

# 11<sup>th</sup> ANNUAL MEETING

PROGRAM

SOCIETY  
OF  
TOXICOLOGY

Williamsburg Lodge  
Williamsburg, Virginia  
March 5-9, 1972



# INFORMATION

## REGISTRATION

- **Registrar**  
Paul A. Mattis
  
- **Preregistration forms available from Secretary**  
Robert A. Scala  
Esso Research & Engineering Co.  
P.O. Box 45  
Linden, N.J. 07036  
(Phone: 201/474-2422)
  
- **Registration Desk—Williamsburg Lodge**

Sunday, March 5, 1972	2:00 p.m.-10:00 p.m.
Monday, March 6, 1972	8:30 a.m.- 4:00 p.m.
Tuesday, March 7, 1972	8:30 a.m.- 5:00 p.m.
Wednesday, March 8, 1972	8:30 a.m.- 5:00 p.m.
  
- **Registration Fees**

Society of Toxicology Members . . . . .	\$10.00
Nonmembers . . . . .	15.00
Predoctoral Full-time Students . . . . .	2.00
  
- **Abstracts of Papers**

Distributed without charge to all members of the Society of Toxicology and to all preregistrants in advance of the meeting. Included in registration fee for those registering at the meeting. Additional copies available at Registration Desk, price \$2.00.

## SCHEDULE OF MEETINGS

- **Locations** (see centerfold map)  
Auditorium, Tidewater Room, and AB Room
  
- **Scientific Sessions**

Monday, Tuesday, Wednesday
8:50 a.m.-12:20 p.m.
1:30 p.m.- 5:00 p.m.
Thursday
8:50 a.m.-12:20 p.m.
  
- **Annual Business Meeting**  
Monday, March 6, 1972 at 4:00 p.m.--Auditorium
  
- **Committee Meetings**  
Time and location will be posted

## INFORMATION

### SOCIAL EVENTS

- **Cocktail Party**  
Monday, March 6, 1972 – 6:30 p.m.  
North Gallery (Cash bar)
  
- **Banquet**  
Tuesday, March 7, 1972 – 7:00 p.m. – Virginia Room  
Tickets available at Registration Desk
  
- **Ladies Hospitality East Lounge of Inn**  
Monday, Tuesday, Wednesday  
8:00 a.m.-5:00 p.m.  
Thursday  
8:00 a.m.-Noon

### SPECIAL SERVICES

**Placement Bureau . . . . . Room H**  
John G. Keller, Director

## OFFICERS

Wayland J. Hayes, Jr. . . . .	<i>President</i>
Victor A. Drill . . . . .	<i>President-Elect</i>
Robert L. Roudabush . . . . .	<i>Past President</i>
Robert A. Scala . . . . .	<i>Secretary</i>
Donald D. McCollister . . . . .	<i>Treasurer</i>

## COUNCIL

(Consists of officers and four elected members)

Kenneth P. DuBois . . . . .	1970-72
John P. Frawley . . . . .	1970-72
Joseph F. Borzelleca . . . . .	1971-73
Leon Golberg . . . . .	1971-73

## ELECTED COMMITTEES

### Educational Committee

Frederick Sperling, <i>Chairman</i> . . . . .	1970-72
James R. Fouts . . . . .	1970-72
Mary O. Amdur . . . . .	1971-73
George J. Wright . . . . .	1971-73

### Finance Committee

Donald D. McCollister, <i>Chairman</i> . . . . .	
Sheldon D. Murphy . . . . .	1970-72
Ralph C. Wands . . . . .	1970-72
E. V. Buehler . . . . .	1971-73
Francis N. Marzulli . . . . .	1971-73

### Membership Committee

Robert C. Anderson . . . . .	1969-72
Edward D. Palmes . . . . .	1970-73
Dorothy B. Hood . . . . .	1971-74

## APPOINTED COMMITTEES

### Awards Committee

Robert L. Roudabush, *Chairman*  
Joseph F. Borzelleca Leon Golberg

### Board of Publications

Maynard B. Chenoweth, *Chairman* (1968-71)  
Earl H. Dearborn, *Managing Editor*, T.A.P.  
Wayland J. Hayes, Jr., *President*  
Julius M. Coon (1970-72)  
Ted A. Loomis (1971-73)  
Victor A. Drill, *Auditor*

### Nominating Committee

Ted A. Loomis, *Chairman*  
Seymour L. Friess William E. MacDonald  
Florence K. Kinoshita Bernard L. Oser

### Program Committee

Victor A. Drill, *Chairman*  
Joseph F. Borzelleca, *Co-Chairman*  
Yves Alarie Paul A. Mattis  
Gale C. Boxill James A. Miller  
William F. Durham Robert A. Scala

### Technical Committee

Rob S. McCutcheon, *Chairman*  
William F. Durham Roger P. Smith  
E. Paul Lichenstein Carrol S. Weil

## ad hoc COMMITTEES

Representative to Division of Chemistry  
and Chemical Technology  
National Academy of Sciences, National Research Council  
V. K. Rowe

Representative to Drug Research Board  
National Academy of Sciences, National Research Council  
Victor A. Drill

### Placement

John G. Keller

### ANSI Z-37 Committee

Harold N. MacFarland (Liaison)

March 6, 1972

**MONDAY MORNING – AUDITORIUM**

*Chairman:* Renate Kimbrough

*Assisted by:* Clyde Burnett, Thomas Gaines

- 9:10 1. **Reversibility of Effects Caused by Hexachlorophene in the Rat.** G.L. Kennedy, Jr., I.A. Dressler, W.C. Richter, M.L. Keplinger, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.
- 9:30 2. **The Electroencephalogram and Visual Evoked Potential of the Squirrel Monkey Fed Hexachlorophene.** J.A. Santolucito, Environmental Protection Agency, Perrine, Florida (Sponsor: W. Durham).
- 9:50 3. **Determinations of Hexachlorophene in Human and Experimental Animal Tissues.** A.G. Ulsamer, P.D. Yoder, and F.N. Marzulli, Food and Drug Administration, Washington, D.C.
- 10:10 4. **A Possible Mechanism of Action of Hexachlorophene Intoxication.** L.E. Blockus, D.H.M. Chan, J.W. Goode, M.L. Keplinger, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.

*10-MINUTE BREAK*

- 10:40 5. **Persistent Effects of Monomethylhydrazine Administered at a Continuous Very Low Dose Rate or in Single Doses.** F.N. Dost, D.E. Johnson, and C.H. Wang, Science Research Institute, Oregon State University, Corvallis, Oregon.
- 11:00 6. **The Chronic Inhalation Toxicity of Monomethylhydrazine.** J.D. MacEwen, C.C. Haun, and A.A. Thomas, SysteMed Corporation, Dayton, Ohio.
- 11:20 7. **Effect of Methylhydrazine (MMH) on Cerebrospinal Fluid Catecholamine Efflux in the Rhesus Monkey.** B.A. Shaywitz, W.T. Gormley, and K.C. Back, Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio.
- 11:40 8. **In Vivo Effects on Hepatic Ornithine Decarboxylase Activity in Hydrazine-Treated Rats.** V.S. Hubbard and W.L. Banks, Jr., Department of Biochemistry, Medical College of Virginia, Richmond, Virginia (Sponsor: J.F. Borzelleca).

March 6, 1972

MONDAY MORNING – TIDEWATER ROOM

*Chairman:* John Weisberger

*Assisted by:* Ruth Davis, Robert Katz

- 8:50 9. Drug Related Mesovarial Leiomyomas in Rats. L.W. Nelson and J.H. Weikel, Jr., Department of Pathology and Toxicology, Mead Johnson Research Center, Evansville, Indiana.
- 9:10 10. Thin-Layer Chromatography of Carcinogenic Substances. S. Laham, J.P. Farant, and M. Potvin, Environmental Toxicology Programme, Environmental Health Centre, Department of National Health and Welfare, Ottawa, Ontario, Canada.
- 9:30 11. Direct-Acting Alkylating Carcinogens. Chloroethers and Related Compounds. B.L. Van Duuren, C. Katz, and B.M. Goldschmidt, Institute of Environmental Medicine, New York University Medical Center, New York, New York.
- 9:50 12. Vitamin A, Liver and Colon Carcinoma in Rats Fed Low Levels of Aflatoxin. P.M. Newberne and A. Rogers, Department of Nutrition and Food Science, Massachusetts Institute of Technology, Cambridge, Massachusetts.
- 10:10 13. Vitamin A and Respiratory Carcinogenesis in Hamsters. A.E. Rogers and P.M. Newberne, Department of Nutrition and Food Science, Massachusetts Institute of Technology, Cambridge, Massachusetts.

10-MINUTE BREAK

- 10:40 14. Carcinogenicity of Simple Aromatic Amine Derivatives in Mice and Rats. F. Homburger, G.H. Friedell, E.K. Weisburger, and J.H. Weisburger, Bio-Research Consultants, Inc., Cambridge, Massachusetts, St. Vincent Hospital, Worcester, Massachusetts, and National Cancer Institute, Bethesda, Maryland.
- 11:00 15. Antioxidants and Carcinogenesis: Butylated Hydroxytoluene, But Not Diphenyl-p-Phenylenediamine, Inhibits Cancer Induction by N-2-Fluorenylacetamide and by N-Hydroxy-N-2-Fluorenylacetamide in Rats. B. Ulland, J.H. Weisburger, R.S. Yamamoto, and E.K. Weisburger, National Cancer Institute, Bethesda, Maryland.
- 11:20 16. A Rapid Screen for the Assessment of Potential Carcinogenic Activity of Compounds Using the Sebaceous Gland Suppression Test with Particular Reference to Tobacco Condensates and Polycyclic Hydrocarbons. L.E. Mawdesley-Thomas, D.H. Barry, and P. Healey, Huntingdon Research Centre, Huntingdon, England (Sponsor: A.N. Worden).
- 11:40 17. Kinetics of Formation of Nitroso-Sarcosine from Sodium Nitrite and Amines. M.A. Friedman, Department of Pharmacology, Medical College of Virginia, Richmond, Virginia (Sponsor: J.F. Borzelleca).

March 6, 1972

MONDAY MORNING – AB ROOM

Chairman: E.V. Buehler

Assisted by: Phillip Belluscio, Jule Lamar

- 8:50 18. Carrageenan: An Ulcerogenic Agent? K.F. Benitz, R. Abraham, L. Golberg, and F. Coulston, Institute of Experimental Pathology and Toxicology, Albany Medical College of Union University, Albany, New York.
- 9:10 19. The Kupffer-Cell Response to Degraded Carrageenan. R. Abraham and L. Golberg, Institute of Experimental Pathology and Toxicology, Albany Medical College of Union University, Albany, New York.
- 9:30 20. Fixation and Preparation of Ocular Tissues for Toxicological Evaluation. D.M. Albert and E.J. Gralla, Ophthalmology Section, Yale School of Medicine, New Haven, Connecticut.
- 9:50 21. Ocular Lesions Induced in Rats by Feeding Cultures of *Penicillium viridicatum*. W.W. Carlton, M.D. McCracken, and J. Tuite, School of Veterinary Science and Medicine and School of Agriculture, Purdue University, Lafayette, Indiana.
- 10:10 22. Quantitative Histochemistry of the Effect of Cosmetics on Mouse Skin. D.H. Barry and L.E. Mawdesley-Thomas, Huntingdon Research Centre, Huntingdon, England (Sponsor: A.N. Worden).

10-MINUTE BREAK

- 10:40 23. Sources and Classification of Toxicological Data. A Study of Carbaryl (Sevin). K.E. Weston, Purcellville, Virginia.
- 11:00 24. A Computer System for the Collection and Analysis of Toxicology-Pathology Data. R.T. Drew, W.W. Lohmann, and K. Wolford, Merck Institute for Therapeutic Research, West Point, Pennsylvania (Sponsor: H.M. Peck).
- 11:20 25. Detecting Shifts in Laboratory Profiles During Drug Studies in Man. R.J. Kuzma, C.R. Buncher, and J.W. Newberne, Wm. S. Merrell Co., Division of Richardson-Merrell, Inc., Cincinnati, Ohio.
- 11:40 26. The Mission and Program of the National Center for Toxicological Research. M.F. Cranmer, Environmental Protection Agency, Perrine, Florida (Sponsor: W.F. Durham).
- 12:00 27. The Toxicology Information Program. H.M. Kissman, National Library of Medicine, Bethesda, Maryland.



**March 6, 1972**

**MONDAY AFTERNOON – AUDITORIUM**

**Symposium**

The case for mutagenicity testing –  
Has it been made?

- 1:30 Introduction** – Alexander Hollaender  
**Evaluation of Mutagenicity** – Marvin Legator  
**Mutagenicity of Chemical Carcinogens** – John H. Weisburger  
**Cytogenetic Methods of Testing** – Warren Nichols
- Open discussion
- Summary

**4:00 Annual Business Meeting** – *Auditorium*  
Members of the Society of Toxicology

**6:30 Cocktail Party** – *Gallery*  
Cash bar

March 7, 1972

TUESDAY MORNING – AUDITORIUM

*Chairman:* V. K. Rowe

*Assisted by:* John Mennear, Charles Kokoski

- 8:50 28. Evaluation of Normal and Organophosphate and Carbamate Insecticide Inhibited Blood Cholinesterase Activity Utilizing Dimethyl Butylacetate as a Substrate. M.F. Cranmer and A.J. Peoples, Environmental Protection Agency, Perrine, Florida (Sponsor: W.F. Durham).
- 9:10 29. Cholinesterase Inhibition Studies in Man with Ethion. R.J. Palazzolo, O.E. Fancher, J.F. McCarthy, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois, and Niagara Chemical Division, FMC Corporation, Middleport, New York.
- 9:30 30. Effect of Acute and Subacute Inhibition of Cholinesterase on the Response of the Rat Uterus to Cholinergic Drugs. J.J. McPhillips and D.J. Foley, Department of Pharmacology, West Virginia University, Morgantown, West Virginia.
- 9:50 31. Relationship Between Cholinesterase Activity and Sensitivity to Cholinergic Drugs in the Rat Ileum. D.J. Foley and J.J. McPhillips, Department of Pharmacology, West Virginia University, Morgantown, West Virginia.
- 10:10 32. Lethality, Antiesterase and Hemicholinium-Like Actions of Bis-Quaternary Ammonium Compounds Containing the 4-(Tetramethylene-2-one) Phenacyl Chain. T.A. Loomis, H.Z. Sommer, and J.A. Collins, Department of Pharmacology, School of Medicine, University of Washington, Seattle, Washington.

10-MINUTE BREAK

- 10:40 33. Some Actions of a New Organophosphorus Compound and One of Its Major Metabolites at the Neuromuscular Junction. B.A. Hemsworth and J.M. Cholakis, Department of Pharmacology and Toxicology, University of Rochester School of Medicine, Rochester, New York (Sponsor: H.C. Hodge).
- 11:00 34. Comparison of the Metabolism of Parathion with the Amounts of High Spin and Low Spin Cytochrome P-450 in Various Subfractions of Rabbit and Rat Liver Microsomes. B.J. Norman and R.A. Neal, Vanderbilt University, Nashville, Tennessee.
- 11:20 35. Enhancement of Aniline Metabolism by Paraoxon. J.T. Stevens, R.E. Stitzel, and J.J. McPhillips, Department of Pharmacology, West Virginia University Medical Center, Morgantown, West Virginia.
- 11:40 36. Effect of Carbon Monoxide on Response to Parathion and Paraoxon. C. Baeza, A.M. Goldberg, and R.J. Rubin, Johns Hopkins University, School of Hygiene and Public Health, Baltimore, Maryland (Sponsor: D. Blake).

March 7, 1972

**TUESDAY MORNING – TIDEWATER ROOM**

*Chairman:* Charles Winek

*Assisted by:* Frank Greene, Barrie Phillips

- 9:10 37. **Ultraviolet Determination of Mesitylenic Acid in Urine.** S. Laham and E.O. Matutina, Environmental Toxicology Programme, Division of Health Effects, Environmental Health Directorate, Department of National Health and Welfare, Ottawa, Canada.
- 9:30 38. **Genesis of a Drug Screening Laboratory.** C.R. Angel and D.J. Beach, Division of Biochemistry, Walter Reed Army Institute of Research, Washington, D. C. (Sponsor: J.F. Borzelleca).
- 9:50 39. **A Rapid Procedure for Analyzing Large Numbers of Urine Specimens for the Presence of Drugs.** L.R. Goldbaum and A.M. Dominguez, Toxicology Branch, Armed Forces Institute of Pathology, Washington, D.C.
- 10:10 40. **The Effect of Feeding an Elemental Chemical Diet on Mature Rats (Toxicology and Pathology).** A.J. Campbell, W.R. Sewell, M. Chudkowski, J.E. Willson, G.H. Lord, and K. Mohammed, Johnson & Johnson Research Foundation, New Brunswick, New Jersey.

*10-MINUTE BREAK*

- 10:40 41. **A Comparative Study of Inhalation of Lead Particulates in Animals and Man.** T.B. Griffin, F. Coulston, L. Golberg, J. Bradley, and J.C. Russell, Institute of Experimental Pathology and Toxicology, Albany Medical College, Albany, New York.
- 11:00 42. **Toxic Effects of Triphenyllead Acetate in Laboratory Animals and Humans.** G. Eisenlord, G.J. Goble, and J.F. Cole, Hine Laboratories, Inc., San Francisco, California, and International Lead Zinc Research Organization, Inc., New York, New York.
- 11:20 43. **Distribution Study of Arsenic, Mercury, and Lead in Human Fatal Poisonings.** S.K. Niyogi, Department of Pharmacology, Jefferson Medical College, Thomas Jefferson University, Philadelphia, Pennsylvania.
- 11:40 44. **The Effect of Folic Acid on Diphenylhydantoin-Induced Teratogenicity in Mice.** J.L. Schardein, D.L. Hentz, J.A. Petrere, J.E. Fitzgerald, and S.M. Kurtz, Parke, Davis and Company, Ann Arbor, Michigan.

March 7, 1972

TUESDAY MORNING – AB ROOM

*Chairman:* George Wright

*Assisted by:* Krishna Misra, Louis Gongwer

- 9:10 45. Excretion of Three Antimalarial Drugs WR-38,839, WR-33,063, and WR-122,455 in Rhesus Monkeys with Chronic Biliary Cannulae. C.C. Smith, G.F. Wolfe, and S.F. Mattingly, University of Cincinnati College of Medicine, Cincinnati, Ohio.
- 9:30 46. Observations on the Metabolism of Saccharin. J.L. Bayard, Institute of Experimental Pathology and Toxicology, Albany Medical College, Albany, New York (Sponsor: F. Coulston).
- 9:50 47. Metabolism of Caffeine-<sup>3</sup>H in the Rat. K.L. Khanna, G.S. Rao, and H.H. Cornish, Department of Environmental and Industrial Health, School of Public Health, University of Michigan, Ann Arbor, Michigan, and Laboratory of Chemistry, National Heart and Lung Institute, NIH, Bethesda, Maryland.
- 10:10 48. The Metabolism and Urinary Excretion of *o*-Phenylphenol in Dogs and Cats. F.W. Oehme and T.H.F. Smith, Comparative Toxicology Laboratory, Kansas State University, Manhattan, Kansas, and Lehn & Fink Products Co., Montvale, New Jersey.

10-MINUTE BREAK

- 10:40 49. The Excretion Rates of Chlormadinone Acetate, Mestranol, Norethynodrel, and Norethindrone in Female Rats. G.K. Hanasono and L.J. Fischer, Department of Pharmacology, University of Iowa, College of Medicine, Iowa City, Iowa (Sponsor: B.A. Becker).
- 11:00 50. The Effect of Altered Hepatic Function on the Plasma Disappearance and Biliary Excretion of Diethylstilbestrol. C.D. Klaassen, Department of Pharmacology, University of Kansas Medical Center, Kansas City, Kansas.
- 11:20 51. The Metabolism of Quazodine in the Rat, Dog, and Man. M.J. Bartek, J.A. LaBudde, and J.H. Weikel, Jr., Mead Johnson Research Center, Evansville, Indiana.
- 11:40 52. Effect of Salicylate on the Biological Half-Life of Bishydroxycoumarin in the Rat. B.H. Thomas, B.B. Coldwell, W. Zeitz, and G. Solomonraj, Food and Drug Directorate, Department of National Health and Welfare, Ottawa, Canada. (Sponsor: J.F. Borzelleca).

March 7, 1972

TUESDAY AFTERNOON – AUDITORIUM

*Chairman:* Morris Joselow

*Assisted by:* Otho Easterday, Otis Fancher

- 1:30 53. Toxic Effects of Methylmercury in the Rat. I.C. Munro, S.M. Charbonneau, R.F. Willes, A. Moodie, E. Nera, V. Montpetit, T. Goodman, D. Stoltz, and H.C. Grice. Research Laboratories, Food and Drug Directorate, Department of National Health and Welfare, Ottawa, Canada.
- 1:50 54. Toxic Effects of Methylmercury in the Cat. S.M. Charbonneau, I.C. Munro, A. Moodie, R.F. Willes, E. Nera, V. Montpetit, D. Stoltz, H.L. Trenholm, T. Goodman, and H.C. Grice, Research Laboratories, Food and Drug Directorate, Department of National Health and Welfare, Ottawa, Canada.
- 2:10 55. Acute Toxicity of Methyl Mercury, Its Tissue Distribution and Elimination in Guinea Pigs. R.H. Downie, F. Iverson, C.J. Paul, and H.L. Trenholm, Toxicology Section, Food and Drug Directorate, Ottawa, Canada (Sponsor: G.S. Wiberg).
- 2:30 56. Subchronic Administration of Methyl Mercury to Guinea Pigs: The Tissue Distribution and Elimination of Mercury. F. Iverson, H.L. Trenholm, R.H. Downie, and C.J. Paul, Toxicology Section, Food and Drug Directorate, Ottawa, Canada (Sponsor: G.S. Wiberg).
- 2:50 57. Consummatory Indices of Chronic Methyl Mercury Ingestion. D.R. Snyder and J.J. Braun, Section of Laboratory Animal Sciences, Yale University School of Medicine, New Haven, Connecticut.

10-MINUTE BREAK

- 3:20 58. A Study of the Effects of NTA on the Toxicity of Mercury Compounds. P.L. Wright, M.L. Keplinger, I.D. Hill, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois, and Monsanto Company, St. Louis, Missouri.
- 3:40 59. Effect of NTA Chelation on the Subacute Oral Toxicity in Rats of Cadmium and Methyl Mercury. K.H. Jacobson, Laboratory of Environmental Medicine, Tulane University, New Orleans, Louisiana.
- 4:00 60. A Comparison of the Metabolism of Nitrotriacetate (NTA) in Dog and Man. J.A. Budny and J.D. Arnold, Proctor and Gamble Company, Cincinnati, Ohio, and Harry S. Truman Laboratories, University of Missouri, Kansas City, Missouri.
- 4:20 61. Calcium and Zinc Metabolism in the Presence of  $\text{Na}_3\text{NTA}$ . W.R. Michael and J.M. Wakim, Proctor and Gamble Company, Cincinnati, Ohio.
- 4:40 62. A Study of the Mercury Content of Fish from Various Sources. M.M. Luckens, Department of Toxicology and Pharmacology, College of Pharmacy, University of Kentucky, Lexington, Kentucky.

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7:00 Society of Toxicology Banquet.  
Virginia Room

March 7, 1972

TUESDAY AFTERNOON – TIDEWATER ROOM

*Chairman:* Richard Steelman

*Assisted by:* Edward Schwartz, Mark Hite

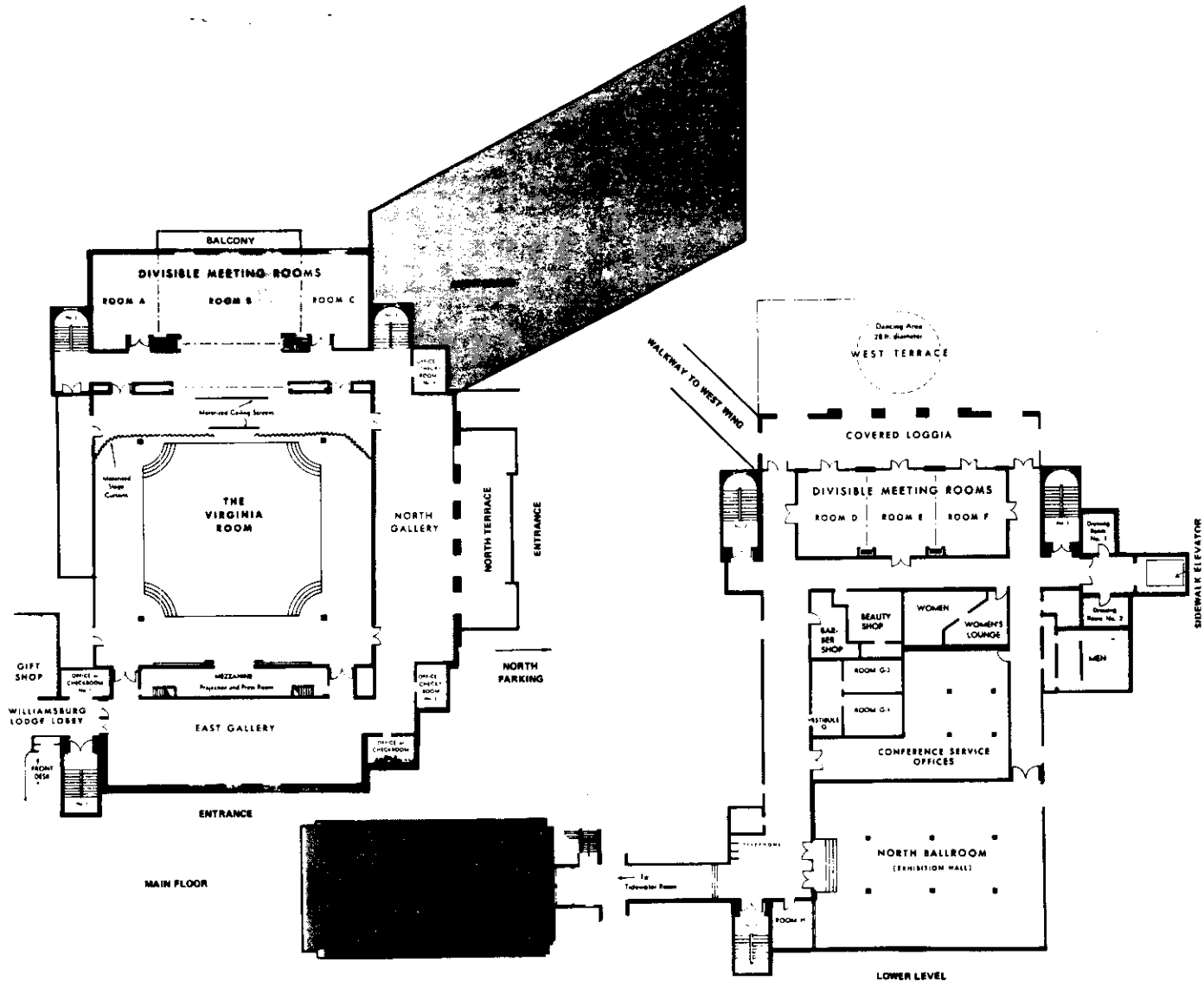
- 1:30 63. Genetic Nonhomogeneity of Microsomal Metabolism within a Single Strain of Young Rats. I. Gut and B. Balinova, Oakdale Toxicology Center, Department of Pharmacology, University of Iowa, Oakdale, Iowa (Sponsor: B.A. Becker).
- 1:50 64. Microsomal Activity in Endrin Susceptible and Resistant Pine Mice. R.W. Hartgrove, V.J. Petrella, and R.E. Webb, Department of Biochemistry and Nutrition, V.P.I. & S.U., Blacksburg, Virginia (Sponsor: J.F. Borzelleca).
- 2:10 65. Effects of the Butyl Alcohols on Liver Microsomal Enzymes. D. Bechtel and H.H. Cornish, University of Michigan, School of Public Health, Ann Arbor, Michigan.
- 2:30 66. Microsomal Enzyme Systems in Rabbit Lung and Liver During the First Month of Life. J.R. Fouts and T. Devereux, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
- 2:50 67. Effects of 1,3-Bis(2-Chloroethyl)-1-Nitrosourea (BCNU) on Hepatic Drug Metabolizing Systems in the Rat. I. Lu and R.E. Larson, Department of Pharmacology, Oregon State University, Corvallis, Oregon.

10-MINUTE BREAK

- 3:20 68. Effect of Four Antiviral Agents on the Hepatic Microsomal Mixed Functional Oxidase Enzymes. A.E. Munson, W. Regelson, and J.A. Munson, Division of Medical Oncology, Medical College of Virginia, Richmond, Virginia (Sponsor: J.F. Borzelleca).
- 3:40 69. Investigation of Multiple Mechanisms for Potentiation of Malaon (MX) by Triorthotolyl Phosphate (TOTP). S.D. Cohen, J.E. Callaghan, and S.D. Murphy, Department of Physiology, Harvard School of Public Health, Boston, Massachusetts.
- 4:00 70. The Identification of Five Unreported Lindane Metabolites Recovered from Rat Urine. R.W. Chadwick and J.J. Freal, Environmental Protection Agency, Perine, Florida (Sponsor: W. Durham).

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- 7:00 Society of Toxicology Banquet.  
Virginia Room.

# THE WILLIAMSBURG CONFERENCE CENTER



March 7, 1972

TUESDAY AFTERNOON – AB ROOM

*Chairman:* John Poutsika

*Assisted by:* John Pollock, Bob West


- 1:30 71. **The Fate of Thiodipropionic Acid, Its Dido-  
decyl Ester, and of Its Polyester with Cyclohexane-1,2-  
Dimethanol and Stearyl Alcohol in Rats.** R.C. Reynolds,  
D.W. Fassett, and B.D. Astill, Laboratory of Industrial  
Medicine, Kodak Park, Rochester, New York.
- 1:50 72. **Synthesis and Biologic Activity of Para-  
Hydroxylaminopropiophenone.** F.G. DeFeo, T.F. Fitz-  
gerald, and J. Doull, Department of Pharmacology,  
University of Kansas Medical Center, Kansas City,  
Kansas.
- 2:10 73. **Observations Consequent upon a Long-Term  
Study of Diphenylamine in Mice.** W. Ford, R. Abraham,  
W. Rockwood, and L. Golberg, Institute of Experi-  
mental Pathology and Toxicology, Albany Medical Col-  
lege of Union University, Albany, New York.
- 2:30 74. **Oxalate Excretion Following Oral Administra-  
tion of Glycolate and Glyoxylate.** E.W. McChesney, L.  
Golberg, and E.S. Harris, Institute of Experimental  
Pathology and Toxicology, Albany Medical College of  
Union University, Albany, New York.
- 2:50 75. **Modification of Acrylamide Neuropathy in Rats  
by Various Factors.** M.L. Kaplan and S.D. Murphy,  
Department of Physiology, Harvard School of Public  
Health, Boston, Massachusetts.

10-MINUTE BREAK

- 3:20 76. **Studies on the Acute Toxicity of Monochloro-  
acetic Acid in Rats.** F.D. Hayes, P.J. Gehring, and J.E.  
Gibson, Department of Pharmacology, Michigan State  
University, East Lansing, Michigan.
- 3:40 77. **Acute Toxicity of Sodium Pentafluorostannite  
in Rats and Mice.** D.L. Conine, J.C. Muhler, and R.B.  
Forney, Department of Toxicology, Indiana University  
School of Medicine, Indianapolis, Indiana.
- 4:00 78. **Toxicology of Santicizer 334F.** O.E. Fancher,  
G.L. Kennedy, Jr., J.B. Plank, D.C. Lindberg, W.H.  
Hunt, and J.C. Calandra, Industrial Bio-Test Labora-  
tories, Inc., Northbrook, Illinois.
- 4:20 79. **Single- and Repeated-Dose Toxicity of Thali-  
carpine (NSC 68075) Administered Intravenously in  
Monkeys – A Comparison with Dogs.** P.E. Palm, M.S.  
Nick, and E.P. Arnold, Arthur D. Little, Inc., Cam-  
bridge, Massachusetts.
- 4:40 80. **Factors Affecting Hemolysis Induced by Ellip-  
ticine, an Antineoplastic Agent.** M.A. Innis and I.P. Lee,  
Department of Health, Education, and Welfare, National  
Institutes of Health, Bethesda, Maryland (Sponsor: R.  
Dixon).

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- 7:00 **Society of Toxicology Banquet.**  
Virginia Room.





**March 7, 1972**

**Tuesday Evening**

**7:00 P.M.**

**BANQUET**

**Virginia Room**

**Menu**

Turtle Gumbo Soup

Boneless Breast of Rockingham Chicken  
on Slice of Virginia Ham

Molasses Baked Sweet Potato

Peas and Belgian Carrots

Mixed Garden Greens  
Red Wine Vinegar and Olive Oil Dressing

Spoon Bread

Rum Cream Pie with Chocolate Shavings

Beverage

Wine: Graves

Courtesy of the Charles River Companies

**Welcome:** Wayland J. Hayes, Jr., President  
Society of Toxicology

**Guest Speaker:** Leonard J. Goldwater

March 8, 1972

WEDNESDAY MORNING – AUDITORIUM

*Chairman:* Kenneth Back

*Assisted by:* Basil Leong, James McNerney

- 8:50 81. **Halocarbon-Epinephrine-Induced Cardiac Arrhythmia Potential of Some Common Industrial Solvents.** C.F. Reinhardt, L.S. Mullin, and M.E. Maxfield, Haskell Laboratory for Toxicology and Industrial Medicine, E.I. duPont de Nemours and Company, Wilmington, Delaware.
- 9:10 82. **Sensitization of the Heart to Catecholamine-Induced Arrhythmia by Haloalkanes.** J.H. Wills, P. Bradley, H. Kao, H. Grace, W. Hull, T.B. Griffin, F. Coulston, and E.S. Harris, Albany Medical College, Albany, New York, and NASA Manned Spacecraft Center, Houston, Texas.
- 9:30 83. **Cardiac Function in Mice Following Exposure to Haloalkane Propellants Alone and in Combination with Bronchodilators.** J. Egle, J.W. Putney, and J.F. Borzelleca, Department of Pharmacology, Medical College of Virginia, Richmond, Virginia.
- 9:50 84. **Alveolar Instability Following Administration of Fluorocarbon.** Y. Alarie, M.A. Choby, and W.E. Poel, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania.
- 10:10 85. **The Hypotensive Response in Dogs Exposed to Bromotrifluoromethane.** E.W. van Stee and K.C. Back, Wright-Patterson Air Force Base, Ohio.

*10-MINUTE BREAK*

- 10:40 86. **Inhalation of Aerosols by Multi-Species in a Head Exposure Chamber with Simultaneous Cardio-Pulmonary Measurements.** H.E. Swann, Jr., S. Carson, J. Scheimberg, and O.P. McShane, Food and Drug Research Laboratories, Maspeth, New York.
- 11:00 87. **Production of a Bronchial Asthma-Like Syndrome in Guinea Pigs by Inhalation of Sensitizing and Challenging Antigen for Testing of Therapeutic Drugs.** S. Carson, H.E. Swann, Jr., J. Scheimberg, O.P. McShane, H.C. Dang, and D. Serlin, Food and Drug Research Laboratories, Inc., Maspeth, New York.
- 11:20 88. **Evaluating the Toxicology of Household Aerosols.** G.S. Wiberg, Division of Toxicology, Food Advisory Bureau, Food and Drug Directorate, Ottawa, Canada.
- 11:40 89. **Investigations of a Lung Edema Toxin from Sweet Potatoes (*Ipomoea batatas*).** B.J. Wilson and M.R. Boyd, Center in Toxicology, Vanderbilt University, Nashville, Tennessee.

March 8, 1972

WEDNESDAY MORNING – TIDEWATER ROOM

*Chairman:* John Emmerson

*Assisted by:* Donald Ecobichon, Francis Weir

- 8:50 90. **The Effect of Ascorbic Acid Deficiency and Protein Quality on Stimulation of Hepatic Microsomal Enzymes in Guinea Pigs.** R. Chadwick, A. Peoples, and M. Cranmer, Environmental Protection Agency, Perrine, Florida (Sponsor: W.F. Durham).
- 9:10 91. **Interaction of Inhaled 1,1-Dichloroethylene and Microsomal Enzyme Inducers.** G.P. Carlson, G.C. Fuller, and B.I. Gonet, Department of Pharmacology and Toxicology, College of Pharmacy, University of Rhode Island, Kingston, Rhode Island.
- 9:30 92. **Interactions of Cyclodiene Insecticides with Components of Hepatic Microsomal Mixed Function Oxidase System from Male and Female Rats.** F.E. Greene, Milton S. Hershey Medical Center, Hershey, Pennsylvania.
- 9:50 93. **Arsenic Trioxide: Stimulation of Liver Enzyme Detoxication Activity.** D.J. Wagstaff, Department of Veterinary Physiology and Pharmacology, University of Missouri, Columbia, Missouri (Sponsor: J.L. Shupe).
- 10:10 94. **Vinylidene Chloride (VC) Hepatotoxicity and its Dissociation from a Lipoperoxidative Mechanism.** R.J. Jaeger, J. Trabulus, and S.D. Murphy, Department of Physiology, Harvard School of Public Health, Boston, Massachusetts.

10-MINUTE BREAK

- 10:40 95. **Enzyme Deficiencies in the Rabbit: Correlation with Pharmacological and Toxicological Effects.** D.J. Ecobichon, Department of Pharmacology, Dalhousie University, Halifax, Nova Scotia, Canada.
- 11:00 96. **Cadmium Potentiated Hexobarbital Sleep Time in Male and Female Albino Rats and Mice.** W.M. Hadley and T.S. Miya, Department of Pharmacology and Toxicology, School of Pharmacy and Pharmcal Sciences, Purdue University, Lafayette, Indiana.
- 11:20 97. **Effects of 2,6-Dichloro-4-Nitroaniline and Its Metabolites on Rat Liver Mitochondria.** M.A. Gallo, E. Bachmann, and L. Golberg, Institute of Experimental Pathology and Toxicology, Albany Medical College of Union University, Albany, New York.
- 11:40 98. **A Strategy for the Seventies: The Role of the Toxicologist in Environmental Maintenance and Repair.** M.M. Luckens, Department of Toxicology and Pharmacology, College of Pharmacy, University of Kentucky, Lexington, Kentucky.

March 8, 1972

WEDNESDAY MORNING – AB ROOM

*Chairman:* B.N. Banerjee

*Assisted by:* A.E. Earl, Jules Brodeur

- 8:50 99. The Frequency of Occurrence of Teratological Anomalies in Control New Zealand White Strain Rabbits. B.N. Banerjee and R.S. Durluo, Woodard Research Corporation, Herndon, Virginia.
- 9:10 100. Sensitivity of Blastocyst Implantation to Toxic Agents. R. Abraham, J.C. Fulfs, L. Golberg, and F. Coulston, Institute of Experimental Pathology and Toxicology, Albany Medical College of Union University, Albany, New York.
- 9:30 101. Methyl Mercury Toxicity in Pregnant and Non-pregnant Rats. W.L. Marcus and B.A. Becker, Oakdale Toxicology Center, Department of Pharmacology, University of Iowa, Oakdale, Iowa.
- 9:50 102. The Teratogenic Effects of Cadmium in the Rat. N. Chernoff, Environmental Protection Agency, Perrine, Florida (Sponsor: W.F. Durham).
- 10:10 103. Effects of Cadmium Chloride on Mouse Spermatogenesis Studied by Velocity Sedimentation Cell Separation and Serial Mating. I.P. Lee and R.L. Dixon, Department of Health, Education, and Welfare, National Institutes of Health, Bethesda, Maryland.

10-MINUTE BREAK

- 10:40 104. Alteration of Salicylate-Induced Embryotoxicity by Phenobarbital and SKF-525A Pretreatments of Sprague Dawley Rats. J.L. Minor and B.A. Becker, Oakdale Toxicology Center, Department of Pharmacology, University of Iowa, Oakdale, Iowa.
- 11:00 105. Effect of Prenatal Treatment with Some Antineoplastic Agents on Gonadal Function in Mice. R.L. Dixon and J.A. McLachlan, Department of Health, Education, and Welfare, National Institutes of Health, Bethesda, Maryland.
- 11:20 106. Embryo-Fetal Toxicity and Teratogenic Effects of a Group of Methacrylate Esters in Rats. A.R. Singh, W.H. Lawrence, and J. Autian, Materials Science Toxicology Laboratories, University of Tennessee Medical Units, Memphis, Tennessee.
- 11:40 107. Studies on the Prenatal Toxicity and Teratology of N,N-Diethyl Benzene Sulfonamide in Rats. T.M. Leland, G.F. Mendelson, M. Steinberg, and M. Weeks, Toxicology Division, U.S. Army Environmental Hygiene Agency, Aberdeen Proving Ground, Maryland.

March 8, 1972

WEDNESDAY AFTERNOON – AUDITORIUM

Chairman: Cipriano Cueto

Assisted by: E. E. Vogin, Robert Bagdon

- 1:30 108. Light Microscopy and Ultrastructure of Liver of Rats Fed Polychlorinated Biphenyls. R.D. Kimbrough, R.E. Linder, and T.B. Gaines, Toxicology Branch, Environmental Protection Agency, Chamblee, Georgia.
- 1:50 109. Reproductive Effects of Polychlorinated Biphenyls in White Leghorn Chickens. D.H. Jenkins, M.L. Keplinger, O.E. Fancher, E.P. Wheeler, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.
- 2:10 110. Toxicology of Brominated Biphenyls. I. Oral Toxicity and Embryo-toxicity. J.G. Aftosmis, R. Culik, K.P. Lee, H. Sherman, and R.S. Waritz, Haskell Laboratory – DuPont Company, Wilmington, Delaware.
- 2:30 111. Toxicology of Brominated Biphenyls. II. Skin, Eye, and Inhalation Toxicity and an Acute Test Method for Evaluating Hepatotoxicity and Accumulation in Body Fat. J.G. Aftosmis, O.L. Dashiell, F.D. Griffith, C.S. Hornberger, M.M. McDonnell, H. Sherman, F.O. Tayfun, and R.S. Waritz, Haskell Laboratory--DuPont Company, Wilmington, Delaware.
- 2:50 112. Metabolism of 2,4,5-T in Rats. W.N. Piper, J.Q. Rose, and P.J. Gehring, Dow Chemical Company, Midland Michigan.

10-MINUTE BREAK

- 3:20 113. Teratogenic Effects of 2,4,5-T in Mice. E.R. Hart and M.G. Valerio, Bionetics Research Laboratories, Bethesda, Maryland.
- 3:40 114. The Metabolism and Distribution of 2,4,5-Trichlorophenoxyacetic Acid in Female Rats. S.C. Fang, M.L. Montgomery, and V.H. Freed, Department of Agricultural Chemistry, Oregon State University, Corvallis, Oregon.
- 4:00 115. Effects upon Rat Reproduction and Guinea Pig Teratology of Carbaryl Fed in the Diet Versus Daily Stomach Intubation. C.S. Weil, M.D. Woodside, J.B. Bernard, N.I. Condra, and C.P. Carpenter, Carnegie-Mellon University, Pittsburgh, Pennsylvania.
- 4:20 116. Use of the Fathead Minnow (*Pimephales promelas* Rafinesque) in Estimating the Toxicity of Chemicals to Fish. C.J. Terhaar, W.S. Ewell, and S.P. Dziuba, Toxicology Laboratory, Eastman Kodak Company, Rochester, New York.
- 4:40 117. Toxicity of Phthalate Esters in Tissue Culture: Effects on Growth, Amino Acids Uptake and Protein Turnover. E.O. Dillingham, C.H. Wu, and J. Autian, Materials Science Toxicology Laboratories, University of Tennessee, Memphis, Tennessee.

March 8, 1972

WEDNESDAY AFTERNOON – TIDEWATER ROOM

*Chairman:* M. O. Amdur

*Assisted by:* R. Geil, M. Braude

- 1:30 118. **Pulmonary Function Studies of Men Exposed for 120 Hours to Sulfur Dioxide.** F.W. Weir, D.H. Stevens, and P.A. Bromberg, Department of Preventive Medicine and Department of Medicine, Ohio State University, Columbus, Ohio.
- 1:50 119. **Attempt to Demonstrate S-Sulfonate in Human Plasma.** A.R. Gunnison and E.D. Palmes, Institute of Environmental Medicine, New York University Medical Center, New York, New York.
- 2:10 120. **Long-Term Exposure of Primates and Guinea Pigs to Mixtures of Sulfur Dioxide and Fly Ash.** R.J. Kantz, II, W.M. Busey, Y. Alarie, C.E. Ulrich, and A.A. Krumm, TRW/Hazleton Laboratories, Inc., Vienna, Virginia.
- 2:30 121. **An Indirect Action of Ozone on the Pulmonary Macrophage.** D.E. Gardner, Bio-Medical Research Branch, Division of Health Effects Research, Environmental Protection Agency, Research Triangle Park, North Carolina (Sponsor: D.L. Coffin).
- 2:50 122. **Altered Central Nervous System Function Resulting from Ozone Exposure.** C.E. Ulrich and M.F. Sobecki, TRW/Hazleton Laboratories, Inc., Vienna, Virginia (Sponsor: J.W. Clayton, Jr.).

10-MINUTE BREAK

- 3:20 123. **Chronic Oral Toxicity of Cannabinoids in Rats.** G.R. Thompson and M.C. Braude, Mason Research Institute, Worcester, Massachusetts, and NIMH, Rockville, Maryland.
- 3:40 124. **Marihuana Related Pathology in Rats.** M.M. Mason and G.R. Thompson, Mason Research Institute, Worcester, Massachusetts.
- 4:00 125. **The Effects of Tobacco Smoke on Mucociliary Activity.** E.E. Vogin, C. Rubinstein, J. Scheimberg, and S. Carson, Food and Drug Research Laboratories, Inc., Maspeth, New York.
- 4:20 126. **Immunological Factors in the Etiology of Pulmonary Berylliosis.** A.L. Reeves, R.H. Swanborg, and N.D. Krivanek, Wayne State University, Detroit, Michigan.
- 4:40 127. **Fluoride Intoxication: Correlation of the Fate of Na<sup>18</sup>F with Fluoride Effects upon Glucose Catabolism in the Rat.** R.M. Knaus, F.N. Dost, and C.H. Wang, Science Research Institute, Oregon State University, Corvallis, Oregon.

March 8, 1971

WEDNESDAY AFTERNOON – AB ROOM

Chairman: Robert Larson

Assisted by: William D'Aguanno, R. A. Neal

- 1:30 128. Two Active Structures for Hemicholinium-Like Action. B. Blase, T.A. Loomis, and H.Z. Sommer, Department of Pharmacology, School of Medicine, University of Washington, Seattle, Washington.
- 1:50 129. Studies on the Nature of Cholinergic Receptors: Dissociation Constants of Fluoro-, Chloro-, Bromo-, and Iodo-Acetylcholines at Muscarinic and Nicotinic Receptors. B.V. Rama Sastry, H.C. Cheng, and L.K. Owens, Department of Pharmacology, Vanderbilt University, Nashville, Tennessee.
- 2:10 130. Effect of Acetylcholine on the *In Vitro* Blood Clotting Time of Human Blood. J.M. Singh, V. Costanza, and M.D. Singh, Department of Pharmacology, Xavier University, New Orleans, Louisiana.
- 2:30 131. The Action of Pesticides on Conduction in the Rat Superior Cervical Ganglion Preparation, *In Vitro*. E.R. Whitcomb, Environmental Protection Agency, Perrine, Florida (Sponsor: W.F. Durham).
- 2:50 132. Effect of Reserpine and Atropine Sulfate on the Development of Tolerance to Pentobarbital. J.M. Singh and M.D. Singh, Department of Pharmacology, Xavier University, New Orleans, Louisiana.

10-MINUTE BREAK

- 3:20 133. High Nicotine Tolerance of Syrian Golden Hamsters. P. Bernfeld and F. Homburger, Bio-Research Consultants, Inc., Cambridge, Massachusetts.
- 3:40 134. Early Effects of Thiamylal on Lidocaine Toxicity in Rhesus Monkeys. M.L. Cohn, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania (Sponsor: M. Eisler).
- 4:00 135. Determination of the Ototoxicity of Ethacrynic Acid and Furosemide in the Dog. W.J. Goldman, T.C. Bielinski, and P.A. Mattis, Merck Institute for Therapeutic Research, West Point, Pennsylvania.
- 4:20 136. A Comparison of Ethanol- and Acetaldehyde-Induced Hyperglycemia in the Rabbit. L.W. Masten and H.H. Cornish, University of Michigan, School of Public Health, Ann Arbor, Michigan.
- 4:40 137. *In Vitro* and *In Vivo* Structure-Activity Relationships in a Series of Methyl and Halogen Substituted Alcohols. E.O. Dillingham, R.W. Mast, G.E. Bass, and J. Autian, Materials Science Toxicology Laboratories, University of Tennessee, Memphis, Tennessee.

March 9, 1972

THURSDAY MORNING – AUDITORIUM

*Chairman:* O.G. Fitzhugh

*Assisted by:* Gareth Owen, Clifford Chappel

- 8:50 138. **Actions of Dieldrin on the Uptake of Testosterone-1,2-H<sup>3</sup> by Prostate Glands of the Male Mouse.** J.A. Thomas, M.T. Smith, M.G. Mawhinney, C.G. Smith, and J.J. McPhillips, Department of Pharmacology, West Virginia University Medical Center, Morgantown, West Virginia.
- 9:10 139. **Gonadal Function in Mice Exposed Prenatally to p,p'-DDT.** J.A. McLachlan and R.L. Dixon, Department of Health, Education, and Welfare, National Institutes of Health, Bethesda, Maryland.
- 9:30 140. **Localization of DDT-H<sup>3</sup> in Male Reproductive Organs and Its Actions Upon Androgenic Function.** M.T. Smith, J.A. Thomas, C.G. Smith, M.G. Mawhinney, and J.J. McPhillips, Department of Pharmacology, West Virginia University Medical Center, Morgantown, West Virginia.
- 9:50 141. **Concentrations of Chlorinated Hydrocarbon Pesticides in Human Blood and their Relation to Concentration in Depot Fat.** J.R. Brown, Department of Environmental Health, School of Hygiene, University of Toronto, Toronto, Canada.
- 10:10 142. **Effects of o,p'-DDT on the Adrenal Cortex of the Beagle.** M.F. Copeland and M.F. Cranmer, Environmental Protection Agency, Perrine, Florida (Sponsor: W.F. Durham).

10-MINUTE BREAK

- 10:40 143. **Morphological and Biochemical Effects of Sucrose Acetate Isobutyrate on the Liver.** B.G. Procter, P. Dussault, G. Rona, and C.I. Chappel, Bio-Research Laboratories, Ltd., Pointe Claire, Quebec, Canada.
- 11:00 144. **Inhibition Studies of Carboxyesterase Activity.** J.C. Killeen and T.B. Griffin, Institute of Experimental Pathology and Toxicology, Albany Medical College of Union University, Albany, New York (Sponsor: L. Golberg).
- 11:20 145. **Drug 'Induced' Alkaline Phosphatase Activity in the Liver of the Beagle Dog.** M.H. Litchfield and D.M. Conning, Imperial Chemical Industries, Ltd., Industrial Hygiene Research Laboratories, Cheshire, England (Sponsor: J.F. Borzelleca).
- 11:40 146. **Comparison of Plasma Enzyme Assays for the Detection of Liver Damage in the Beagle Dog.** M.H. Litchfield and C.J. Gartland, Imperial Chemical Industries, Ltd., Industrial Hygiene Research Laboratories, Cheshire, England (Sponsor: J.F. Borzelleca).



March 9, 1972

THURSDAY MORNING – TIDEWATER ROOM

*Chairman:* John Kirschman

*Assisted by:* Harold Grice, William Hunt

- 8:50 147. Utilization of the Pig Zygote System for Mutagenic Testing. D.J. Kilian and C.B. Jacobson, Dow Chemical Company, Freeport, Texas, and George Washington University Medical Center, Washington, D.C.
- 9:10 148. Chronic Toxicity, Teratology, and Mutagenicity Studies with Cyclohexylamine in Rats. D.E. Bailey, K. Morgareidge, G.E. Cox, E.E. Vogin, and B.L. Oser, Food and Drug Research Laboratories, Inc., Maspeth, New York.
- 9:30 149. Response of Neonatal Rats to Mycotoxins and Insecticides. R.M. Farb, J.A. Cain, B.G. Moore, and A.W. Hayes, University of Alabama, University, Alabama.
- 9:50 150. Toxicity of Ochratoxin A in the Rat. I.C. Munro, C.A. Moodie, E.J. Middleton, P.M. Scott, and H.C. Grice, Food and Drug Directorate, Department of National Health and Welfare, Ottawa, Canada.
- 10:10 151. Acute Toxicity of a Mycotoxin from *Aspergillus glaucus*. T. Glinsukon and R.C. Shank, Massachusetts Institute of Technology, Cambridge, Massachusetts. (Sponsor: G.N. Wogan).

10-MINUTE BREAK

- 10:40 152. The Oncogenic Effects of Aflatoxin Metabolites in the Rat. C.A. Moodie, H.C. Grice, and D.C. Smith, Food and Drug Directorate, Department of National Health and Welfare, Ottawa, Canada.
- 11:00 153. Preclinical Toxicologic Studies with Tobramycin. J.S. Welles, J.L. Emmerson, W.R. Gibson, R. Nickander, N.V. Owen, and R.C. Anderson, The Lilly Toxicology Laboratories, Greenfield, Indiana.
- 11:20 154. Experimental Papilledema in the Dog Induced by a Salicylanilide. W.R. Brown, L. Rubin, M. Hite, and R.E. Zwickey, Merck Institute for Therapeutic Research, West Point, Pennsylvania.
- 11:40 155. Aspirin: Three-Month Oral Toxicity Studies in Dogs and Rats. D.L. Bokelman, W.J. Bagdon, R.D. Jensen, and R.E. Zwickey, Merck Institute for Therapeutic Research, West Point, Pennsylvania.
- 12:00 156. The Comparative Toxicity of the Pyrolysis Products of Three Copolymers of Vinylidene Fluoride and Hexafluoropropylene. V.L. Carter, H. Warrington, D. Bafus, C. Legg, and E.S. Harris, NASA Manned Spacecraft Center, Toxicology Laboratory, Houston, Texas.

March 9, 1972

THURSDAY MORNING -- AB ROOM

*Chairman:* Theodore King

*Assisted by:* Charles Proctor, Donald Abbott

- 8:50 157. Toxicological Studies of Tryptamine and N,N-Dimethyltryptamine. R.P. Maickel, E. Campaigne, and T.R. Bosin, Indiana University, Bloomington, Indiana.
- 9:10 158. A Review of the Toxicological Features of some Drug-Induced Myocardial Papillary Muscle Necrosis in Dogs. T. Balazs, Food and Drug Administration, Washington, D.C.
- 9:30 159. Deficiency of Memory and Learning Functions Related to Lipofuscin Accumulation in Brains of Rats on Chronic Vitamin E Deficient Diet. S.K. Puri, S. Pogacar, and H. Lal, University of Rhode Island, Kingston, Rhode Island, and Rhode Island Medical Center, Howard, Rhode Island.
- 9:50 160. Investigation of Extrapyramidal Toxicity and Depression of Shock Avoidance Behavior by Neuroleptic Drugs. S. Fielding, B. Outwater, T. McGreevy, and L. Pacifico, Ciba-Geigy Pharmaceutical Company, Summit, New Jersey (Sponsor: H. Lal).
- 10:10 161. The Toxicology of Metiapine, a Dibenzothiazepine Tranquilizer. J.P. Gibson, J.W. Newberne, and M.W. Rohovsky, Merrell-National Laboratories, Cincinnati, Ohio.

10-MINUTE BREAK

- 10:40 162. Interactions between Diphenylhydantoin and Tolbutamide in the Mouse. J.H. Mennear and T.A. Gossel, Purdue University, Lafayette, Indiana.
- 11:00 163. Comparative Dermal Irritation/Sensitization Studies with Banomite® (U-27415\*) in Guinea Pigs and Man. T.J. Kakuk, R.L. Johnston, T.E. Weddon, and W.A. Rye, The Upjohn Company, Kalamazoo, Michigan (Sponsor: G.C. Boxill).  
\*Benzoyl chloride (2,4,6-trichlorophenyl) hydrazone
- 11:20 164. Effects of Vitamin C on Atrioventricular and Intraventricular Conduction in Dogs. G.A. Bobb, S.H. Lau, and A.N. Damato, USPHS Hospital, Staten Island, New York (Sponsor: E.J. Fairchild).
- 11:40 165. Studies on the Increased Toxicity of Ouabain in Newborn Rats. C.D. Klaassen, University of Kansas Medical Center, Kansas City, Kansas.

## Notes

## Notes