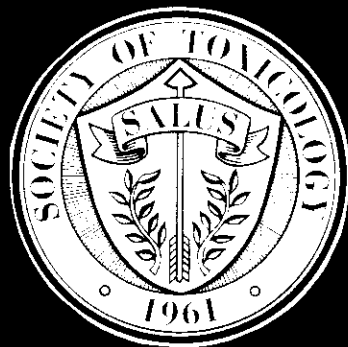


# 16th ANNUAL MEETING



## PROGRAM

**Society  
of  
Toxicology**

**ROYAL YORK HOTEL  
TORONTO, ONTARIO**

**MARCH 27-30, 1977**

reg. proc. 2/22/77

30.00

#2

30.00

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tickets

@15.00

# SIXTEENTH ANNUAL MEETING

sponsored by

## SOCIETY OF TOXICOLOGY

Royal York Hotel - Toronto, Ontario

March 27-30, 1977

### REGISTRATION FEES

	<u>Member</u>	<u>Non- Member</u>	<u>Student- Full-time, Predoctoral</u>
<b>Preregistration*</b>	<b>\$30</b>	<b>\$40</b>	<b>\$ 5</b>
<b>At Conference** (R.S. Waritz, Registrar)</b>	<b>35</b>	<b>45</b>	<b>10</b>
<b>Banquet* **</b>	<b>15</b>	<b>15</b>	<b>15</b>

\* Payable in U.S. funds only. Return form with payment to:  
Executive Secretary, Society of Toxicology  
66 South Miller Road  
Akron, Ohio 44313 Tel: 216/867-3755

\*\* Payable in either Canadian or U.S. Funds, at par. Registration desk  
located on Convention Floor  
Sunday, March 27 - 1P.M. - 9P.M.  
Monday, March 28 - 7:30 A.M. - 4 P.M.  
Tuesday, March 29 - 8:00 A.M. - 4 P.M.

## Sessions Summary

### Platform

		<u>Room</u>	<u>Page for Details</u>
MONDAY			
A.M.	General Toxicology	Tudor	10
	Reproduction/Teratology/Behavior	Ontario	12
	CNS/Behavior	Concert Hall	13
TUESDAY			
A.M.	Carcinogenesis/Mutagenesis	Ontario	19
	Metabolism/Pharmacokinetics	Concert Hall	21
	Food Additives/Mycotoxins	Tudor	23
P.M.	Agricultural Chemicals/Endocrine	Tudor	30
	Respiratory Toxicology	Concert Hall	32
	Liver/Gastrointestinal	Ontario	34
WEDNESDAY			
A.M.	Halogenated Hydrocarbons	Concert Hall	40
	Metals	Ontario	42
	Drug Toxicity	Tudor	44

### Symposium

MONDAY			
P.M.	Good Laboratory Practice (Ending 4 P.M. Business Meeting follows, same room)	Concert Hall	19

### Poster

MONDAY			
A.M.	Liver/Kidney	Ballroom	15
	Metals	Ballroom	17
TUESDAY			
A.M.	General Toxicology	Ballroom	25
	Halogenated Hydrocarbons	Ballroom	28
P.M.	General Toxicology	Ballroom	36
	Reproduction/Mutagenesis	Ballroom	37
WEDNESDAY			
A.M.	Metabolism	Ballroom	46
	General Toxicology	Ballroom	48

## **GENERAL MEETING INFORMATION**

### **Sessions and Locations**

All meetings will be held on the Convention Floor of the Royal York Hotel (see Centerfold Map).

### **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 them free with their registration. Additional copies available at registration desk (Convention Floor) at \$2 each.

### **Hotel Accomodations**

The Royal York Hotel is the headquarters, with the following guaranteed guest room rates when reservations are made on the printed form accompanying the Pre-Conference mailing:

Single \$34

Twin \$44

Additional guest rooms, as needed, will be available at the Harbour Castle Hotel at the same guaranteed rates.

The Royal York accepts the following credit cards:

American Express, Canadian Pacific, Chargex (BankAmericard),  
Diners Club, Esso (Canadian), Master Charge.

### **Snack Bar**

A snack bar will be open Monday, Tuesday, Wednesday in the Ballroom 7:45 A.M. - 4:30 P.M.

## Special Events and Services

### Symposium

"Good Laboratory Practice", Concert Hall, 1:30 - 4:00 P.M., Monday.  
Chairman: J.J. McPhillips.

### Annual Business Meeting

Concert Hall, 4 P.M. Monday. Open to all Society of Toxicology members.

### Mixer and Reception

Canadian Room, 6:30 - 8 P.M. Monday, Cash Bar.

### Annual Banquet

Concert Hall, 7:30 P.M. Tuesday. \$15. See Page 39 of program for menu. Complimentary wine, courtesy Charles River Breeding Laboratories.

### Ladies Hospitality

Territories Room, Mezzanine floor. 9 A.M. - 4 P.M., Monday and Tuesday, 9 A.M. - Noon, Wednesday.

### Placement Service

Prince Edward Room, Mezzanine floor.

10 A.M. - Noon, Monday, Tuesday, Wednesday

2 P.M. - 4 P.M., Monday, Tuesday.

Co-chairman: Mark Hite, W.E. Rinehart

### "Issues" Session

Ontario Room, Tuesday 4:45 P.M. The officers and Councilors will be available for discussions of pertinent questions with the membership in an open forum.

### Press Room

Saskatchewan Room. 8 A.M. - 9 P.M., Monday and Tuesday.

8 A.M. - Noon, Wednesday.

### First International Congress on Toxicology, March 30 - April 2, 1977.

The first meeting of the International Congress on Toxicology immediately follows the annual meeting of the Society of Toxicology, in the Royal York Hotel and in most of the same meeting rooms. Sessions begin 1:30 P.M. Wednesday, March 30 and continue through Saturday morning, April 2.

Preregistration fee: \$45; at Congress, \$55. This registration is not included in registration fee for Society of Toxicology.

For further information: R.G. Burford, G.D. Searle & Co. of Canada, Ltd., 400 Iroquois Shore Road, Oakville, Ont. L6H 1M5, Canada.

**COUNCIL (1976-77)**  
**(composed of the officers and four elected councilors)**

**Officers**

Robert A. Scala  
Harold M. Peck  
Seymour L. Friess  
Gale C. Boxill  
Hans P. Drobeck

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President-Elect  
Past-President  
Secretary  
Treasurer

**Councilors**

Perry J. Gehring (1975-1977)  
Tom S. Miya (1975-1977)  
Robert L. Dixon (1976-1978)  
Frederick W. Oehme (1976-1978)

\*\*\*\*\*

**Executive Secretary**

William E. McCormick  
66 South Miller Road  
Akron, Ohio 44313  
216/867-3755

**COMMITTEES 1976-1977**

**ELECTED COMMITTEES**

**Educational Committee**

Carl C. Smith (1975-1977), Chairman  
James E. Long (1975-1977)  
Stata Norton (1976-1978)  
Andrew L. Reeves (1976-1978)

**Finance Committee**

Hans P. Drobeck, Chairman  
Henry Sherman (1975-1977)  
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Jiro K. Kodama (1976-1979)

## **APPOINTED COMMITTEES**

### **Awards Committee**

Seymour L. Friess, Chairman  
Robert L. Dixon  
Frederick W. Oehme

### **Nominating Committee**

Sheldon D. Murphy, Chairman  
E. Paul Denine  
John Doull  
Donald D. McCollister  
Oscar M. Moreno

### **Program Committee**

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Robert T. Drew  
Elliott S. Harris  
Morris M. Joselow  
K.S. Khera  
James M. McNerney  
Joseph J. McPhillips  
John H. Mennear  
Richard S. Waritz, Registrar

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Robert G. Tardiff, Co-Chairman  
Tibor Balazs  
Evelyn G. Burtis  
John L. Egle, Jr.  
Martin R. Gilman  
A. Wallace Hayes  
Irwin A. Heyman  
Benjamin A. Jackson  
Gerald L. Kennedy, Jr.  
Charles F. Reinhardt  
Thomas E. Shellenberger



**Advisory Committee on  
Acquisition of Toxicological  
Data on Pesticides for Food  
Additives Unit, World Health  
Organization\***

Harold C. Grice, Chairman  
Sheldon D. Murphy, Co-Chairman  
Milton Eisler  
William Durham  
Wayland J. Hayes, Jr.  
Frank C. Lu  
Donald D. McCollister  
Emil Poulsen

**Committee for Legislative Assistance**

Joseph F. Borzelleca, Chairman  
Victor A. Drill  
Wayland J. Hayes, Jr.  
Seymour L. Friess

**Board of Publications**

Bernard A. Becker (1974-1977), Chairman  
H.P.K. Agersborg, Jr. (1975-1978)  
Robert E. Menzer (1976-1979)  
Gabriel L. Plaa, Editor,  
Toxicology and Applied Pharmacology  
Robert A. Scala, President  
Harold M. Peck, Auditor

**Representatives to the Steering Committee  
for the First International Congress on  
Toxicology**

Sheldon D. Murphy, Co-Chairman  
Leon Golberg  
Harold C. Grice  
Gabriel L. Plaa

**APPOINTMENTS**

**Historian\*\***

Harry W. Hays

**Placement**

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

**Representative to Drug Research Board, NAS + NRC ‡ ‡**

Victor A. Drill

**Representative to Science Advisory Committee  
Registry of Tissue Reactions to Drugs, NAS-NRC ‡ ‡**

Harold M. Peck

**Representative to Scientific Advisory Board  
National Center for Toxicological Research ‡ ‡**

Perry J. Gehring

**Liaison with European Society of Toxicology ‡ ‡**

Leon Golberg

Bo Holmstedt

**Liaison with American Industrial Hygiene Association\***

Gale C. Boxill

Harold M. Peck

Robert A. Scala

**Liaison with Environmental Mutagens Society ‡**

John H. Weisburger

**Liaison with National Society for Medical Research ‡**

Paul J. Garvin

\*Appointment for 1 year, ends April 30, 1977

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

\*\*\*Appointment for 2 years, ends April 30, 1977

‡ Continuing appointment

‡‡ Annual reappointment on a continuing basis

**FUTURE MEETINGS-SOCIETY OF TOXICOLOGY**

<b>Meeting Number</b>	<b>Year</b>	<b>Dates</b>	<b>Location</b>
17	1978	March 12-16	Hyatt Regency San Francisco, CA
18	1979	March 11-15	Marriott New Orleans, LA
19	1980	March	Philadelphia, PA
20	1981	March 8-12	Washington Hilton Washington, DC
21	1982	March 7-11	Sheraton Boston Boston, MA
22	1983	March	Hyatt Regency San Francisco, CA

## PAST PRESIDENTS-SOCIETY OF TOXICOLOGY

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

## SOCIETY OF TOXICOLOGY 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

### 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

**Frank R. Blood**

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

**March 28, 1977**

**MONDAY MORNING - TUDOR ROOM**

***"General Toxicology"***

Chairman: A.G. Ulsamer

Assisted by: R.M. Hehir

<u>Paper No.</u>	<u>Time</u>	
1.	8:30	<b>Chlorinated-S-Triazine Trione Compounds: Acute and Chronic Toxicity Studies.</b> J. Laveglia, D.G. MacKellar, FMC Corp., Princeton, NJ; J.H. Wedig, Olin Corp., New Haven, CT; M.L. Keplinger, Industrial BIO-TEST Laboratories, Inc., Northbrook, IL; P.L. Wright and G.J. Levinskas, Monsanto Co., St. Louis, MO.
2.	8:45	<b>Comparative Toxicology of Cardiac Glycosides from the Milkweed <i>Asclepias eriocarpa</i>.</b> J.M. Benson and J.N. Seiber, Dept. of Environ. Tox., Univ. of Calif., Davis, CA; R.F. Keeler and A.E. Johnson, Poisonous Plant Research Lab., U.S. Dept. Agr., Logan, UT. (Sponsor: W.W. Kilgore).
3.	9:00	<b>Safety Evaluation of Insect Repellent Cyclohexamethylene Carbamide.</b> S.C. Lovre, A.H. McCreesh, M.H. Weeks, U.S. Army Envir. Hyg., Aberdeen Proving Ground, MD.
4.	9:15	<b>Percutaneous Absorption of Zinc Pyridinethione in Monkeys.</b> W.B. Gibson and G. Calvin, Procter and Gamble Co., Miami Valley Lab., Cincinnati, OH. (Sponsor: E.V. Buehler).

<u>Paper No.</u>	<u>Time</u>	
5.	9:30	<b>Acute and Subacute Intravenous Toxicity of Hashish Oil in Monkeys.</b> Y.K. Luthra, H. Rosenkrantz, R.W. Fleischman and M.C. Braude, Mason Research Inst., Worcester, MA and NIDA, Rockville, MD.
6.	9:45	<b>Observations on the Toxicity of Zearalnone in the Rat.</b> M.A. Gallo, D.E. Bailey, J.G. Babish, and G.E. Cox, Food and Drug Research Labs., Inc., East Orange, NJ; J.M. Taylor, FDA, Washington, DC.
	10:00	30 Minute Break
7.	10:30	<b>Subacute Oral Toxicity of Two Alkylating Agents, MMS and Metepa, in the Mouse.</b> G.L. Kennedy, Jr., D.E. Gordon, M.L. Keplinger, and J.C. Calandra. Industrial BIO-TEST Labs., Northbrook, IL.
8.	10:45	<b>Information Analysis: The Toxicology Information Response Center Activities During 1976.</b> H.G. Gerstner, J.E. Huff and G.U. Ulrikson, Inf. Center Complex/Inf. Div., ORNL, Oak Ridge, TN; H.M. Kissman and B.M. Vasta, Tox. Inf. Program, Nat'l. Lib. Medicine, Bethesda, MD.
9.	11:00	<b>Structure-Activity Relationships of Active Uptake of Paraquat into Rat Lung as Influenced by 4,4' Bipyridyls.</b> J.H. Ross and R.L. Krieger, Dept. Environ. Tox., Univ. of Calif., Davis, CA.
10.	11:15	<b>Studies on the Long Term Toxicity of 2-Butanol.</b> M.A. Gallo, B.L. Oser, G.E. Cox, and D.E. Bailey, Food and Drug Research Labs., Inc., East Orange, NJ.
11.	11:30	<b>Effects of Citrinin on Renal Transport Processes.</b> W.O. Berndt and A.W. Hayes, Dept of Pharm. and Tox., Univ. of Mississippi Medical Center, Jackson, MS.

March 28, 1977

**MONDAY MORNING - ONTARIO ROOM**

*"Reproduction/Teratology/Behavior"*

*Chairman: B.B. Coldwell*

*Assisted by: T. Kuiper-Goodman*

<u>Paper No.</u>	<u>Time</u>	
12.	8:30	<b>Vehicle-Mediated Differences in Iododeoxyuridine-Induced Embryotoxicity in Mice.</b> R.G. Skalko, D.S. Packard, Jr., D.A. Caniano and K.F. Benitz, Albany Medical College, Albany, NY, and Birth Defects Institute, NY Health Dept., Albany, NY.
13.	8:45	<b>The Human Placental Cholinergic System: A Model for Examining its Role in Placental Function.</b> M. Fant and R.D. Harbison, Dept. of Biochemistry, Vanderbilt Univ. School of Medicine, Nashville, TN.
14.	9:00	<b>Teratogenicity Study on Hydroxyurea in the Cat.</b> K.S. Khera, Food and Drug Directorate, Health and Welfare, Canada, Ottawa, Ont.
15.	9:15	<b>Dipterex Teratogenicity in the Rat, Hamster, and Mouse when Given by Gavage.</b> R.E. Staples and E.H. Goulding, NIEHS, Research Triangle Park, NC.
16.	9:30	<b>Fetotoxicity of Dimethadione in Rats.</b> H.S. Buttar, I. Dupuis and K.S. Khera, Health Protection Branch, Health and Welfare Canada, Ottawa, Ont.
17.	9:45	<b>Pharmacodynamics of Mirex in Goats: Effect of Reproduction and Lactation.</b> J.A. Liddle, A.L. Smrek, S.R. Adams, R.D. Kimbrough, Center for Disease Control, Atlanta, GA.
18.	10:00	<b>Chronic Toxicity and Reproduction Studies in Rats Given Pentachlorophenol by the Dietary Route.</b> B.A. Schwetz, J.F. Quast, P.A. Keeler, C.G. Humiston and R.J. Kociba, Tox. Res. Lab., Dow Chemical U.S.A., Midland, MI.

<u>Paper No.</u>	<u>Time</u>	
19.	10:15	<b>Fetotoxicity and Teratogenicity of Zearanol in Mice.</b> G.J. Davis, J.A. McLachlan and G.W. Lucier, Endocrine Laboratories of Madison, Inc., Madison, WI and NIEHS, Research Triangle Park, NC. (Sponsor: P.O. Ness).
	10:30	30 Minute Break
20.	11:00	<b>Teratogenic Effects of the Plant Hormone Indole-3-Acetic Acid in Mice and Rats.</b> J.A. John, C.D. Blogg, F.J. Murray, B.A. Schwetz, and P.J. Gehring, Tox. Research Lab., Dow Chemical U.S.A., Midland, MI.
21.	11:15	<b>Toxicity and Reproduction Studies with Patulin in the Rat.</b> M.A. Gallo, D.E. Bailey, J.G. Babish, Food and Drug Research Labs., Inc., East Orange NJ; J.M. Taylor and R.E. Daily, FDA, Washington, DC.
22.	11:30	<b>Subtle Postnatal Effects of Locoweed in Rats.</b> B.K. Nelson, L.F. James, R.P. Sharma, and C.D. Cheney, USDA Poisonous Plant Research Lab., and Tox. Program and Psycho. Dept., Utah State Univ., Logan, UT.

March 28, 1977

**MONDAY MORNING - CONCERT HALL**

*"CNS/Behavior"*

*Chairman: D.C. Villeneuve*

*Assisted by: B.N. Banerjee*

23.	8:30	<b>Lead-Induced Developmental and Behavioral Changes in the Mouse.</b> L.E. Gray, Jr. and L. Reiter, U.S. EPA, Research Triangle Park, NC and Dept. of Physiol. and Pharmacol. Duke Univ., Durham, NC. (Sponsor: S. Norton).
24.		Paper moved to Poster VIII, Wednesday Morning.

<u>Paper No.</u>	<u>Time</u>	
25.	8:45	<b>Lithium Chloride-Induced Hypophagia and Geophagia: Two Behavioral Assays of Toxicosis Compared.</b> D. Mitchell NIEHS, Research Triangle Park, NC (Sponsor: J.R. Fouts).
26.	9:00	<b>The Toxicity of Paraquat in Mature and Immature Rats.</b> L.L. Smith and M.S. Rose, Imperial Chemical Industries, Ltd., Alderley Park, Nr. Macclesfield, Cheshire, U.K.
27.	9:15	<b>Effect of Amphetamine and Alcohol on Lipid Synthesis and Transfer in the Rat.</b> C. DiFonzo, W.C. Breckenridge, and G. Feuer, Dept. Clin. Biochem, and Lipid Clinic, Univ. Of Toronto, Toronto, Ont.
28.	9:30	<b>Neurotoxicity of Kepone in Perinatal Rats Following <i>In-Utero</i> Exposure.</b> L. Rosenstein, A. Brice, N. Rogers, and S. Lawrence, U.S. EPA, Research Triangle Park, NC. (Sponsor: W.F. Durham).
29.	9:45	<b>Comparative Behavioral Toxicology of Mirex and Kepone in the Rat.</b> L. Reiter, K. Kidd, G. Ledbetter, L.E. Gray, Jr., N. Chernoff, U.S. EPA, Research Triangle Park, NC.
	10:00	30 Minute Break
30.	10:30	<b>A Comparative Study of Lead and Rubidium Induced Hyperactivity in the Rat.</b> C. Chow and H. Cornish. School of Pub. Hlth., Univ. of Michigan, Ann Arbor, MI.
31.	10:45	<b>Postnatal CNS Effects of Intrauterine Exposure to Ethylene-thiourea in Rats.</b> L. Tryphonas and K.S. Khera, Health Protection Branch, Health and Welfare Canada, Ottawa, Ont.
32.	11:00	<b>Carbon Monoxide-Induced Decrease in Brain Dopamine Metabolism: Age-Related and Persistent Effects.</b> M.B. Newby, R.J. Roberts, and R.K. Bhatnagar, Dept. of Phar., Univ of Iowa, Iowa City, IA.



Paper No. Time

33. 11:15 **Neurotoxicity: A Contemporary Morphological Assay.** P.S. Spencer, M.C. Bischoff, and H.H. Schaumburg. Rose F. Kennedy Center, Albert Einstein College of Medicine, Bronx, NY.

March 28, 1977

**MONDAY MORNING - BALLROOM**

*"Poster I: Liver/Kidney"*

*Chairman: S.D. Cohen*

8:45 - 10:15

Paper No.

34. **Ultrastructural Morphometric and Biochemical Studies of Chronic Arsenic Exposure on Hepatocyte Mitochondria of Rats and Mice.** B.A. Fowler, J.S. Woods, and C.M. Schiller, NIEHS, Research Triangle Park, NC.
35. **Relationship Between Plasma Cadmium-thionein and Cadmium Induced Nephropathy.** M.G. Cherian, R.A. Goyer, L. Delaquerriere-Richardson, Dept. Path., Univ. of Western Ontario, London, Ont.
36. **Acute Hepatotoxicity of Ethylene, Vinyl Fluoride, Vinyl Chloride, and Vinyl Bromide After Aroclor <sup>R</sup>1254 Pretreatment.** R.B. Conolly, R.J. Jaeger, and S. Szabo, Harvard School of Pub. Hlth., Harvard Medical School and Peter Bent Brigham Hospital, Boston, MA.
37. **Carbon Tetrachloride Induced Plasma Retention of Sulfobromophthalein in the Rainbow Trout.** W.H. Gingerich, L.J. Weber, and R.E. Larson, Dept. Fisheries and Wildlife and Dept. Pharm. and Tox., Oregon State Univ., Corvallis, OR.

**Paper No.**

38. **Differences in Phenobarbital or 3-Methylcholanthrene Induced Alterations in Intestinal and Hepatic Drug-Metabolizing Enzymes of Various Animal Species.** C.L. Miranda and R.S. Chhabra, NIEHS Research Triangle Park, NC.
39. **Stimulation of Biliary Function Following Polybrominated Biphenyls.** S.Z. Cagen and J.E. Gibson. Dept. Pharmacol., Michigan State Univ., East Lansing, MI.
40. **The Pattern of Induction of Hepatic and Renal Mixed Function Oxidase in Young Rats by Polybrominated Biphenyls.** J.G. Dent, K.M. McCormack, S.Z. Cagen and J.E. Gibson. Dept. Pharmacol., Michigan State Univ., East Lansing, MI.
41. **Enhancement of 1,1-Dichloroethylene Hepatotoxicity by Pretreatment with Low Molecular Weight Epoxides.** M.E. Andersen and L.J. Jenkins Jr., Naval Med. Res. Inst. Bethesda, MD.
42. **Renal Proximal Tubular Transport after Acute and Short-term Chronic Administration of 2,4,5-trichlorophenoxyacetic acid.** F.J. Koschier and W.O. Berndt. Dept. Physiol. SUNY Buffalo, N.Y. and Dept. Pharmacol. and Tox., Univ. Mississippi Med. Ctr., Jackson, MS. (Sponsor: A.W. Hayes).
43. **Toxic Products Produced by Ultraviolet Irradiation of Halothane.** D.B. Menzel, J.H. Karis, M.B. Abou-Donia and P.B. Bennett. Dept. of Physiol. and Pharm. Dept. Anaesthesi. and Dept. of Med., Duke Univ. Med. Ctr., Durham, NC.
44. **Subacute Toxicity of SCE-963, a New Cephalosporin Antibiotic in Rats and Dogs.** M. Nomura, T. Abe and Y. Murata, Central Res. Div., Takeda Chemical Industries, Ltd., Osaka, Japan. (Sponsor: K. Takano).

March 28, 1977  
**MONDAY MORNING - BALLROOM**

*"Poster II: Metals"*  
*Chairman: G.C. Fuller*

10:30 - 12:00

Paper No.

45. **Heavy Metals and Lymphocytes: A Possible site of Immunosuppression by Chemicals.** C.L. Gaworski and R.P. Sharma, Toxicology Program, Utah State Univ., Logan, UT.
46. **Effects of Metallic Compounds on Chick Dorsal Root Ganglia Cultures.** E.J. Obersteiner and R.P. Sharma, Toxicology Program, Utah State Univ., Logan, UT.
47. **Residues of Lead in Edible Tissues of Products of Cattle and Swine after Low Level Exposures.** R.P. Sharma, J.C. Street, J.L. Shupe and D.J. Wagstaff. Utah State Univ., Logan, UT and Bureau of Veterinary Medicine, FDA, Rockville, MD.
48. **Diminution of Regional Acetylcholine Content in Mouse Brain During Chronic Ingestion of Lead.** A.T. Modak, R.H. Purdy, and W.B. Stavinoha, Univ., of Texas Health Science Center at San Antonio and South-west Found. for Research and Education, San Antonio, TX.
49. **The Influence of Low Level Lead Exposures on Free Erythrocytic Porphyrin and Blood and Liver Delta-aminolevulinic Acid Dehydratase in Three Species of Food producing Animals.** J.C. Street, M.H. Raghiv, R.P. Sharma and D.J. Wagstaff. Utah State Univ., Logan, UT and Bureau of Veterinary Medicine FDA, Rockville, MD.

**Paper No.**

50. **An Interaction between Chronic Lead Exposure and Acute Phenylhydrazine Administration in the Rat.** B.B. Gelman and J.S. Bus, Dept. of Environ. Health, Univ. of Cincinnati, Cincinnati, OH. (Sponsor: P.B. Hammond).
51. **Effects of Cd and Ni on Antibody Mediated Rosette Formation by Rabbit Alveolar Macrophages.** J.G. Hadley<sup>1,3</sup>, D.E. Gardner<sup>3</sup>, D.L. Coffin<sup>3</sup> and D.B. Menzel<sup>1,2</sup>. Departments of Physiology and Pharmacology<sup>1</sup> and of Medicine<sup>2</sup>, Duke Univ. Ctr., Durham, NC and U.S. EPA<sup>3</sup> Research Triangle Park, NC.
52. **Dose Dependence of Cadmium Kinetics in the Rat Liver.** J.M. Frazier, Dept. of Environ. Med., The Johns Hopkins Univ., Baltimore, MD. (Sponsor: R.J. Rubin).
53. **The Excretion of Cadmium and Mercury in Saliva.** L.W. Smith and J.F. Borzelleca, Dept. of Pharmacol., Med. Col. of Virginia, Richmond, VA.
54. **Renal Porphyrin Following Chronic Methyl Mercury Exposure in the Rat.** J.S. Woods and B.A. Fowler, NIEHS, Research Triangle Park, NC.
55. **The Effect of Thiocholesterol on the Distribution and Toxicity of Mercuric Chloride.** J.J. Burgun and R.B. Forney, Dept. of Pharm. and Tox., Indiana Univ. School of Med., Indianapolis, IN.

March 28, 1977

## MONDAY AFTERNOON - CONCERT HALL

*"Symposium: Good Laboratory Practice"*

*Chairman: J.J. McPhillips*

- 1:30            **"What Constitutes Good Laboratory Practice"**  
*E.A. Pfitzer*
- 2:00            **"What Constitutes Qualified Personnel"**  
*R.B. Forney*
- 2:30            **"How Can Good Laboratory Practice Be Maintained, Particularly In Experiments Lasting Two Years or More"**  
*R.T. Drew*
- 3:00            **"What Are The Consequences of Poor Laboratory Practice: Medical & Legal"**  
*Alan Kaplan*
- 3:30-4:00      **Discussion Period**
- 4:00            **Annual Business Meeting, Concert Hall**  
*R.A. Scala, Presiding*

March 29, 1977

## TUESDAY MORNING - ONTARIO ROOM

*"Carcinogenesis and Mutagenesis"*

*Chairman: J.M. McNerney*

*Assisted by: C.C. Haun*

<u>Paper No.</u>	<u>Time</u>	
56.	8:30	<b>Morphologic Characteristics of Hepatic Nodules Induced by Mirex and Dieldrin in Mice.</b> K.F. Benitz, R.N. Roth and F. Coulston, Inst. of Comparative and Human Tox., Albany Medical College, Albany, NY.
57.	8:45	<b>Carcinogenic Activity of Hexachlorobenzene in Hamsters.</b> J.R.P. Cabral, P. Shubik, T. Mollner, F. Raitano, Eppley Inst., Univ. of Nebraska Medical Center, Omaha, NB.

<u>Paper No.</u>	<u>Time</u>	
58.	9:00	<b>Sequential Alkaline Phosphatase Changes in Hyperplastic and Neoplastic Urothelium of Mice Induced by 2-Acetylaminofluorene.</b> B. Highman, C.H. Frith and N.A. Littlefield, Univ. of Arkansas College of Med., Little Rock, AR. and National Center for Tox. Research, Jefferson, AR.
59.	9:15	<b>The Role of Naphthalenes as Cocarcinogens.</b> I. Schmeltz, J. Hilfrich, J. Tosk, D. Hoffmann and E.L. Wynder. American Health Foundation, Valhalla, NY.
60.	9:30	<b>Enhancement of Urethan Tumorigenesis in Mouse Lung Following Multiple Injections of Butylated Hydroxytoluene.</b> H.P. Witschi and S. Lock, Department de Pharmacologie, Faculte de Medecine, Universite de Montreal, Montreal, Canada.
61.	9:45	<b>The Putative Role of Dietary Fiber in Dimethylhydrazine - Induced Colon Carcinogenesis.</b> T. Barbolt, N. Ringwood and R. Abraham, Inst. of Comparative and Human Tox., Albany Medical College, Albany, NY.
	10:00	30 Minute Break
62.	10:30	<b>Dominant Lethal Studies in Mice with Dietary Feeding of Metepa and MMS .</b> D.W. Arnold, C.M. Salamon, S.H. Smith, G.L. Kennedy, Jr., M.L. Keplinger and J.C. Calandra. Industrial BIO-TEST Laboratories, Inc., Northbrook, IL.
63.	10:45	<b>Induction of Micronuclei by Carcinogens.</b> M.A. Friedman, W.H. Carter, J. Staub and A. Segreti, Dept. of Pharmacol. and Biostat., Med. College of Virginia and MCV/VCU Cancer Center, Richmond, VA.

<u>Paper No.</u>	<u>Time</u>	
64.	11:00	<b>The Induction of DNA Repair in Primary Rat Liver Cultures as a Screen for Chemical Carcinogens.</b> G.M. Williams, American Health Foundation, Valhalla, NY. (Sponsor: J.H. Weisburger).
65.	11:15	<b>Induction of DNA Repair in Human Leucocytes by Fecal Metabolites of Dimethylhydrazine.</b> C.T. Miller, and J.A. Ruddick, Health Protection Branch, Health and Welfare Canada, Ottawa, Ont. (Sponsor: K.S. Khera).
144.	11:30	<b>Preclinical Toxicologic Evaluation of Bruceantin (NSC-165563) in Mice, Dogs, and Monkeys.</b> T.R. Castles, R.L. Bridges, J.C. Bhandari, and C.C. Lee, Midwest Research Inst., Kansas City, MO.

March 29, 1977

## TUESDAY MORNING - CONCERT HALL

*"Metabolism/Pharmacokinetics"*

*Chairman: B.A. Fowler*

*Assisted by: J.S. Woods*

66.	8:30	<b>Extrapolation of Polychlorinated Biphenyl Pharmacokinetics from the Rat to the Mouse.</b> D.B. Tuey and H.B. Matthews, Dept. of Pharmacol. Univ. of North Carolina, Chapel Hill, NC, and NIEHS, Research Triangle Park, NC. (Sponsor: J.R. Fouts)
67.	8:45	<b>Effect of the Route of Administration on Microsomal Enzyme Induction Following Repeated Administration of Methadone in the Mouse.</b> J.C. Kapeghian, G.A. Burdock, and L.W. Masten. Dept. of Pharmacol., Univ. of Mississippi, Univer. MS. (Sponsor: W.M. Davis)
68.	9:00	<b>Acetylation of Isoniazid by Rabbit Liver and Lung N-Acetyltransferases in vitro.</b> S.D. Harrison, Jr. and D.A. Potter, Southern Research Institute, Birmingham, AL. (Sponsor: E.P. Denine)

<u>Paper No.</u>	<u>Time</u>	
69.	9:15	<b>Metabolism of the Dyestuff Intermediate, 2,4-Diaminoanisole, in the Rat.</b> P.H. Grantham, L.C. Mohan, T. Benjamin, P.P. Roller and E.K. Weisburger, National Cancer Inst., Bethesda, MD.
70.	9:30	<b>Studies on the Bioorganic Mechanism of the Metabolism of Dihalomethanes to Formaldehyde and Inorganic Halide.</b> A.E. Ahmed and M.W. Anders, Dept. of Pharmacol., Univ. of Minnesota, Minneapolis, MN.
71.	9:45	<b>Serum Glutathione S-Transferase Activity: A Leak of Enzyme from Liver?</b> H. Mukhtar and J.R. Bend, NIEHS, Research Triangle Park, NC. (Sponsor: J.R. Fouts).
72.	10:00	<b>Kinetics of Diphenylhydantoin Metabolism in the Isolated Perfused Liver From Pregnant and Non-Pregnant Rats.</b> M. Vore, J. Bauer, Dept. of Pharmacol. and Tox., Univ. of California Medical Center, San Francisco, CA. (Sponsor: H.C. Hodge).
	10:15	30 Minute Break
73.	10:45	<b>Effect of Dietary Fiber on Lindane Metabolism,</b> R.W. Chadwick, M.F. Copeland, and C.J. Chadwick, Health Effects Research Laboratory, U.S. EPA, Research Triangle Park, NC.
74.	11:00	<b>Modification of Cytochrome P-450 by the Fungicide Metabolite Ethylene Thiuram Monosulfide.</b> T. Yoshida and R.A. Neal, Dept. of Biochemistry, Vanderbilt Univ. School of Medicine, Nashville, TN.
75.	11:15	<b>The Fate of Silvex Following Oral Administration to Humans.</b> M.W. Sauerhoff, M.B. Chenoweth, H.L. Gordon, W.H. Braun, G.E. Blau, and P.J. Gehring. Tox. Research Lab., Dow Chemical Company, Midland, MI.



**Paper No.   Time**

76.      11:30      **Species Dependent Pharmacokinetic Profile and Toxicity of a Thiourea Derivative in Rats and Monkeys.** J.D. Young, S.J. Gorzinski, J.E. LeBeau, R.W. Slauter, and W.H. Braun, Tox. Research Lab., Dow Chemical U.S.A., Midland, MI. (Sponsor: P.J. Gehring).

March 29, 1977

**TUESDAY MORNING - TUDOR ROOM**

*"Food Additives/Mycotoxins"*

*Chairman: J.K. Kodama*

*Assisted by: J.L. Gargus*

77.      8:30      **Phenolic Antioxidants and the Inhibition of Dimethylamine-Nitrite Induced Hepatotoxicity in the Rat.** B.D. Astill, Health, Safety, and Human Factors Laboratory, Eastman Kodak Co., Rochester, NY. and T. Mulligan, Hazleton Laboratories, America Inc., Vienna, VA.
78.      8:45      **Long Term Toxicity Study with Orthotoluenesulfonamide and Saccharin.** D.L. Arnold, S.M. Charbonneau, C.A. Moodie and I.C. Munro. Health Protection Branch, Health and Welfare Canada, Ottawa, Ont.
79.      9:00      **Six-Year Study of Saccharin in Rhesus Monkeys.** E.W. McChesney, F. Coulston and K.F. Benitz, Inst. of Comparative and Human Tox., Albany Med. College, Albany, NY.
80.      9:15      **Eight-year Study of Cyclamate in Rhesus Monkeys.** F. Coulston, E.W. McChesney, and K.F. Benitz, Inst. of Comparative and Human Tox., Albany Med. College, Albany, NY.

<u>Paper No.</u>	<u>Time</u>	
81.	9:30	<b>Biogenesis of Lung Toxic Furans Produced During Microbial Infection of Sweet Potatoes (<i>Ipomoea Batatas</i>).</b> L.T. Burka, L. Kuhnert, B.J. Wilson and T.M. Harris, Center in Environ. Tox. and Dept. of Chem., Vanderbilt Univ., Nashville, TN.
82.	9:45	<b>Effect of Patulin on Krebs Cycle Intermediate Stimulated Oxygen Consumption.</b> A.W. Hayes, Dept. of Pharmacol. and Tox., Univ. of Mississippi Medical Center, Jackson, MS.
83.	10:00	<b>Aflatoxicosis in Rats Fed Low Levels of Aflatoxin Either Chemically Pure or as a Natural Contaminant.</b> O. Tisdell, P.O. Nees, D.L. Harris, WARF Instit., Inc., Madison, WI. and G.E. Mann, Southern Reg. Res. Ctr., USDA, New Orleans, LA.
84.	10:15	<b>Effect of Dietary Sodium Selenite Upon Lesions Induced by Repeated Small Doses of Aflatoxin B<sub>1</sub>.</b> K.E. Grant, M.W. Conner and P.M. Newberne, Dept. of Nutrition and Food Science, Mass. Inst. of Technology, Cambridge, MA.
	10:30	30 Minute Break
85.	11:00	<b>Studies on the Absorption, Distribution, Metabolism, Excretion, and Pharmacokinetics of WR-180,409-<sup>14</sup>C<sub>3</sub>H<sub>7</sub>PO<sub>4</sub> in Rhesus Monkeys.</b> W.R. McConnell and R.L. Furner, Southern Res. Inst., Birmingham, AL. (Sponsor: E.P. Denine).
86.	11:15	<b>Effect of Salicylate on the Fate of <sup>14</sup>C-Warfarin in the Guinea Pig.</b> L.T. Wong, G. Solomonraj and B.H. Thomas, Health Protection Branch, Health and Welfare Canada, Ottawa, Ont. (Sponsor: B.B. Coldwell).
87.	11:30	<b>Biotransformation of Some Alkaloids by Liver Microsomes.</b> A. Peeples and R.R. Dalvi, School of Vet. Med., Tuskegee Inst., Tuskegee, AL. (Sponsor: R.A. Neal).

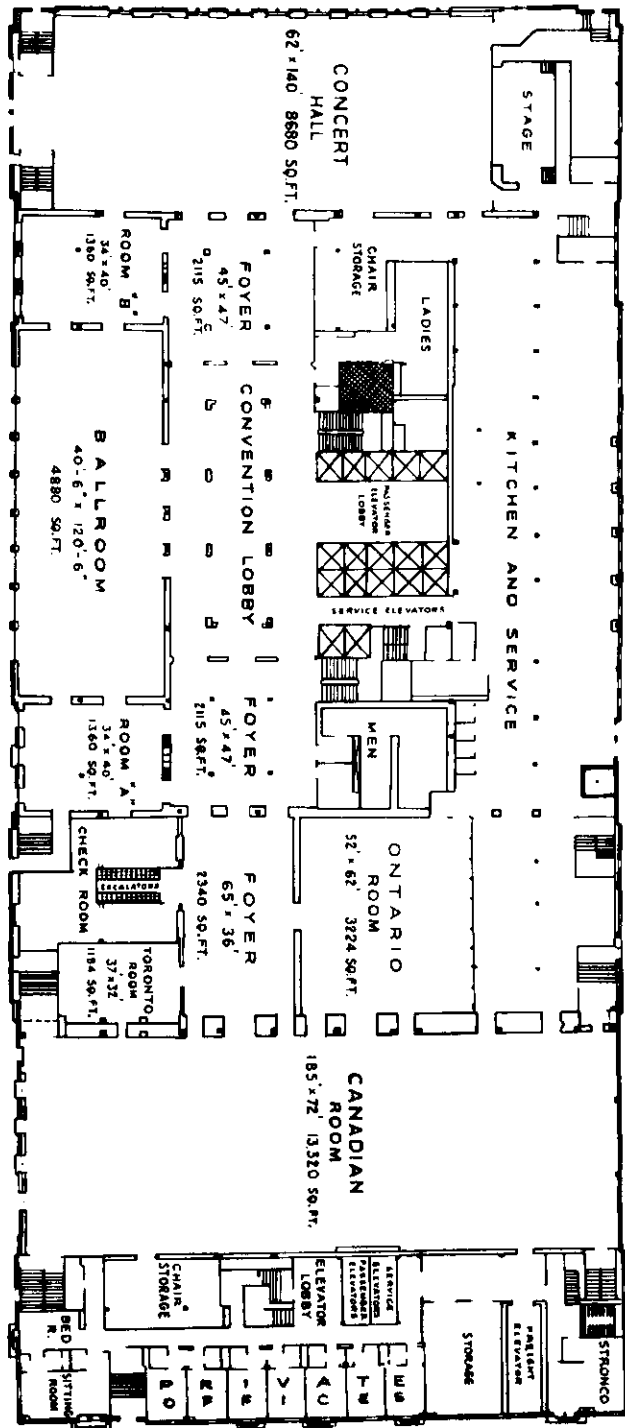
March 29, 1977  
**TUESDAY MORNING - BALLROOM**  
*"Poster III: General Toxicology"*  
Chairman: R.P. Sharma

8:45 - 10:15

**Paper No.**

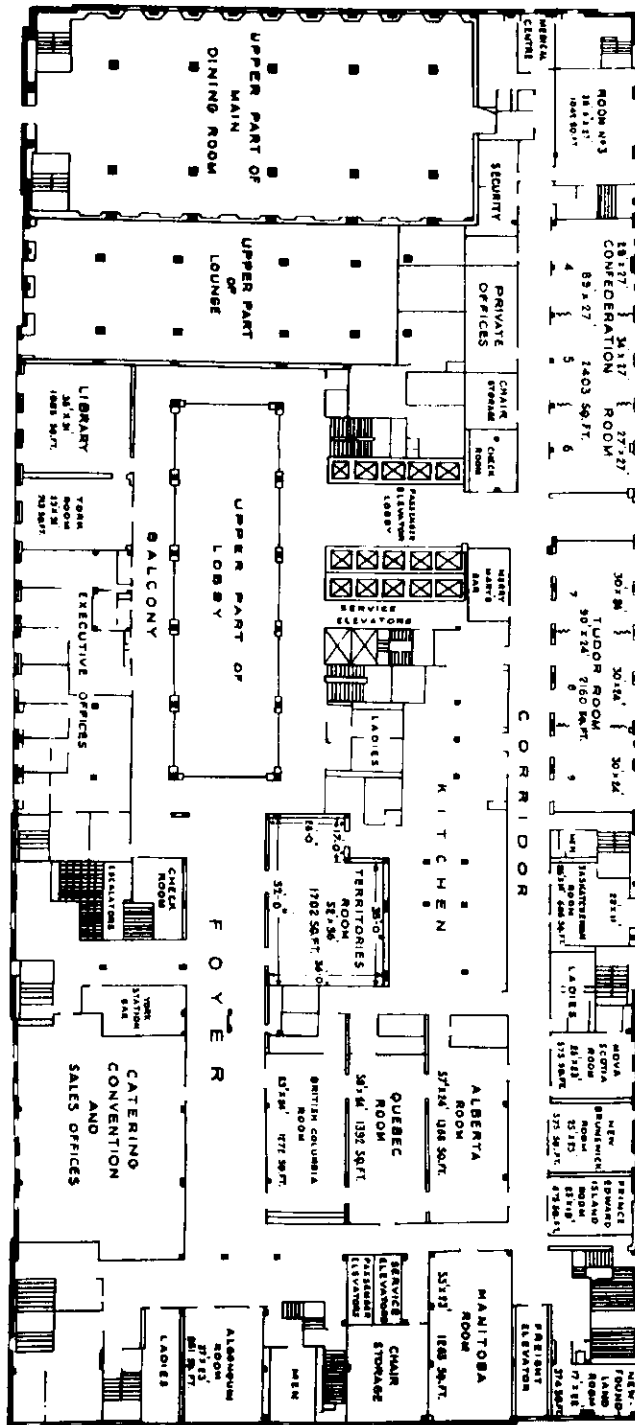
88. **The Antagonism of Ethanol Depression by DL-524-US.** L.C. Griffis and R.B. Forney, Dept. of Pharmacol. and Tox., Indiana Univ. School of Med., Indianapolis, IN.
89. **Changes in Plasma Proteins of Ducklings from Dietary Fusarotoxins.** D.S. Sawhney, Cornell Univ., Ithaca, NY (now with FDA, Washington, DC). (Sponsor: J.M. Taylor).
90. **Alterations of SH and NH<sub>2</sub> Groups in Membranes in Relations to Their Interactions with Sulfated Polysaccharides (SPS).** R. Jones, E.P. Pittz, D. Rourke and I. Rosenblum. Inst. of Comparative and Human Tox., Albany Med. College, Albany, NY.
91. **Increased Acid Phosphatase Activity in Hens Following Long-Term Low-Level Oral Administration of Leptophos.** M.B. Abou-Donia, Dept. of Physiol. and Pharmacol., Duke Univ. Med. Ctr., Durham, NC.
92. **Pesticide Toxicity in Cultured Mammalian Cells.** D.P. DeVore, T.H. Hutson, M.A. Sheridan, and J.S. Pitman, Battelle, Columbus Laboratories, Columbus, OH. (Sponsor: R.I. Freudenthal).
93. **Similar toxic and cardiovascular actions of the pesticide Chlordimeform and Local Anesthetics.** G.K.W. Yim, V. Nolan, and A. Lund, Depts. of Pharmacol. and Tox., and Entomology. Purdue University, W. Lafayette, IN. (Sponsor: T.S. Miya).

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Paper No.

94. **The Influence of Respiratory Stress on Blood Pressure Dose Response to Isoproterenol in Rats.** M.M. Tseng, D.P. Henry and D.J. Brown, Dept. of Tox. and Pharmacol., Indiana Univ. School of Med., Indianapolis, IN.
95. **Toxicity of Free Fatty Acids upon Cultured Rat Heart Muscle and Endothelial Cells.** D.G. Wenzel and T.W. Hale, Dept. of Pharmacol. and Tox. Univ. of Kansas, Lawrence, KS.
96. **Enzymatic and Physiological Responses of Rat Lungs to Acute Cadmium Chloride Inhalation.** J.S. Bus, A. Vinegar and S.M. Brooks, Dept. Environ. Health, Univ. of Cincinnati, Cincinnati, OH. (Sponsor: C.C. Smith).
97. **Oxygen Toxicity: Comparison of Lung Biochemical Responses of Newborn and Adult Rats.** J. Yam, L. Frank and R.J. Roberts. Depts. of Ped. and Pharmacol., Univ. of Iowa, Iowa City, IA.

March 29, 1977

**TUESDAY MORNING - BALLROOM**

*"Poster IV: Halogenated Hydrocarbons"*

*Chairman: R.I. Krieger*

10:30 - 12:00

98. **The Effect of Two Hallucinogens on *in vivo* Levels of cyclic AMP in Rat Brain.** M. Rappaport and H. Cornish, Interdepartmental Toxicology Program and Dept. of Environ. and Industrial Health, Univ. of Michigan, Ann Arbor, MI.
99. **Use of Videotape to Monitor Clinical Expression of Neurotoxicity in Beagle Dogs.** D.R. Saunders, G.R. Steffen, M.T. Case and R.A. Nelson, Riker Laboratories, Inc., 3M Company, St. Paul, MN.

Paper No.

100. **Histopathology of Low Chlorinated Biphenyls and Hexachlorobenzene in Female Rhesus Monkeys.** M.J. Iatropoulos, R. Felt, F. Coulston and F. Korte, International Center of Environ. Safety, Albany Medical College, Holloman AFB, New Mexico; Institut fuer Oekologische Chemie, Gesellschaft fuer Strahlen - und Umweltsforschung, mbH, Munich, Germany.
101. **Lactation - Transfer Changes Caused by Clophen A-30 and Hexachlorobenzene in Male and Female Infant Rhesus Monkeys.** M.J. Iatropoulos, W. Hobson, F. Coulston and F. Korte, International Center of Environmental Safety, Albany Medical College, Holloman AFB, New Mexico; Institut fuer Oekologische Chemie, Gesellschaft fuer Strahlen - und Umweltsforschung, mbH, Munich, Germany.
102. **The Distribution and Elimination of <sup>14</sup>C-2,5,2',5'-Tetrachlorobiphenyl in Rainbow Trout (Salmo Gairdneri).** P.D. Guiney, R.E. Peterson<sup>1</sup>, M.J. Melancon, Jr. and J.J. Lech. <sup>1</sup>School of Pharmacy, Univ. of Wisconsin, Madison, WI. and Dept. of Pharmacol. Med. College of Wisconsin, Milwaukee, WI.
103. **2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TC-DD) Induced Depression in Biliary Excretion of Polychlorinated Biphenyls in Rats.** K.H. Yang, P.D. Guiney, J.L. Seymour and R.E. Peterson, School of Pharmacy and Regional Primate Res. Ctr., Univ. of Wisconsin, Madison, WI.
104. **Comparison of the Fate of Vinyl Chloride Following Single and Repeated Exposure in Rats.** P.G. Watanabe, J.A. Zempel and P.J. Gehring, Tox. Res. Lab., Dow Chemical Company, Midland, MI.

Paper No.

105. **Consequences of Vinyl Bromide Debromination in the Rat.** E.W. Van Stee, J.M. Patel, B.N. Gupta, R.T. Drew, NIEHS, Research Triangle Park, NC.
106. **Effect of Two Halogenated Hydrocarbons on Hepatic Microsomal Enzyme Activity.** J.P. Murphy, E.W. VanStee and K.C. Back, 6570 Aerospace Med. Research Lab., Wright-Patterson Air Force Base, OH.
107. **Subacute Effects of Brominated Benzenes on Xenobiotic Metabolism.** G.P. Carlson and R.G. Tardiff, Dept. of Pharmacol. and Tox. Purdue Univ., West Lafayette, IN. and U.S. EPA, Cincinnati, OH.

March 29, 1977

**TUESDAY AFTERNOON - TUDOR ROOM**

*"Agricultural Chemicals/Endocrine"*

*Chairman: G.P. Carlson*

*Assisted by: D.G. Hoffman*

Paper No.    Time

108.        1:15        **Pesticide-induced Impairment of Hepatobiliary Function.** H.M. Menendale, Dept. of Pharmacol. and Tox., Univ. of Mississippi Med. Ctr., Jackson, MS. (Sponsor: A.W. Hayes).
109.        1:30        **Bioavailability in Rats of Bound and Conjugated Plant Residues of Carbamate Insecticides.** T.C. Marshall and H.W. Dorough, Dept. of Entomology and Graduate Program in Tox., Univ. of Kentucky, Lexington, KY.
110.        1:45        **In Vivo and In Vitro Effects of di-n-Alkyl 2,2-Dichlorovinyl Phosphoric Acid Esters on Hen Brain Neurotoxic Esterase.** J.R. Albert, S.M. Stearns and H.J. Mersmann, Shell Development Co., Biol. Sciences and Res. Ctr., Modesto, CA.



<u>Paper No.</u>	<u>Time</u>	
111.	2:00	<b>Reproductive Dysfunction in Nonhuman Primates Exposed to Dioxins.</b> J.R. Allen, D.A. Barsotti and J.P. Van Miller, Dept. of Path. and Regional Primate Res. Ctr., Univ. of Wisconsin, Madison, WI.
112.	2:15	<b>Mortality in 1973 and 1974 from Pesticides.</b> W.J. Hayes, Jr., Dept. of Biochemistry, Vanderbilt Univ. School of Med., Nashville, TN.
	2:30	30 Minute Break
113.	3:00	<b>Effects of Pesticides on Steroid Hormone Binding in Cytoplasm of Rodent Tissues.</b> L. Schein, J.A. Thomas, and M.P. Donovan, Dept. of Pharmacol., West Virginia Univ. Med. Ctr. Morgantown, WV.
114.	3:15	<b>Pathologic Changes in Mice Induced by Diethylstilbestrol and 17B-Estradiol.</b> B. Highman, M.J. Norvell and T.E. Shellenberger, Univ. of Arkansas College of Med., Little Rock, AR and National Center for Tox. Res. Jefferson, AR.
115.	3:30	<b>Mammary Tumorigenesis in Female C3H Mice Fed Diets Containing Diethylstilbestrol or 17-B Estradiol.</b> M.J. Norvell and T.E. Shellenberger. Molecular Biology Div., National Center for Tox., Res., Jefferson, AR.
116.	3:45	<b>Functional and Structural Alterations in the Testes of Mice Exposed <i>In Utero</i> to Diethylstilbestrol.</b> J.A. McLachlan and R.R. Newbold, Environ. Tox. Branch, NIEHS, Research Triangle Park, NC. (Sponsor: R.L. Dixon).
117.	4:00	<b>Renal Tubular Regeneration Following Experimentally Induced Hyperuricemic Nephropathy in the Rat.</b> B. Stavric and E.A. Nera. Health Protection Branch, Health & Welfare Canada, Ottawa, Ont. (Sponsor: I.C. Munro).

Paper No.    Time

118.        4:15            **The Influence of Fasting on the Diuretic Response of Rats to Furosemide.** S. Chakrabarti and J. Brodeur, Departement de Pharmacologie, Faculte de Medecine, Universite de Montreal, Montreal, Quebec.

March 29, 1977

**TUESDAY AFTERNOON - CONCERT HALL**

*"Respiratory Toxicology"*

*Chairman: R. T. Drew*

*Assisted by: G.L. Kennedy, Jr.*

119.        1:15            **Sensory Irritation to Formaldehyde During Single and Repeated Exposures in Mice.** L.E. Kane and Y. Alarie, Graduate School of Public Health, Univ. of Pittsburgh, Pittsburgh, PA.
120.        1:30            **Respiratory Anaphylaxis to Aerosolized Chemicals in Guinea Pigs.** M. Karol, S. Oka, H. Ioset, S. Yoo and Y. Alarie, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA.
121.        1:45            **Effects of Some Cardioactive Drugs on Isolated Rat and Guinea Pig Lungs.** S. Najjar and F. Sperling. Dept. of Pharmacol., Howard Univ. College of Med., Washington, DC.
122.        2:00            **Pulmonary Mechanical Response to Acute Low Level Chemical Inhalation.** A.A. Hermann, L.E. Ostrander, E.D. Baretta, R.J. Soto, D.P. Schlueter, and R.D. Stewart, S.C. Johnson & Son, Inc., Racine, WI.
123.        2:15            **Pulmonary Changes Following Chronic Exposures to Aluminum Chlorhydrate.** F.L. Cavender, W.H. Steinhagen and W.M. Busey, Becton, Dickinson Res. Ctr., Research Triangle Park, NC; and Experimental Pathology Laboratories, Inc., Herndon, VA.

<u>Paper No.</u>	<u>Time</u>	
124.	2:30	<b>Morphologic Changes Following Chronic Inhalation of Aluminum Chlorhydrate in the Rat and Guinea Pig.</b> W.M. Busey, B.Y. Cockrell and F.L. Cavender, Experimental Pathology Laboratories, Inc. Herndon, VA; and Becton, Dickinson Res. Ctr., Research Triangle Park, NC.
	2:45	30 Minute Break
125.	3:15	<b>Effect of Particle Size on the Inhalation Toxicity of Naled Aerosols.</b> P.E. Berteau, W.A. Deen and R.L. Dimmick, Univ. of California, School of Public Health, Berkeley, CA., Naval Supply Center, Oakland, CA. (Sponsor: W.F. Durham).
126.	3:30	<b>Inhibition of Pulmonary Mixed-Function Oxidations by Paraquat and Ozone.</b> M.R. Montgomery and G.A. Mortenson, VA Hospital and Univ. of Minnesota, Minneapolis, MN.
127.	3:45	<b>The Effects of Diethyl Maleate and Diethyl Fumarate on Ozone Toxicity in Mice.</b> M.C. Bruce and S.D. Murphy, Harvard Univ. School of Public Health, Boston, MA.
128.	4:00	<b>Alterations in the Fatty Acid Composition of Lung Phospholipids and Triglycerides Following Age-Dependent Lipid Peroxidation in Neonatal Rat Lungs.</b> J.P. Kehrer and A.P. Autor, Dept. of Pharmacol., Univ. of Iowa, Iowa City, IA.
129.	4:15	<b>Influence of Pretreatment on B(a)P Metabolism in the Isolated Perfused Lung.</b> R. Niemeier,* D. Warshawsky, E. Bingham, Univ. of Cincinnati College of Med., Cincinnati, OH. *Present address: NIOSH, Cincinnati, OH.

March 29, 1977

**TUESDAY AFTERNOON - ONTARIO ROOM**

*"Liver/Gastrointestinal"*

*Chairman: R.L. Singhal*

*Assisted by: P.D. Hrdina*

<u>Paper No.</u>	<u>Time</u>	
130.	1:15	<b>Alanine Aminotransferase Activity of Rat Tissues Following the Administration of Cefazolin.</b> G. Feuer, T. Balazs, T. Farber, M. Lipien, M.S. Ilyas and R. Ilse, FDA, Washington, DC and Dept. of Clin. Biochem., Univ. of Toronto, Toronto, Ont.
131.	1:30	<b>Evidence for a Highly Specific Interaction Between <math>\Delta^8</math>-Tetrahydrocannabinol and Hydrocortisone in the Liver Tyrosine-Aminotransferase System.</b> J.M. Wrenn and M.A. Friedman, Dept. of Pharmacol. Med. College of Virginia and MCV/VCU Cancer Center, Richmond, VA.
132.	1:45	<b>The Influence of Esterase Inhibition on the Hepatotoxicity of Esters of Allyl Alcohol in Rats.</b> E.H. Silver and S.D. Murphy, Harvard Univ. School of Public Health, Boston, MA.
133.	2:00	<b>Interaction of Steroids with the Hepatic Drug Metabolizing Enzyme System in the Rat.</b> R. Kardish, R. Farkas and G. Feuer, Dept. of Clin. Biochem., Univ. of Toronto, Toronto, Ont.
134.	2:15	<b>Results of 90-Day Toxicity Studies in Rats Given Vinylidene Chloride in Their Drinking Water or Exposed to VDC Vapors by Inhalation.</b> J.F. Quast, C.G. Humiston, B.A. Schwetz, M.F. Balmer, L.W. Rampy, J.M. Norris and P.J. Gehring. Tox. Research Lab., Dow Chemical U.S.A., Midland, MI.
135.	2:30	<b>Hepatotoxicity of 1,1-Dichloroethylene: A proposed mechanism.</b> R.J. Jaeger and L. Coffman, Harvard School of Public Health, Boston, MA.

2:45

30 Minute Break

<u>Paper No.</u>	<u>Time</u>	
136.	3:15	<b>Hepatic Effects of 2-Chloroethanol in the Rat.</b> L. Friedman, J. Scalera, T. Balazs, L. Kasza, J.E. Keys, E.L. Peters and C.H. Graham, Divs. of Tox., Path., and Drug Biol., FDA, Washington, DC.
137.	3:30	<b>Lysosomal Mechanisms in Intestinal Transport of Sulfated Macromolecules in the Neonatal Rat and Guinea Pig.</b> G. Estel, R. Mankes, T. Barbolt and R. Abraham, Inst. Comp. and Human Tox., Albany Medical College, Albany, NY.
138.	3:45	<b>Alterations of Hepatic Nuclear Ploidy in Rodents by PCB and Mirex.</b> B.Mayes, R. Abraham and F.Coulston, Inst. of Comp. and Human Tox., Albany Medical College, Albany, NY.
139.	4:00	<b>Comparative Toxicity of Chlor-diazoxide, Phenobarbitol, Phenylbutazone and Thioridazine in Normal and Acute Liver Damaged Mice.</b> M.F. Matas, P.J. DeBaecke, A.J. George, and R.E. Cimprich, Stuart Pharmaceutical Division, ICI United States Inc., Wilmington, DE. (Sponsor: L.E. Gongwer).
140.	4:15	<b>Primary Hepatocyte Cultures for the Investigation of the Fate and Mechanism of Action of Environmental Chemicals.</b> K.K. Dougherty, S.D. Spilman, C.E. Green, A.R. Steward and J.L. Byard. Dept. of Environ. Tox. Univ. of California, Davis, CA.

March 29, 1977  
**TUESDAY AFTERNOON - BALLROOM**

*"Poster V: General"*

*Chairman: R.J. Rubin*

**1:00-2:30**

**Paper No.**

141. **Effects on the Rat Testis of Sodium Fluoroacetate in Drinking Water.** J.L. Sullivan, F.A. Smith, and R.H. Garman, Univ. of Rochester School of Medicine and Dentistry, Rochester, NY.
142. **The Reactivation of Plasma Cholinesterase in Human Fetus and Adult Following In Vitro Exposure to the Organophosphate, Dichlorvos.** J.V. Bell, Dept. of Pharmacol., West Virginia Univ. Med. Ctr., Morgantown, WV. (Sponsor: John A. Thomas).
143. **A Comparison of the Effects of Model Irritants on Anesthetized and Non-Anesthetized Rabbit Eyes.** A.G. Ulsamer, P.L. Wright, and R.E. Osterberg, Consumer Product Safety Commission, Bethesda, MD.
144. **Moved to Platform Session (Carcinogenesis/Mutagenesis) Tuesday, 11:30 A.M.**
145. **Effect of Monomethylhydrazine on Plasma Glucose, Plasma Insulin and Liver Glycogen.** M.E. George and K.C. Back, 6570th Aerospace Med. Res. Lab., Wright-Patterson Air Force Base, OH.
146. **Detection of Membrane Protein Modifications by Toxicants Using <sup>14</sup>C-Chemical Probes and SDS Polyacrylamide Gel Electrophoresis (SDSPAGE).** D. Rourke, E.P. Pittz, I. Rosenblum, R. Jones and F. Coulston, Inst. Comp. and Human Tox., Albany Medical College, Albany, NY.
147. **A Method for Comparative Testing of Smoke Toxicity.** W.J. Potts and T.S. Lederer, Tox. Lab., The Dow Chemical Co., Midland, MI. (Sponsor: E.S. Harris).

Paper No.

148. **Automatic Processing of Clinical Laboratory Data in a Small Laboratory.** J.J. Bare, R.D. Platt, and B.M. Phillips, Miles Laboratories, Inc., Elkhart, IN.
149. **Reproductive Toxicity of Cadmium. C.** Dwivedi, D.N. Singh, E.P. Crump and R.D. Harbison. Dept. of Pediatrics, Meharry Medical College, Nashville, TN. and Ctr. in Tox., Vanderbilt Univ. School of Med., Nashville, TN.
150. **A Simple Behavioral Assay for Use with Avian Species.** H.L. Evans and V.G. Laties, Environ. Health Sciences Ctr. and Dept. of Rad. Biology and Biophysics, Univ. of Rochester, Rochester, NY. (Sponsor: T.W. Clarkson).

March 29, 1977

**TUESDAY AFTERNOON - BALLROOM**

*"Poster VI: Reproduction/Mutagenesis"*

*Chairman: L.J. Jenkins*

2:45-4:15

151. **Teratogenic and Lethal Effects in the Rat Fetus, Following Absorption of Hexafluoroacetone from Maternal Skin.** M.R. Brittelli, R. Culik, and O.L. Dashiell, Haskell Lab. for Tox. and Ind. Med. E.I. duPont de Nemours and Company, Newark, DE. (Sponsor: J.J. Clary).
152. **Accumulation of Lower Chlorinated PC-Bs in Fetal Intestine.** G.W. Lucier and H.B. Matthews, NIEHS, Research Triangle Park, NC. (Sponsor: R.L. Dixon).
153. **Effects of Food Restriction on the Teratologic Response of CD<sup>®</sup>-1 Mice.** R.D. Hemm, L. Arslanoglou, and J.J. Pollock, Ayerst Research Laboratories, Chazy, NY.

**Paper No.**

154. **Inhalation Teratology Studies of Five Chemicals in Rats.** J.V. Dilley,\* N. Chernoff,‡ D. Kay.\* N. Winslow,\* and G.W. Newell\* Stanford Research Inst.\*, Menlo Park, CA. U.S.EPA‡, Research Triangle Park, NC.
155. **In Vitro Mutagenic Activity of Fourteen Pesticides.** D.C. Poole, V.F. Simmon and G.W. Newell, Stanford Research Inst., Menlo Park, CA.
156. **Study of the Mutagenic Potential of BIS(2-Chloroethyl) and BIS(2-Chloroisopropyl) ethers in Mice by the Heritable Translocation Test.** T.A. Jorgenson,\* C.J. Rushbrook,\* G.W. Newell,\* and R.G. Tardiff‡, Stanford Research Inst.\* Menlo Park, CA., U.S. EPA/HERL‡, Cincinnati, OH.
157. **Munitions Wastewater Recycling: Do Bactericidal Treatments Produce Microbial Mutagens?** V.F. Simmon, S.L. Eckford, A.F. Griffin, R. Spangford, and G.W. Newell, Stanford Research Inst., Menlo Park, CA.
158. **Possible Mutagenic Effects of 2,4-Dinitrotoluene. A Dominant Lethal Study in the Rat.** G.S. Simon, R.G. Tardiff and J.F. Borzelleca, Dept. of Pharmacol., Med. College of Virginia, Richmond, VA and Health Effects Lab., U.S. EPA, Cincinnati, OH.
159. **Smoke Exposure of Rodents: Correlation Between Renal Aryl Hydrocarbon Hydroxylase Activity and Mutagenesis in *S. Typhimurium*.** M.H. Bilimoria, J. Johnson, J.C. Hogg, Path. Inst., McGill University, Montreal, Quebec, and H.P. Witschi, Dept. of Pharmacol., Universite de Montreal, Montreal, Quebec.



**Banquet Menu**  
**Tuesday Evening - March 29, 7:30 P.M.**  
**Concert Hall**

**Orange and Grapefruit Supreme**

**Consomme Tio Pepe**

**Roast Prime Ribs of Beef au Jus**

**Green Salad**

**Chateau Potatoes**

**Green Beans au Beurre**

**Bombe Surprise**

**Coffee**

**Complimentary Wine: Charles River  
Breeding Laboratories**

**\$15**

March 30, 1977  
**WEDNESDAY MORNING - CONCERT HALL**  
*"Halogenated Hydrocarbons"*  
Chairman: E.W. Van Stee  
Assisted by: E.S. Reynolds

<u>Paper No.</u>	<u>Time</u>	
160.	8:15	<b>Experimental Human Exposures to Methyl Chloride at Industrial Environment Levels.</b> C.L. Hake, R.D. Stewart, A. Wu, H.V. Forster and P.E. Newton. Med. College of Wisconsin, Milwaukee, WI.
161.	8:30	<b>Subacute Inhalation Toxicity Studies on Eight Fluorocarbons:</b> H.J. Trochimowicz, B.L. Moore, and T. Chiu. Haskell Lab. for Tox. and Ind. Med, E.I. duPont de Nemours and Company, Inc., Newark, DE. (Sponsor: J.J. Clary).
162.	8:45	<b>Subacute Inhalation Studies of Sevoflurane and Halothane in Macaca Speciosa.</b> D.C. Sawyer, Michigan State Univ., R.F. Wallin, Baxter Travenol Laboratories, Inc. (Sponsor: J.E. Gibson).
163.	9:00	<b>Metabolic Fate of Bromodichloromethane in Rats and Rhesus Monkeys.</b> C.C. Smith, W.W. Weigel, G.F. Wolfe, Univ. of Cincinnati, College of Med., Cincinnati, OH.
164.	9:15	<b>Ninety-Day Inhalation Toxicity Studies on Two Fluorocarbons:</b> H.J. Trochimowicz, J.P. Lyon, D.P. Kelly and T. Chiu. Haskell Lab. for Tox. and Ind. Med., E.I. DuPont de Nemours and Company, Inc., Newark, DE. (Sponsor: J.J. Clary).
165.	9:30	<b>Effects of Food Deprivation in Rats Previously Exposed to Mirex.</b> D.C. Villeneuve, A. Yagminas, I. Chu and I.A. Marino, Health Protection Branch, Health and Welfare Canada, Ottawa, Canada.

<u>Paper No.</u>	<u>Time</u>	
166.	9:45	<b>Three-Generation Reproduction Study of Rats Ingesting 2,3,7,8-Tetrachlorodibenzo -p- Dioxin.</b> F.J. Murray, F.A. Smith, K.D. Nitschke, C.G. Humiston, R.J. Kociba, and B.A. Schwetz, Tox. Res. Lab., Dow Chemical U.S.A., Midland, MI.
	10:00	15 Minute Break
167.	10:15	<b>Polychlorinated Biphenyl Transport by Blood Components.</b> H.B. Matthews, J.R. Surles, J.G. Carver, and M.W. Anderson, Pharmacol. Branch, NIEHS, Research Triangle Park, NC. (Sponsor: J.R. Fouts).
168.	10:30	<b>PCB and HCB Induced Immunosuppression in Mice.</b> L.D. Loose, K.A. Pittman, K. Benitz and J.B. Silkworth, Inst. Comp. and Human Tox. Albany Medical College, Albany, NY.
169.	10:45	<b>Combined Effect of Food Deprivation and Hexachlorobenzene Feeding in Rats.</b> D.C. Villeneuve <sup>1</sup> , M.J. van Logten <sup>2</sup> , E.M. den Tonkelaar <sup>2</sup> , P.A. Greve <sup>2</sup> , J.G. Vos <sup>2</sup> , G.J.A. Speijers <sup>2</sup> , and G.J. van Esch <sup>2</sup> . <sup>1</sup> Health Protection Branch, Health and Welfare Canada, Ottawa, Canada. <sup>2</sup> Lab. for Tox., National Institute of Public Health, Bilthoven, The Netherlands.
170.	11:00	<b>The Absence of Porphyrin in Beagle Dogs Administered Hexachlorobenzene for Twelve Months.</b> E.J. Gralla, R.W. Fleischman, Y.K. Luthra, M. Hagopian, J.R. Baker, H. Esber and W. Marcus. Mason Research Inst., Worcester, MA and Office of Toxic Substances, U.S. EPA, Washington, DC.
171.	11:15	<b>Effects of Heptachlor on Broiler Chickens.</b> D.J. Wagstaff, J.R. McDowell, and H.J. Paulin. FDA and Litton Bioentics Inc., Rockville, MD.

Paper No.   Time

172.      11:30      **Impaired Host-defense in Mice Fed Aroclor 1242 or Hexachlorobenzene for 6 Weeks.** L.D. Loose, J.B. Silkworth and F. Coulston. Inst. Comp. and Human Tox., Albany Medical College, Albany, NY.
173.      11:45      **Results of a Two-Year Chronic Toxicity Study with Hexachlorobutadiene (HC-BD) in Rats.** R.J. Kociba, D.G. Keyes, G.C. Jersey, J.J. Ballard, D.A. Dittenber, J.F. Quast, C.E. Wade, C.G. Humiston and B.A. Schwetz, Tox. Res. Lab., Dow Chemical U.S.A., Midland, MI.

March 30, 1977

**WEDNESDAY MORNING - ONTARIO ROOM**

*"Metals"*

*Chairman: M.M. Joselow*

*Assisted by: E.A. Pfizter*

174.      8:30      **Effects of Chronic Arsenic Exposure on Pyruvate Dehydrogenase in Rat Liver and Intestine.** C.M. Schiller, B.A. Fowler, and J.S. Woods, Environ. Tox. Branch, NIEHS, Research Triangle Park, NC.
175.      8:45      **Chronic Oral Toxicity of Beryllium in the Rat.** K. Morgareidge, G.E. Cox, D.E. Bailey and M.A. Gallo (Sponsor: B.L. Oser). Food and Drug Research Laboratories, Inc., East Orange, NJ.
176.      9:00      **Fetal Toxicity and Transplacental Transport of Ni(II) in Rats.** F.W. Sunderman, Jr., S. Shen, J. Mitchell and P. Allpass, Univ. of Connecticut School of Medicine, Farmington, CT.
177.      9:15      **Biliary Excretion of Cadmium in the Rat, Rabbit and Dog.** C.D. Klaassen and F.N. Kotsonis. Univ. of Kansas Med. Ctr., Kansas City, KS.

<u>Paper No.</u>	<u>Time</u>	
178.	9:30	<b>Toxicology and Distribution of Cadmium at Non-lethal Doses.</b> F.N. Kotsonis and C.D. Klaassen. Univ. of Kansas Med. Ctr., Kansas City, KS.
179.	9:45	<b>Cadmium Mediated Cellular Dysfunction.</b> D. Warrington, J.B. Silkworth, K. Benitz, R. Roth and L.D. Loose, Inst. Comp. and Human Tox., Albany Medical College, Albany, NY.
	10:00	30 Minute Break
180.	10:30	<b>The Distribution of Lead in Tissues Following Oral Administration to Rats of Different Ages.</b> M.L. Keplinger, G.L. Kennedy, Jr., R.J. Wingender, and J.C. Calandra. Industrial BIO-TEST Laboratories, Inc., Northbrook, IL.
181.	10:45	<b>Prolonged Administration of Lead to Developing Neonatal Rats as an Experimental Model of Plumbism.</b> A.J. Stevenson, S. Kacew and R.L. Singhal. Dept. of Pharmacol., Univ. of Ottawa, Ottawa, Ontario.
182.	11:00	<b>Toxic Effects of Inorganic Lead in Infant Monkeys.</b> R.F. Willes, E. Lok, and J.F. Truelove, Health Protection Branch Health & Welfare Canada, Ottawa, Ontario. (Sponsor: K.S. Khera).
183.	11:15	<b>The Effects of Triethyllead on Central Catecholamine Function in the Adult Rat.</b> A.M. Schumann, W.L. Dewey and J.F. Borzelleca. Dept. of Pharmacol. Med. Col. of Virginia, Richmond, VA.
184.	11:30	<b>Concentrations of Inorganic and Organic Mercury in Mouse Brain Associated with Varying Degrees of Neuropathology and Functional Impairment.</b> J.S. MacDonald and R.D. Harbison. Vanderbilt Univ. School of Med., Nashville, TN.

March 30, 1977  
**WEDNESDAY MORNING - TUDOR ROOM**  
*"Drug Toxicity"*

*Chairman: J.L. Emerson*  
*Assisted by: R.L. Singhal*

<u>Paper No.</u>	<u>Time</u>	
185.	8:15	<b>Effect of Gentamicin on Organic Acid and Base Accumulation by Rat Renal Cortical Slices.</b> W.M. Kluwe, W.R. Hewitt, and J.B. Hook. Dept. of Pharmacol., Michigan State Univ., East Lansing, MI.
186.	8:30	<b>Toxic Interactions Between Narcotic Analgesics and Catechol-o-Methyltransferase Inhibitors.</b> W.M. Davis and N. Hatoum, Dept. of Pharmacol., Univ. of Mississippi, University, MS.
187.	8:45	<b>Effects of Aminergic and Cholinergic Blocking Agents on the Lethality of Morphine in Rats.</b> N. Hatoum and W.M. Davis. Dept. of Pharmacol., University of Mississippi, University, MS.
188.	9:00	<b>Evaluation of Diazepam and Pyridoxine as Antidotes for Lethal Isoniazid Intoxication.</b> L. Chin, M.L. Sievers, H.E. Laird, R.N. Herrier, and A.L. Picchioni. Univ. of Arizona Col. of Pharmacy, Tucson, AZ. and Phoenix Indian Med. Ctr., Phoenix, AZ.
189.	9:15	<b>Effects of Tricyclic Antidepressant Drugs on Isoproterenol-Induced Cardiotoxicity.</b> L.R. Weiss and S. Krop, Div. of Drug Biology, FDA, Washington, DC.
190.	9:30	<b>Toxicity Studies of <math>\beta</math>-(3,4-Dihydroxyphenyl)-L-Alanine (Levodopa) in Sprague Dawley and Long-Evans Rats.</b> J.P. Prytherch, R.A. Levin, F.W. Sigler, C.D. King, Norwich Pharmacal Company, Norwich, NY. (Sponsor: Louis E. Van Petten).

<u>Paper No.</u>	<u>Time</u>	
191.	9:45	<b>One-Year Toxicity Study of B-(3,4-Dihydroxyphenyl)-L-Alanine (Levodopa) in Beagle Dogs.</b> R.A. Levin, J.P. Prytherch, F.W. Sigler and C.D. King, Norwich Pharmacal Company, Norwich, NY. (Sponsor: Louis E. Van Petten).
	10:00	30 Minute Break
192.	10:30	<b>Toxic Effects of Mexrenoate Potassium in the Rat and Dog.</b> M. Koka, R. Stejskal, K.S. Rao and R.G. McConnell, Searle Laboratories, Chicago, IL.
193.	10:45	<b>Toxicologic Profile of Octanucline in Rat, Dog and Monkey.</b> R. Stejskal, K.S. Rao, F. Reno* and R.G. McConnell, Searle Laboratories, Chicago, IL, and *Hazleton Laboratories America, Inc., Vienna, VA.
194.	11:00	<b>Subacute Oral Toxicity of a Synthetic Tetrahydropyridobenzopyran (Abbott-41988) in Monkeys.</b> C.L. Yang, G.R. Thompson, S. Levin and B.A. Becker, Div. of Drug Safety, Abbott Lab., North Chicago, IL.
195.	11:15	<b>In Vitro and In Vivo Testing for Reactive Metabolites of Cocaine and Procainamide.</b> R.W. Freeman, R.L. Woosley and R.D. Harbison. Vanderbilt Univ. School of Med., Nashville, TN.
196.	11:30	<b>Use of Laboratory Models for the Evaluation of Fibrogenic Potential.</b> G.C. Fuller, J.K. Yermakoff, and D.O. Fisher, Department of Pharmacol. and Tox., Univ. of Rhode Island, Kingston, RI.

March 30, 1977

**WEDNESDAY MORNING - BALLROOM**

*"Poster Session VII: Metabolism"*

*Chairman: M.R. Montgomery*

8:45-10:15

**Paper No.**

197.                    **Organophosphate Inhibition of Tissue Esterases and Interactions with Ester Drugs in the Mouse.** R.E. Oullette and S.D. Cohen; School of Pharmacy, Univ. of Connecticut, Storrs, CT.
198.                    **A Comparison of Benzopyrene Metabolism by 3-Methylcholanthrene Induced and Noninduced Liver and Lung Enzymes from the Rhesus Monkey, Evaluated by High-Pressure Liquid Chromatography.** R.I. Freudenthal and S.G. Hundley; Battelle, Columbus Laboratories, Columbus, OH.
199.                    **Pharmacokinetics and Metabolism of Pentachlorobenzene in Rhesus Monkeys.** A.P. Leber\*, R.I. Freudenthal\*, R.L. Baron, and A. Curley; \*Battelle, Columbus Laboratories, Columbus, OH and Pesticide and Toxic Substances Lab., U.S. EPA, Research Triangle Park, NC.
200.                    **Metabolism of the Pancreatic Carcinogen N-Nitroso-2,6-dimethylmorpholine in the Syrian Hamster.** R. Gingell, D. Nagel and P. Pour, Eppley Institute for Research in Cancer, 42nd & Dewey Avenue, Omaha, NB.
201.                    **Fate of p-Nitroanisole in Mice and Studies of its O-Demethylation Using a Sensitive Radioassay.** T.D. Trautman, T. Thongsinthusak and R.I. Krieger, Dept. of Environ. Tox., Univ. of California, Davis, CA.
202.                    **Measuring Antipyrine Plasma Half-life and Antipyrine Metabolism in Rhesus Monkeys.** C.R. Clark, J.L. Miller, and R.I. Krieger, Dept. of Environ. Tox., Univ. of California, Davis, CA.



**Paper No.**

203. **Long Term Feeding Study of Hexachlorobenzene in Rhesus Monkeys.** K. Rozman, W. Mueller, F. Coulston, F. Korte. International Center of Environmental Safety, Albany Medical College, Holloman AFB, NM. and Institut fuer Oekologische Chemie, Gesellschaft fuer Strahlen-und Umweltforschung, mbH, Munich, Germany.
204. **Trichloroethylene-Induced Deactivation of Liver Endoplasmic Reticulum and Glutathione Depletion.** E.S. Reynolds, M.T. Moslen, P.J. Boor, K. Bailey, and S. Szabo, Dept. of Path., Univ. of Texas Medical Branch, Galveston, TX. and Peter Bent Brigham Hospital, Boston, MA.
205. **Metabolic Fate and Disposition of Carbon 14-Labeled Methyl n-Butyl Ketone in the Rat.** G.D. DiVincenzo, M.L. Hamilton, C.J. Kaplan, and J. Dedinas, Eastman Kodak Co., Rochester, NY. (Sponsor: B.D. Astill).
206. **The Fate of <sup>14</sup>C-Vinylidene Chloride Following Inhalation Exposure and Oral Administration in Rats.** M.J. McKenna, J.A. Zempel, E.O. Madrid and P.J. Gehring, Tox. Res. Lab., Dow Chemical U.S.A., Midland, MI.
207. **Pharmacokinetic and Toxicological Evaluation of Dogs Fed 1,2,4,5-Tetrachlorobenzene in the Diet for Two Years,** W.H. Braun, L.Y. Sung, D.G. Keyes, and R.J. Kociba, Tox. Res. Lab., Dow Chemical U.S.A. Midland, MI.

March 30, 1977  
**WEDNESDAY MORNING - BALLROOM**  
*"Poster VIII: General Toxicology"*  
*Chairman: R.T. Louis-Ferdinand*

10:30-12:00

Paper No.

208. **The Effect of Diquat on the Gastrointestinal Tract of Rats.** H.C. Crabtree, E.A. Lock and M.S. Rose, Imperial Chemical Industries Ltd., Central Tox. Lab., Alderley Park, Nr. Macclesfield, Cheshire, U.K.
209. **Relative Toxicity of Thermal Decomposition Products from Various Polymers.** C.S. Barrow, H. Lucia, M.F. Stock and Y. Alarie, Graduate School of Public Health, Univ. of Pittsburgh, Pittsburgh, PA.
210. **Paper Canceled**
211. **A Toxicity Prediction System.** K. Enslin\*, D. Khanna\*, and P.N. Craig. \*Genesee Computer Center Inc., Rochester, NY, Franklin Inst. Res. Labs., Philadelphia, PA. (Sponsor: H.M. Peck).
212. **Halogen Substituents at the 4- and 4'-Positions of Biphenyl: Influence on Hepatic Function in the Rat.** D.J. Ecobichon, M.M. Hansell and S. Safe. Dept. Anat. and Pharmacol., Dalhousie Univ., Halifax, N.S. and Dept. Chemistry, Univ. of Guelph, Guelph, Ont.
213. **The Effect of Cadmium on Growth and Mineral Disposition in the Male Rat.** E.M. Yuhas, T.S. Miya, and R.C. Schnell, Dept. Pharmacol. and Tox., Purdue University, West Lafayette, IN.
214. **Species Comparison of the Binding of the Organic Arsenical Herbicide, Cacodylic Acid, to Erythrocytes.** J.T. Stevens, J.D. Farmer and L.L. Hall, Environ. Tox. Lab. U.S. EPA Research Triangle Park, NC.

**Paper No.**

**24.**

**Effects of Drugs Given Postnatally to Rats. F.R. Alleva, T. Balazs, D.A. Davis, W.S. Monlux and C.S. Lao, FDA, Washington, DC.**

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