16.00

Complimentary wine,
courtesy Charles River Breeding Laboratories, Inc.

SYMPOSIUM*:

Novel Analytical Support for Clinical Toxicology

Thursday Morning, March 15, 1979

8:00 A.M. - 12 Noon

Grand Ballroom (Carondelet)

**Chairperson: R. B. Forney, Indiana Univ. School of Medicine,
Indianapolis, IN**

8:00-8:55 **Gas Chromatography-Mass Spectroscopy.** R. G. Finnigan, *Finnigan Corp., Sunnyvale, CA*

8:55-9:50 **High Pressure Liquid Chromatography.** A. Poklis, *Office of the Medical Examiner, Clayton, MO*

Break — 20 Minutes

10:10-11:05 **Non-Invasive Drug Analysis.** K. M. Dubowski, *Univ. of Oklahoma, Oklahoma City, OK*

11:05-12:00 **New Applications of the EMIT Homogenous Enzyme Immunoassays.** D. S. Kabakoff, *The Cyva Co., Palo Alto, CA*

*Jointly with American Academy of Clinical Toxicology, American Association of Poison Control Centers, The American Board of Medical Toxicology, and The Canadian Academy of Clinical and Analytical Toxicology.

**PLATFORM SESSION 16:
Environmental and Industrial II**

Thursday Morning, March 15, 1979

Mardi Gras Ballroom A, B, C, D

**Co-Chairpersons: M.A. Gallo, Food and Drug Research Laboratories,
East Orange, NJ;**

M.M. Joselow, College of Medicine of New Jersey, Newark, NJ

Paper No.	Time (A.M.)	
346	8:30	Mutagenic Activity in Agricultural Waste Smoke Condensate. H.E. Olsen, M.Y. Fukayama, C.I. Wei, and D.P.H. Hsieh. <i>Dept. of Environ. Tox., Univ. of California, Davis, CA</i>
347	8:45	1-3-Dinitrobenzene: Comparison of Toxic Effects in Three Assay Systems. T.E. Cody, L. Hastings, S. Witherup and R.T. Christian, <i>Univ. of Cincinnati Med. Center, Cincinnati, OH.</i> Sponsor: G. Cooper
348	9:00	Methylmercury Excretion During Pregnancy and Lactation M.R. Greenwood, T.W. Clarkson, R.A. Doherty, L. Magos and P.N. Bennett, <i>Environ. Hlth. Sci. Ctr., Univ. of Rochester, Rochester, NY; Med. Res. Council Tox. Unit, Carshalton, U.K. and Univ. of Bath, Bath, UK</i>
349	9:15	Kepon: Cellular Sites of Action. E.L. Carmines, R.A. Carchman and J.F. Borzelleca, <i>Dept. of Pharmacol. Medical College of Virginia, Richmond, VA</i>
350	9:30	The Effects of SO₂ on the Development of Salt-Induced Hyper-Tension in Rats. R.T. Drew, D.L. Costa, S.B. Haber and J. Iwai. <i>Medical Dept., Brookhaven Natl. Lab., Upton, NY</i>
351	9:45	Health Status of Persons Exposed to PBB. H.E.B. Humphrey, K.R. Wilcox, J.L. Isbister and A.W. Bloomer. <i>Michigan Dept. Public Health, Lansing, MI.</i> Sponsor: J.B. Hook
352	10:00	Exhaled Mercury as an Index of Inorganic Hg Body Burden. J.D. Dunn, T.W. Clarkson and L. Magos, <i>Univ. Rochester, Sch. of Med. and Dent., NY, and Toxicology Unit, Medical Research Council, Carshalton, UK</i>
353	10:15	The Toxicological Evaluation of Methylmethacrylate (MMA). M.H. Litchfield, Imperial Chemical Industries, Ltd. <i>Central Tox. Lab., Alderley Park, Nr. Macclesfield, Cheshire, UK.</i> Sponsor: J. Smith
	10:30	Break - 15 minutes
354	10:45	Pharmacokinetic Modeling of the Spiny Lobster (<i>Panulirus Argus</i>): Distribution and Disposition of Octane and Hexadecane. D.B. Tuey, R.P. Weatherby and J.R. Bend, <i>National Inst. of Environ. Hlth. Sciences, Research Triangle Park, NC.</i> Sponsor: H.B. Matthews

355	11:00	Effect of Paraquat Treatment on Rat Kidney Basement Membranes. R. Kuttan, R. Spall, I.G. Sipes, E. Meezan and K. Brendel, <i>Dept. Pharmacol., AHSC, Univ. of Arizona, Tucson, AZ</i>
356	11:15	Airborne Lead and Children - The Omaha Study. C.R. Angle and M.S. McIntire, <i>Dept. of Pediatrics, Univ. of Nebraska Coll of Med. and Creighton Univ. Sch. of Med., Omaha, NB.</i> Sponsor: T.S. Miya
357	11:30	Correlation Between Free Erythrocyte Protoporphyrin and Urinary Lead Excretion After EDTA Chelation in Battery Plant Workers. A.J. Nantel, J.Y. Savoie and J.P. Weber, <i>Centre Regional de Toxicologie, C.H.U.L., Quebec, Canada.</i> Sponsor: F.W. Oehme
358	11:45	Evaluation of Population Exposure to Arsenic, Lead, Cadmium and Mercury in the Vicinity of a Copper Smelter. J.P. Weber, J.Y. Savoie and G. Harvey, <i>Centre Regional de Toxicologie, C.H.U.L., Quebec, Canada.</i> Sponsor: F.W. Oehme

PLATFORM SESSION 17: Halogenated Hydrocarbons III

Thursday Morning, March 15, 1979

Mardi Gras Ballroom E, F, G, H

**Co-Chairpersons: R.D. Kimbrough, Center for Disease Control,
Atlanta, GA;**

D.H. Norback, Univ. of Wisconsin, Madison, WI

Paper No.	Time (A.M.)	
359	8:30	Toxicological Responses of Nonhuman Primates to 1, 2, 3, 6, 7, 8-Hexachlorodibenzo-p-Dioxin (HCDD). J.R. Allen, J.P. Van Miller, D.A. Barsotti, and L.A. Carstens. <i>Dept. of Path. Univ. of Wisconsin Medical School, and Regional Primate Res. Center, Madison, WI</i>
360	8:45	Toxicological Effects Produced in Nonhuman Primates Chronically Exposed to Fifty Parts Per Trillion 2, 3, 7, 8-Tetrachlorodibenzo-p-Dioxin (TCDD). S.L. Schantz, D.A. Barsotti and J.R. Allen. <i>Dept. of Path., Univ. of Wisconsin Medical School, and Regional Primate Res. Center, Madison, WI</i>
361	9:00	TCDD Contamination in Italy: The Risk Assessment of Low Level Exposure, Cumulative Effect and Long-Term Consequences. G. Reggiani, <i>Medical Research Board, F. Hoffmann-La Roche & Co. Ltd., Basle, Switzerland</i>

- 362 9:15 **The Comparative Metabolism of Halogenated Biphenyls.** S. Safe and C. Wyndham, *Dept. of Chem., Univ. of Guelph, Guelph, Ont., Canada.* Sponsor: D.C. Villeneuve
- 363 9:30 **Hepatic Ultrastructural Changes of Rats Exposed to Polychlorinated Biphenyl Isomers,** R.H. Weltman and D.H. Norback, *Wm. S. Middleton VA Hospital and Univ. of Wisconsin, Madison, WI*
- 364 9:45 **Transformation *in Vitro* Induced by Aroclor 1254: Ultra-Structure of Transformed Cells.** D.H. Norback and G.J. Swedo, *Wm. S. Middleton Memorial VA Hospital and Univ. of Wisconsin, Madison, WI*
- 365 10:00 **Induction of Hepatic MFO Enzymes in Trout Fed PCB, Some Proposed PCB Replacements, and Related Compounds.** R.F. Addison¹ and F.C.P. Law²; ¹*Marine Ecology Lab., P.O. Box 1006, Dartmouth, N.S., Canada,* ²*Coll. Pharmacy, Dalhousie Univ., Halifax, N.S. Canada.* Sponsor: D.J. Ecobichon
- 366 10:15 **The Effect of Different Diets or Mineral Oil on Liver Pathology, and PBB Concentrations in Blood, Liver and Adipose Tissue.** R.D. Kimbrough, M.P. Korver, and V.W. Burse, *Center for Disease Control, Atlanta, GA*
- 10:30 Break - 15 minutes
- 367 10:45 **Ultrastructural Assessment of Toxicity of Photomirex and Mirex in the Liver and Testis of Rat.** A. Singh, V.E. Valli, and C.A. Ackerley, *University of Guelph, Guelph, Canada,* D.C. Villeneuve, T. Kuiper-Goodman and L. Ritter, *Health Protection Branch, Ottawa, Ontario*
- 368 11:00 **The Comparative Toxicity of Technical and Analytical Pentachlorophenol in Cattle.** E.E. McConnell, C.E. Parker, B.N. Gupta, M.I. Luster and J.A. Moore, *National Inst. of Environ. Health Sciences, Research Triangle Park, NC*
- 369 11:15 **Disposition of Tris-(1,3-Dichloro-2-Propyl)-Phosphate in the Rat.** H.B. Matthews and M.W. Anderson, *Laboratory of Pharmacokinetics, NIEHS, Research Triangle Park, NC*
- 370 11:30 **Interim Results of Two-Year Inhalation Toxicologic Studies of Methylene Chloride in Rats and Hamsters.** L.W. Rampy, K.D. Nitschke, T.J. Bell and J.D. Burek, *Dow Chemical, Health and Environ. Research, Midland, MI.* Sponsor: P.J. Gehring

PLATFORM SESSION 18: Hepatic and Gastrointestinal

Thursday Morning, March 15, 1979

Grand Ballroom (Acadia)

**Co-Chairpersons: G.C. Fuller, Univ. of Rhode Island, Kingston, RI;
M. Vore, Univ. of California School of Medicine, San Francisco, CA**

Paper No.	Time (A.M.)	
371	8:30	Decreased Hepatobiliary Permeability Produced by Tauro-Lithocholate (TLC) Treatment of Rats. J.M. Fujimoto, M.A. Jansen and J.R. Olson. <i>Toxicology Research Laboratory, Wood VA Center, Wood, WI</i>
372	8:45	Alteration in the <i>in Vivo</i> Hepatocyte Transmembrane Potential Following CC14 and Bile Salt Treatment of Rats. J.R. Olson, M.J. Hosko and J.M. Fujimoto, <i>Dept. of Pharmacol., Med. Col. of Wisconsin, Milwaukee, WI</i>
373	9:00	Biliary Excretory Dysfunction in the Rat Following Exposure to Photomirex. L.R. Curtis and H.M. Mehendale, <i>Dept. of Pharmacol. & Tox., Univ. Mississippi Med. Ctr., Jackson, MS</i>
374	9:15	Alterations in Hepatic Transport Systems in Isolated Rat Hepatocytes After Treatment With Microsomal Enzyme Inducers. D.L. Eaton and C.D. Klaassen, <i>Dept. Pharmacol., Univ. Kansas Med. Ctr., Kansas City, KS</i>
375	—	Paper Cancelled
376	9:30	Comparisons in Hepatic Response to Mirex With CD-1 and B6C3F1 Mice. B.A. Mayes and R. Abraham, <i>Inst. of Comparative and Human Tox., Albany Medical College, Albany, NY</i>
377	9:45	Hepatic Prolyl Hydroxylase Activity (HPHA): Effect of Maglinant Disease or Hepatotoxic Drugs. S.W. Mann, G.C. Fuller, E.I. Vidins and J.V. Rodil. <i>Pharmacol. Dept., Univ. Rhode Island, Kingston, RI and Sect. of Med., Brown Program in Med., and VA Hosp., Providence, RI</i>
378	10:00	Effects of Hydrazine and Its Derivatives on the Development of Intestinal Brush Border Enzymes. C.M. Schiller, R. Walden and T.E. Kee, <i>Laboratory of Environ. Tox., NIEHS, Research Triangle Park, NC.</i> Sponsor: B.A. Fowler
	10:15	Break - 15 minutes

379	10:30	Estradiol-17-β-Glucuronide: A Potent Inhibitor of Bile Flow in the Rat. M. Vore, G. Pascoe and M. Meyers. <i>Depts. of Pharmacol., Univ. California, San Francisco, CA and Univ. Kentucky, Lexington, KY</i>
380	10:45	Studies of Acute Hepatotoxicity of Styrene Oxide in Rats. S. Chakrabarti and J. Brodeur, <i>Dept. de medecine du travail et d'hygiene du milieu., Faculte de Medecine, Universite de Montreal, Montreal, Quebec, Canada</i>
381	11:00	Hepatotoxic Injury Induced by Styrene in Adult Male Rats. S. Chakrabarti and J. Brodeur, <i>Dept. de medecine du travail et d'hygiene du milieu, Faculte de Medecine, Universite de Montreal, Montreal, Quebec, Canada</i>
382	11:15	Digoxin Excretion in Hepatic and Renal Toxicity. M.E. Davis, W.O. Berndt and H.M. Mehendale, <i>Dept. Pharmacol. & Toxicol., Univ. Mississippi Med. Ctr., Jackson, MS</i>

POSTER SESSION 11: Agricultural Chemicals II

Thursday Morning, March 15, 1979

Exhibit Hall (East End)

Chairpersons: J. J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

Paper No.	Time (A.M.)	
383	8:30 - 10:30	Photomirex: A Ninety Day Toxicity Study in Rats. D.C. Villeneuve, L.C. Ritter, G.C. Becking and V.E. Valli. <i>Health Protection Branch, Health and Welfare Canada, Tunney's Pasture, Ottawa, Ont., Canada, and Bow Valley Holdings Ltd. (V.E.V.), Guelph, Ont., Canada</i>
384		Acute Toxicity of Pesticides in Hamsters. J.R.P. Cabral, F. Raitano, T. Mollner, S. Bronczyk and P. Shubik, <i>Eppley Inst. for Research in Cancer, Univ. Nebraska Med. Center, Omaha, NB and Medical Research Council Toxicology Unit, Carshalton, England</i>
385		Toxicity of Tansy Ragwort in Rats. C.L. Miranda, D.R. Buhler, and P.R. Cheeke, <i>Environ. Health Sci. Center and Depts. of Agric. Chem. and Animal Sci., Oregon State Univ., Corvallis, OR</i>
386		Studies on the Metabolism of Permethrin by Fish. A.H. Glickman, T. Shono, J.E. Casida and J.J. Lech. <i>Dept. of Pharmacol., Med. Col. of Wisconsin, Milwaukee, WI and Dept. of Entomological Sciences, Univ. Calif., Berkeley, CA</i>
387		Treatment of Mercury Poisoning Using Dimercaprol and Dialysis. D.W. Teat, E.J. Stramoski, and M.D. Ellis, <i>Texas State Poison Center, Univ. of Texas Medical Branch, Galveston, TX., B.A. Bartholomew, R. Pietila, and G. Stanbaugh, Texas Tech School of Medicine, Lubbock, TX</i>

- 388 **A Two-Year Chronic Toxicity Study of Tricyclazole in Mice.** L.C. Howard, N.V. Owen, S.S. Young, D.M. Morton and L. Golberg, *Tox. Div., Lilly Research Laboratories, Greenfield, IN and Chemical Industry Inst. of Toxicology, Research Triangle Park, NC*
- 389 **Herbicidal Potency of Paraquat Homologs as a Function of Their Physicochemical Constants in Duckweed.** J.H. Ross, R.I. Krieger and L.O. Lim, *Dept. Env. Tox., Univ. California, Davis, CA*

POSTER SESSION 12: Nervous System II

Thursday Morning, March 15, 1979

Exhibit Hall (East End)

Chairpersons: J. J. Kocsis, Thomas Jefferson Univ., Philadelphia, PA; J. J. McPhillips, Astra Pharmaceutical Products, Framingham, MA

- | Paper No. | Time (A.M.) | |
|-----------|--------------|---|
| | 8:30 - 10:30 | |
| 390 | | Delayed Neurotoxicity of O-Ethyl O-2,4-Dichlorophenyl Phenylphosphonothioate: Effects of a Single Oral Dose on Hens. M.B. Abou-Donia, D.G. Graham and A.A. Komeil. <i>Depts. of Pharmacol. and Path., Duke Univ. Medical Center, Durham, NC</i> |
| 391 | | Delayed Neurotoxicity of S,S,S-Tributyl Phosphorothioate: Differences Due to Route of Administration. M.B. Abou-Donia, D.G. Graham, B.L. Reichert, and P. Timmons. <i>Depts. of Pharmacol. and Path., Duke Univ. Medical Center, Durham, NC</i> |
| 392 | | Inhibition of Axoplasmic Transport by Delayed Neurotoxic Organophosphorus Esters: A Possible Mode of Action. B.L. Reichert and M.B. Abou-Donia. <i>Dept. of Pharmacol., Duke Univ. Medical Center, Durham, NC</i> |
| 393 | | Development of Tolerance and Cross-Tolerance to the Lethal Effect of Morphine and Heroin. D.G. Lange, E.B. Benson, R.I.H. Wang and J.M. Fujimoto, <i>Dept. of Pharmacol. Medical college of Wisconsin, Milwaukee, WI</i> |
| 394 | | Muscimol Antagonizes Methylhydrazine Induced Convulsions. R.A. Davis, M.E. George, K.C. Back, <i>6570th Aerospace Medical Research Lab., Wright-Patterson AFB, OH</i> |
| 395 | | Evaluation of Delayed Neurotoxic Potential of Chronically Administered Dyfonate® in Adult Hens. J.L. Miller, L. Sandvik, G.L. Sprague, A.A. Bickford, and T.R. Castles. <i>Stauffer Chemical Co., Richmond, CA, and Dept. of Vet. Extension, Univ. California, Davis, CA</i> |
| 396 | | Organophosphate Neurotoxicity: Neurotoxic Esterase in Human Nervous Tissue. M. Lotti and M.K. Johnson, <i>Medical Research Council Toxicology Unit, Carshalton, Surrey, UK.</i> Sponsor: M.S. Rose |

- 397 **Correlation of Brain and Lymphocyte Neurotoxic Esterase Inhibition in the Adult Hen Following Dosing With Neurotoxic Compounds.** B.R. Dudek, M. Barth, L. Gephart, J. Huggins, and R.J. Richardson, *Sch. of Pub. Hlth., Univ. of Mich., Ann Arbor, MI.* Sponsor: H.H. Cornish
- 398 **Effects of DDT and Parathion on Goldfish Retina/Pigment Epithelium/Choroid Concentrations of Serotonin, Dopamine and Norepinephrine** T.O. McDonald and M. Fingerma, *Dept. of Biology, Tulane Univ., New Orleans, LA*
- 399 **Behavioral Effects of Embryonic X-irradiation of Rats.** B.F. Schneider and S. Norton, *Dept. of Pharmacol. Univ. of Kansas Medical Center, Kansas City, KS*
- 400 **Neurobehavioral Sequelae of Neonatal Lead Exposure in Rats.** S. Overmann and D. Woolley, *Univ. of California, Davis, CA*
- 401 **The Effects of Endrin Administration During Gestation on the Behavior of the Golden Hamster.** L.E. Gray, Jr., R. Kavlock, N. Chernoff, D. Lawton, and J. Gray, *EPA, Research Triangle Park, NC and Duke Univ., Dept. of Pharmacol., Durham, NC.* Sponsor: D. Menzel
- 402 **Teratogenic Effects of Endrin in the Golden Hamster.** N. Chernoff, R.J. Kavlock, L.E. Gray and R.C. Hanisch, *Health Effects Research Lab., EPA, Research Triangle Park, NC.* Sponsor: R.W. Chadwick
- 403 **Biochemical and Behavioral Effects of Reserpine in the Horse.** C.G. White, W.E. Woods and T. Tobin, *Grad. Center for Tox. and Dept. Vet. Science, Univ. of Kentucky, Lexington, KY.* Sponsor: H.W. Dorough
- 404 **Pharmacokinetics and Behavioral Effects of Fentanyl in the Horse.** J. Combie, T. Shults, E. Nugent, and T. Tobin, *Grad. Center for Tox. and the Dept. of Veterinary Science, Univ. of Kentucky, Lexington, KY.* Sponsor: H.W. Dorough
- 405 **Toxicity of Topically Applied Acetyl Ethyl Tetramethyl Tetralin (AETT) in Rats.** B.H. Arthur, W.D. Johnson, W.J. Griffing, and J.L. Emmerson, *Tox. Div., Lilly Research Laboratories, Greenfield, IN*
- 406 **Pathology of Ethanol Addiction by Inhalation in Mice.** D.G. Perkins and R.B. Forney, *Dept. of Pharmacol. and Tox., Indiana Univ. School of Medicine, Indianapolis, IN*
- 407 **Effects of Heat and Carbon Monoxide on Continuous Avoidance Performance.** W.F. Sette and Z. Annau, *Johns Hopkins Univ., Sch. of Hyg. & Pub. Hlth., Baltimore, MD.* Sponsor: R. Rubin
- 408 **A Sensitive Radioenzymatic Assay for the Simultaneous Determination of Dopamine and Salsolinol.** R.A. Dean, D.P. Henry, R.R. Bowsher and R.B. Forney, *Dept. of Pharmacol. and Tox., Indiana Univ. School of Medicine Lilly Research Laboratories, Indianapolis, IN*

- 409 **The Efficacy of Complexing Therapy Administered at Various Times After Exposure to Methyl Mercury.** L.J. Zimmer and D.E. Carter, *Tox. Program, Univ. of Arizona, Tucson, AZ.* Sponsor: I.G. Sipes
- 410 **Study of the Repartition of Methylmercury (²⁰³Hg) in Macaca Monkey by Macroscopic Autoradiography.** A.G. Rico, P. Benard, V. Burgat-Sacaze and J.P. Braun, *Lab. Radioelements, Ecole Veterinaire, 31076 Toulouse, France.* Sponsor: F.W. Oehme
- 411 **Oral Chronic Toxicity of Methyl n-Propyl Ketone, Methyl n-Butyl Ketone and Hexane in Rats.** W.J. Krasavage, J.L. O'Donoghue and C.J. Terhaar, *Health, Safety, and Human Factors Laboratory, Eastman Kodak Co., Rochester, NY*
- 412 **Delayed Neurotoxicity of Leptophos: Effect of Pure, Technical Grade and Degradation Products on the Hen.** M.B. Abou-Donia, D.G. Graham, A.A. Komeil and P. Timmons, *Depts. of Pharmacol. and Path., Duke Univ. Medical Center, Durham, NC*

Annual Business Meeting

Tuesday, March 13, 1979

3:30 P.M.

Grand Ballroom

Open to all SOT Members

ISSUES SESSION

Mardi Gras Ballroom A, B, C, D

Wednesday, March 14, 1979

12 Noon - 1:15 P.M.

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

Chaired by President Leon Golberg

ANNUAL BANQUET

Wednesday Evening, March 14, 1979

7:00 P.M.

Grand Ballroom

Open to all attendees and guests. Members and guests of American Academy of Clinical Toxicology, American Association of Poison Control Centers, American Board of Medical Technology, and Canadian Academy of Clinical and Analytical Toxicology are especially invited.

\$16.00

**Complimentary wine,
courtesy Charles River Breeding Laboratories, Inc.**

Have
Book
no - news

Mr. R. Galant

Food Chem. News.

Quest