

# 12th ANNUAL MEETING



PROGRAM

## SOCIETY OF TOXICOLOGY

WALDORF ASTORIA HOTEL  
NEW YORK CITY  
MARCH 18-22, 1973

# INFORMATION

## REGISTRATION

- **Registrar**  
Anne M. Wolven
  
- **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 – Waldorf-Astoria**  
Sunday, March 18, 1973, South Lobby  
2:00 PM – 10:00 PM  
Monday, March 19, 1973, Silver Corridor  
8:30 AM – 4:00 PM  
Tuesday, March 20, 1973, Silver Corridor  
8:30 AM – 5:00 PM  
Wednesday, March 21, 1973, Silver Corridor  
8:30 AM – 5:00 PM
  
- **Registration Fees**  
Society of Toxicology Members ..... \$20.00  
Nonmembers ..... 25.00  
Predoctoral Full-time Students ..... 5.00
  
- **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.
  
- **Locations (see centerfold map)**  
South Lobby – Main floor  
Silver Corridor – Third floor  
Astor Salon, Basildon Room, Jade Room – Third floor  
Grand Ballroom – Third floor  
Vertes and Cole Porter Suites – Fourth floor

## SCHEDULE OF MEETINGS

- **Scientific Sessions** – Astor Salon, Basildon and Jade Rooms  
Monday, Tuesday, Wednesday  
8:50 AM – 12:00 Noon  
1:30 PM – 5:20 PM  
Thursday  
8:30 AM – 12:00 Noon
- **Symposium** – Astor Salon  
Monday, March 19 at 1:30 PM  
Communications between regulator and regulated
- **Workshop** – Astor Salon  
Tuesday, March 20 at 8:50 AM  
Eye irritancy
- **Special Presentation** – Astor Salon  
Tuesday, March 20 at 4:00 PM  
Current program and future emphasis at the NCTR.
- **Annual Business Meeting** – Astor Salon  
Monday, March 19 at 4:00 PM
- **Committee Meetings** – Vertes Suite 4U  
Time will be posted

## SOCIAL EVENTS

- **Banquet** – Grand Ballroom  
Tuesday, March 20 at 7:00 PM  
Tickets available at Registration Desk
- **Ladies Hospitality** – Cole Porter Suite B  
Separate information provided

## SPECIAL SERVICES

- **Placement Bureau** – Vertes Suite 4V  
Monday, Tuesday, Wednesday  
10:00 AM – 12:00 Noon  
2:00 PM – 4:00 PM  
Other hours by appointment  
John G. Keller, Director

## OFFICERS

Victor A. Drill ..... *President*  
Joseph F. Borzelleca ..... *President-Elect*  
Wayland J. Hayes, Jr. .... *Past President*  
Robert A. Scala ..... *Secretary*  
Donald D. McCollister ..... *Treasurer*

## COUNCIL

(Consists of officers and four elected members)

Leon Golberg ..... 1971-1973  
Edward D. Palmes ..... 1971-1973  
Sheldon D. Murphy ..... 1972-1974  
John H. Weisburger ..... 1972-1974

## COMMITTEES – 1972-1973

### Awards Committee

Wayland J. Hayes, Jr., *Chairman*  
Sheldon D. Murphy ..... Edward D. Palmes

### Board of Publications

Julius M. Coon (1970-1973), *Chairman*  
Gabriel L. Plaa, *Managing Editor*  
Victor A. Drill, *President*  
Ted A. Loomis (1971-1974)  
Mary O. Amdur (1972-1975)  
Joseph F. Borzelleca, *Auditor*

### Educational Committee

George J. Wright, *Chairman* ..... 1971-1973  
Mary O. Amdur ..... 1971-1973  
Tom S. Miya ..... 1972-1974  
Lauren A. Woods ..... 1972-1974

### Finance Committee

Donald D. McCollister, *Chairman*  
E. V. Buehler ..... 1971-1973  
Francis N. Marzulli ..... 1971-1973  
Herman F. Kraybill ..... 1972-1974  
Herbert E. Stokinger ..... 1972-1974

### Membership Committee

Robert L. Dixon, *Chairman* ..... 1972-1973  
Dorothy B. Hood ..... 1971-1974  
Frederick Sperling ..... 1972-1975

### **Nominating Committee**

Robert L. Roudabush, *Chairman*

David A. Blake                      Mark Hite  
Rolf Hartung                         Elton R. Homan

### **Program Committee**

Joseph F. Borzelleca, *Chairman*

Herman A. Birnbaum                 Orville E. Paynter  
Clifford I. Chappel                  Robert A. Scala  
Florence K. Kinoshita                Sorrell L. Schwartz  
Joseph J. McPhillips                 Leonard J. Vinson  
Frederick W. Oehme                 Anne M. Wolven (*Registrar*)

### **Regulatory Affairs**

John P. Frawley, *Chairman*

Evelyn G. Burtis                      Bernard L. Oser  
John F. Griffith                         Robert L. Roudabush

### **Technical Committee**

Carroll S. Weil, *Chairman*

Clifford I. Chappel  
Bertram Dinman                         J. W. Newberne  
John P. Frawley                         David P. Rall  
Keith H. Jacobson                       Clara H. Williams

## **AD HOC COMMITTEES**

### **Placement**

John G. Keller

### **Committee to Review Membership Requirements**

Kenneth P. DuBois, *Chairman*

John Doull                                 Edward D. Palmes  
Stephen Krop                                Ralph C. Wands

### **Committee on Manpower and Training in Toxicology**

Robert Anderson, *Chairman*

John Autian                                 Wayland J. Hayes, Jr.  
David W. Fassett                         Harry W. Hays

### **Committee on Licensure and Accreditation**

E. Christofano, *Chairman*

H. W. Gerarde                             Robert A. Scala  
H. F. Kraybill                              Henry F. Smyth

## **LIAISON APPOINTMENTS**

**Representative to Division of Chemistry  
and Chemical Technology, NAS-NRC**

V. K. Rowe

**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

**Liaison Member, Z-37 Committee**

Harold N. MacFarland

**Representative to Scientific Advisory Board, NCTR**

Robert A. Scala

**Representative to Public Advisory Committee on  
the Revision and Application of Drinking Water  
Standards, Environmental Protection Agency**

John A. Zapp, Jr.

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

Harold C. Hodge, *Chairman*

Ted A. Loomis

John A. Zapp, Jr.

**Liaison with Environmental Mutagens Society**

John H. Weisburger

## PAST PRESIDENTS OF THE SOCIETY

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

March 19, 1973

MONDAY MORNING – ASTOR SALON

Chairman: W. B. Deichmann

Assisted by: A.G. Ebert, D.J. Wagstaff

- 8:50 1. **Fertility and Reproduction of Rats Treated with Hexachlorophene.** J.B. Plank, P.L. Wright, S.L. Haley, M.L. Keplinger, G.L. Kennedy, Jr., and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.
- 9:10 2. **Behavioral Toxicity of Hexachlorophene in Rats.** L.R. Weiss, J.T. Williams, and S. Krop, Food and Drug Administration, Washington, D.C.
- 9:30 3. **Attenuation of CNS Toxicity of Hexachlorophene in the Rat and the Cat.** J.P. Hanig, J.M. Morrison, Jr., and S. Krop, Food and Drug Administration, Washington, D.C.
- 9:50 4. **Biological Responses of the Rat to Polychlorinated Biphenyls II.** J.V. Bruckner, K.L. Khanna, and H.H. Cornish, School of Public Health, The University of Michigan, Ann Arbor, Michigan.
- 10:10 5. **The Influences of Pure Polychlorinated Biphenyl Compounds on Hepatic Function in the Rat.** D.J. Ecobichon and G.J. Johnstone, Department of Pharmacology, Dalhousie University, Halifax, N.S., Canada.

10-MINUTE BREAK

- 10:40 6. **The Fate of 2,4,5-Trichlorophenoxyacetic Acid (2,4,5-T) Following Oral Administration to Man.** P.J. Gehring, C.G. Kramer, B.A. Schwetz, J.Q. Rose, V.K. Rowe, and J.S. Zimmer, The Dow Chemical Company, Midland, Michigan.
- 11:00 7. **Effects of 2,4,5-T and Other Organochlorides on the Metabolism of Testosterone- $H^3$  by Male Organs of Reproduction.** J.W. Lloyd, J.A. Thomas, G.G. Mawhinney, and C.S. Dieringer, Department of Pharmacology and Urology, West Virginia University Medical Center, Morgantown, West Virginia.
- 11:20 8. **The Renal Transport of 2,4-Dichlorophenoxyacetic Acid (2,4-D) and 2,4,5-Trichlorophenoxyacetic Acid (2,4,5-T) *in Vitro*.** W.O. Berndt and F. Koschier, Department of Pharmacology and Toxicology and Department of Physiology, Dartmouth Medical School, Hanover, New Hampshire (Sponsor: R.P. Smith).
- 11:40 9. **Non-teratogenicity of 2,4,5-Trichlorophenoxyacetic Acid in Monkeys (*Macaca mulatta*).** W.H. Dougherty, F. Coulston, and L. Golberg, Albany Medical College, Albany, New York.



March 19, 1973

MONDAY MORNING – BASILDON ROOM

*Chairman:* R. P. Beliles

*Assisted by:* T.R. Castles, C.O. Ward

- 8:50 10. **The Significance of an Adaptation Phenomenon in Toxicity Studies I.** T. Balazs, Food and Drug Administration, Washington, D.C.
- 9:10 11. **Central Nervous System Effects of Some Dopamine Derivatives in the Mouse.** R.J. Borgman, I.J. Goodman, J.J. McPhillips and R.E. Stitzel, Departments of Medicinal Chemistry, Psychology and Pharmacology, West Virginia University, Morgantown, West Virginia.
- 9:30 12. **The Effect of Industrial Solvents on Adrenergic Transmitter Mechanisms.** T. Malmfors, Astra Pharmaceuticals AB, Toxicology Laboratories, Sodertalje, Sweden (Sponsor: J.J. McPhillips).
- 9:50 13. **Preclinical Toxicological Studies with AP-237, A New Analgesic.** L.E. Gongwer, A.G. Wheeler, G.E. Fillmore, and S.J. Rzucidlo, ICI America Inc., Wilmington, Delaware.
- 10:10 14. **Preclinical Toxicology of Fenoprofen.** J.L. Emmerson, W.R. Gibson, E.C. Pierce, and G.F. Kiplinger, Toxicology Division, Eli Lilly and Company, Greenfield, Indiana.

*10-MINUTE BREAK*

- 10:40 15. **The Toxicological Properties of Seclazone (W-2354) 7-chloro-3,3a-dihydro-2H,9H-isoxazolo (3,2-B) (1,3) benzoxazin-9-one, a New Anti-Inflammatory Agent.** B.N. Banerjee, J. Mock, and N. Ivins, Wallace Laboratories, Cranbury, New Jersey.
- 11:00 16. **Absorption, Distribution, and Excretion of Metiapine in Rats and Dogs.** R.H. Hook, J.M. Williams, and G.J. Wright, Merrell-National Laboratories, Division of Richardson-Merrell, Inc., Cincinnati, Ohio.
- 11:20 17. **Primate Absorption and Elimination Balance Studies Including Pulmonary, Urinary, Biliary and Fecal Excretion of t-Butanol, Trimethylsilanol, Dimethylsilanediol and Hexamethyldisiloxane.** D.R. Bennett and W.H. Statt, Biomedical Research, Dow Corning Corp., Midland, Michigan.
- 11:40 18. **Primate Absorption and Elimination Balance Studies Including Pulmonary, Urinary, Biliary and Fecal Excretion of Octamethylcyclotetrasiloxane and 2,6-cis-Diphenylhexamethylcyclotetrasiloxane.** J.E. LeBeau and S.J. Gorzinski, Biomedical Research, Dow Corning Corp., Midland, Michigan (Sponsor: D.R. Bennett).

March 19, 1973

MONDAY MORNING – JADE ROOM

*Chairman:* A. A. Stein

*Assisted by:* W.M. Busey, M. Eisler

- 8:50 19. **Chronic Toxicity and Carcinogenicity of Industrial Chemicals and Pesticides.** B. Ulland, E.K. Weisburger, and J.H. Weisburger, Litton-Bionetics Inc., Kensington, Maryland; National Cancer Institute, Bethesda, Maryland.
- 9:10 20. **Further Studies on Carcinogenicity of Environmental Chemicals Including Simple Aromatic Amines.** A.B. Russfield, F. Homburger, E.K. Weisburger, and J.H. Weisburger, Bio-Research Consultants, Inc., Cambridge, Massachusetts, and National Cancer Institute, Bethesda, Maryland.
- 9:30 21. **Studies on the Toxicity and Carcinogenicity of Some Commonly Used Chemical Agents in Mouse and Rabbit Skin.** F. Stenback and P. Shubik, Eppley Institute for Cancer Research, University of Nebraska Medical Center, Omaha, Nebraska.
- 9:50 22. **Acute Toxicity of 2-Fluorenylacetylamide (2-FAA) in Mice.** T.J. Halcy, K.L. Dooley, and J.R. Harmon, N.C.T.R., Jefferson, Arkansas.
- 10:10 23. **Tumorigenesis of Dimethylnitrosamine in the Pekin Duck.** M.D. McCracken, G.D. Bottoms, and W.W. Carlton, School of Veterinary Science and Medicine, Purdue University, West Lafayette, Indiana.

*10-MINUTE BREAK*

- 10:40 24. **Effect of Diet on Carcinogenesis by Nitrosamines or Dimethylhydrazine.** A.E. Rogers and P.M. Newberne, Massachusetts Institute of Technology, Cambridge, Massachusetts.
- 11:10 25. **Induction of Tumors by Simultaneous Feeding of Nitrite and Morpholine.** R.C. Shank and P.M. Newberne, Massachusetts Institute of Technology, Cambridge, Massachusetts.
- 11:20 26. **Effects of 2-Aminoanthraquinone on the Kidneys and Hemochemistry of Rats.** J.R. Baker, E.R. Smith, T.N. Fredrickson, H. Rosenkrantz, J.H. Weisburger, and E.K. Weisburger, Mason Research Institute, Worcester, Massachusetts; National Cancer Institute, Bethesda, Maryland.
- 11:40 27. **Biochemical, Mutagenic and Pathological Effects of Nitrosamines in Rats.** F. Sauro, L. Friedman, and S. Green, Food and Drug Administration, Washington, D.C.

**March 19, 1973**

**MONDAY AFTERNOON – ASTOR SALON**

**Symposium**

**Communications between regulator and regulated**

**1:30** The evaluation of the safety of chemicals used in food, drugs, cosmetics, agriculture, and household products brings together the responsible manufacturer and the cognizant Government regulatory agency under the watchful eyes of the Congress and the affected public. This symposium is intended to provide a forum to examine communications between regulated industry and regulating agencies and to identify those attitudes, practices, and policies which may facilitate or impede this communication.

**Introduction:** Harold C. Hodge

**Panel Discussion**

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

**March 20, 1973**

**TUESDAY MORNING – ASTOR SALON**

*Chairman:* C. S. Weil

*Assisted by:* K. L. Gabriel, E. R. Homan

**8:30 Eye Irritancy Workshop**

**Introduction.** C.S. Weil, Mellon Institute, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

**Slit Lamp Examination of Experimental Animal Eyes. Grading Scales and Evaluation of Induced Ocular Pathology.** H.A. Baldwin, C.H. Beasley, and T.O. McDonald, Alcon Laboratories, Inc., Fort Worth, Texas.

**Animal Studies as a Predictor of Human Ocular Effects.** S.I. Bistner, N.Y. State Veterinary College, Cornell University, Ithaca, New York.

**Eye Irritation and the Consumer Products.** R.M. Hehir, Consumer Product Safety Commission, Washington, D.C.

**Collaborative Eye Irritation Test Studies – Variability and Agreement.** F.N. Marzulli, Division of Toxicology, Food & Drug Administration, Washington, D.C.

**Relevance of Testing Procedures for Eye Irritancy.** K.J. Olson, Dow Corning Corp., Midland, Michigan.

March 20, 1973

**TUESDAY MORNING – BASILDON ROOM**

*Chairman:* R.P. Maickel

*Assisted by:* W.M. Davis, L.D. Miller

- 8:50 28. The Effect of Natural and Synthetic Delta-9-Tetrahydrocannabinol on Reproductive and Lactation Performance in Albino Rats. M.L. Keplinger, P.O. Wright, S.L. Haley, J.B. Plank, M.C. Braude, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.
- 9:10 29. The Effect of Natural and Synthetic Delta-9-Tetrahydrocannabinol on Fetal Development. S.L. Haley, P.L. Wright, J.B. Plank, M.L. Keplinger, M.C. Braude, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.
- 9:30 30.  $\Delta^9$ -tetrahydrocannabinol and Defensive Behavior in Rats. K.A. Miczek and H. Barry, III, Carnegie-Mellon University, Pittsburgh, Pennsylvania; University of Pittsburgh, School of Pharmacy, Pittsburgh, Pennsylvania (Sponsor: R.A. Scala).
- 9:50 31. Some Cardiovascular Actions of  $\Delta^9$ -Tetrahydrocannabinol in the Rat. B.R. Manno and J.E. Manno, Veterans Administration Hospital and Department of Pharmacology and Therapeutics, LSU Medical Center in Shreveport, Shreveport, Louisiana (Sponsor: J.F. Borzelleca).
- 10:10 32. Induction of Aryl Hydrocarbon Hydroxylase in Rat Lung by Inhalation of Marijuana Smoke. J. Marcotte and H. Witschi, Department of Pharmacology, University of Montreal, Montreal, Quebec, Canada.

*10-MINUTE BREAK*

- 10:40 33. Methodone -- Induced Aggression Behavior. M.D. Singh and J.M. Singh, Department of Pharmacology, Xavier University College of Pharmacy, New Orleans, Louisiana.
- 11:00 34. EEG Correlates of Behavioral Toxicity of Neuroleptic Drugs. S. Fielding, M. Cornfeldt, T. McGreevy, B. Outwater, and L. Pacifico, CIBA-GEIGY Pharmaceutical Company, Summit, New Jersey (Sponsor: H. Lal).
- 11:20 35. Behavioral Aspects of Morphine-Amphetamine Interaction. H. Lal, J. Zabik, and S.K. Puri, Department of Pharmacology and Toxicology, College of Pharmacy, University of Rhode Island, Kingston, Rhode Island.
- 11:40 36. Some Inhibitory Actions of Morphine on Sex Accessory Gland Metabolism. J.A. Thomas, M.G. Mawhinney, and J.W. Lloyd, Department of Pharmacology and Urology, West Virginia University Medical Center, Morgantown, West Virginia.

March 20, 1973

TUESDAY MORNING – JADE ROOM

*Chairman:* T. E. Gram

*Assisted by:* D.R. Bennett, J. McLaughlin

- 8:50 37. The Teratogenicity of Diazepam Metabolites in Swiss-Webster Mice. R.P. Miller and B.A. Becker, Department of Pharmacology, University of Iowa, Iowa City, Iowa.
- 9:10 38. The Teratogenic Interaction of 5-Diazouracil and 5-Iododeoxyuridine in the Mouse Embryo. R.G. Skalko, D.A. Caniano, and D.S. Packard, Jr., Birth Defects Institute, New York State Health Department and Institute of Experimental Pathology and Toxicology, Albany Medical College, Albany, New York (Sponsor: L. Golberg).
- 9:30 39. Reproductive, Teratogenic and Egg Production Studies in Animals Fed SO<sub>2</sub>-Treated Activated Sewage Sludge. A.L. Palanker, J.W. Keating, M.S. Weinberg, A.L. Sheffner, and R. Dean, Foster D. Snell, Inc., Florham Park, New Jersey; and Environmental Protection Agency, Cincinnati, Ohio.
- 9:50 40. Teratogenic Studies with Pentachloronitrobenzene in Rats. R.L. Jordan and J.F. Borzelleca, Medical College of Virginia, Richmond, Virginia.
- 10:10 41. The Effect of Pentachloronitrobenzene on Fetal Kidneys. D. Courtney, Environmental Protection Agency, Perrine, Florida (Sponsor: J.F. Borzelleca).

10-MINUTE BREAK

- 10:40 42. Fetotoxic Effects of Pentachlorophenol in the Golden Syrian Hamster. D.K. Hinkle, Environmental Protection Agency, Perrine, Florida (Sponsor: F. Kinoshita).
- 11:00 43. The Effect of Tetrachlorophenol and Pentachlorophenol on Rat Embryonal and Fetal Development. B.A. Schwetz and P.J. Gehring, Chemical Biology Research, The Dow Chemical Company, Midland, Michigan.
- 11:20 44. Teratogenic Effects of Ethylenethiourea in Rats and Rabbits. K.S. Khera, Food Research Laboratories, National Health and Welfare, Ottawa, Canada.
- 11:40 45. The Effect of TOK on the Rat Fetus. R.D. Kimbrough, T. B. Gaines and R.E. Linder, Environmental Protection Agency, Chamblee, Georgia.

March 20, 1973

**TUESDAY AFTERNOON – ASTOR SALON**

*Chairman:* E. Gralla

*Assisted by:* T.C. Campbell, H.E. Swann, Jr.

- 1:30 46. Ochratoxicosis in Domestic Swine. G.M. Szczech, W.W. Carlton, and J. Tuite. Departments of Veterinary Pathology and Botany and Plant Pathology, Purdue University, West Lafayette, Indiana.
- 1:50 47. Toxicosis Produced in Dogs by Culture of *Penicillium Citrinum*. W.W. Carlton, G.M. Szczech and J. Tuite, Departments of Veterinary Pathology and Botany and Plant Pathology, Purdue University, West Lafayette, Indiana.
- 2:10 48. Effects of Diet and Light on the Response of Rats to Aflatoxin and Monocrotaline. P.M. Newberne and A.E. Rogers, Massachusetts Institute of Technology, Cambridge, Massachusetts.
- 2:30 49. Mycotoxin Induced Development Abnormalities in Mice. A.W. Hayes and R.D. Hood, Departments of Microbiology and Biology, The University of Alabama, University, Alabama.
- 2:50 50. Aflatoxin B<sub>1</sub> – Induced Biochemical Lesion in Rat Liver Mitochondria. E.A. Bababunmi and O. Bassir, University of Ibadan, Ibadan, Nigeria (Sponsor: F. Oehme).
- 3:10 51. Carrageenan-Induced Squamous Metaplasia of the Rectal Mucosa in the Rat. R. Fabian, R. Abraham, L. Golberg, and F. Coulston, Albany Medical College, Albany, New York.
- 3:30 52. The "Lung Edema Factor: From Mold-Damaged Sweet Potatoes": Further Studies and Characterization. M.R. Boyd and B.J. Wilson, Department of Pharmacology and Center in Environmental Toxicology, Department of Biochemistry, Vanderbilt University School of Medicine, Nashville, Tennessee.

*10-MINUTE BREAK*

- 4:00 **Special Presentation – Astor Salon**  
**Current Program and Future Emphasis at the NCTR.**  
Cranmer, National Center for Toxicological Research,  
Jefferson, Arkansas.

- 7:00 **Society of Toxicology Banquet – Grand Ballroom**

March 20, 1973

**TUESDAY AFTERNOON – BASILDON ROOM**

*Chairman:* H. P. K. Agersborg

*Assisted by:* M.J. Bleiburg, H. Lal

- 1:30 53. Toxic Interaction of Ethanol and Morphine in Mice. D.J. McCoy and R.B. Forney, Indiana University School of Medicine, Indianapolis, Indiana.
- 1:50 54. Quantitative Relationship between Blood Alcohol Concentration and Psychomotor Performance. M.A. Evans, R. Martz, B.E. Rodda, G.F. Kiplinger, and R.B. Forney, Department of Toxicology, Indiana University Medical Center and Lilly Laboratory for Clinical Research, Indianapolis, Indiana.
- 2:10 55. Effects of Ethanol on Glutethimide Distribution in Relationship to a Mechanism of Toxicity Enhancement. L.B. Hetland and D. Couri, The Ohio State University College of Medicine, Columbus, Ohio.
- 2:30 56. Effect of Elevated Carboxyhemoglobin Levels on Driving Related Tasks. M.M. Mehta, G.D. Herrin, T.H. Rockwell, and F.W. Weir, The Ohio State University, Columbus, Ohio.
- 2:50 57. Neuropharmacological and Behavioral Toxicity Studies with Prostaglandin A<sub>2</sub>. E.I. Dobrin, J.L. Bloss, and W.J. Potts, G.D. Searle & Co., Chicago, Illinois (Sponsor: J. Singh).
- 3:10 58. Behavioral Toxicity of Some Industrial Chemicals. S.N. Pradhan and B. Ghosh, Department of Pharmacology, Howard University College of Medicine, Washington, D.C. (Sponsor: S. Schwartz).
- 3:30 59. Biochemical Toxicology of 1,4-Butanediol. J.E. Zabik, D.P. Van Dam, and R.P. Maickel, Department of Pharmacology, Indiana University, Bloomington, Indiana.

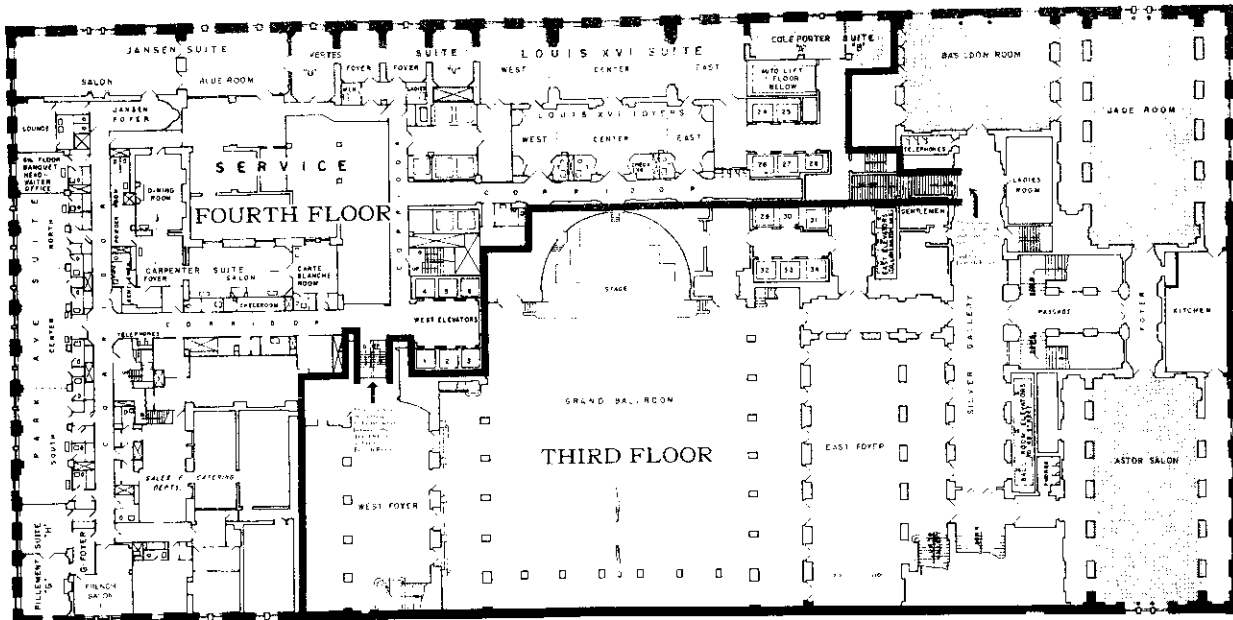
*10-MINUTE BREAK*

- 4:00 Special Presentation – Astor Salon  
Current Program and Future Emphasis at the NCTR. M. Cranmer, National Center for Toxicological Research, Jefferson, Arkansas.

- 7:00 Society of Toxicology Banquet – Grand Ballroom



THE WALDORF-ASTORIA  
CONFERENCE CENTER



March 20, 1973

**TUESDAY AFTERNOON – JADE ROOM**

*Chairman:* C. M. Burnett

*Assisted by:* T.F.X. Collins, J.E. Gray

- 1:30 60. Teratogenic Studies with Oxisuran (A Differential Immunosuppressive) and Azathioprine in the Rat. E.P. Hornyak, S.M. Jones, W. Williams, A. Cerniski, and E. Schwartz, Warner-Lambert Research Institute, Morris Plains, New Jersey.
- 1:50 61. A Comparison of Teratogenic Responses in Four Laboratory Species. K. Morgareidge, D. Bailey, and J. McLaughlin, Food and Drug Research Laboratories, Inc., and Food and Drug Administration, Washington, D.C.
- 2:10 62. Effect of Three Anti-inflammatory Agents on Parturition in the Rat and Rabbit. J.W. Noveroske, R.J. Hessinger, and P.A. Mattis, Merck Institute for Therapeutic Research, West Point, Pennsylvania.
- 2:30 63. A Computerized System for Evaluating Data from Reproduction Studies. P.L. Wright, J.A. Knutson, S.L. Haley, M.L. Keplinger, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.
- 2:50 64. The Induction of Egg Laying in Wildfowl Reproduction Studies Through Controlled Lighting Cycles. R.J. Fink, Hazleton Laboratories, Inc., Vienna, Virginia (Sponsor: L.W. Hazleton).
- 3:10 65. Toxicity Studies of a Copper Containing Intrauterine Device in Several Laboratory Animal Species. G.J. Youkilis, R.G. McConnell, R.D. Hemm, and J.M. Andress, Searle Laboratories, Chicago, Illinois (Sponsor: V.A. Drill).
- 3:30 66. Dose Response and No-Effect Levels in 2 Known Mutagens. D.W. Arnold, G.L. Kennedy, Jr., M.L. Keplinger and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.

*10-MINUTE BREAK*

- 4:00 Special Presentation – Astor Salon  
Current Program and Future Emphasis at the NCTR. M. Cranmer, National Center for Toxicological Research, Jefferson, Arkansas.

- 7:00 Society of Toxicology Banquet – Grand Ballroom

**March 20, 1972**

**Tuesday Evening**

**7:00 P.M.**

**BANQUET**

**Grand Ballroom**

**Menu**

Pineapple Boat filled with Fresh Fruit

Lobster Bisque flavored with Sherry

Roast Prime Ribs of Beef au Jus

Spinach Ring with Carrot Center  
Boulangere Potatoes

Mixed Garden Greens  
Vinaigrette Dressing

Baked Alaska Jubilee  
Cherries Flambe

Petits Fours

Coffee

Wine: Burgundy, Clement Colombet  
Courtesy of the Charles River Companies

**Welcome:** Victor A. Drill, President  
Society of Toxicology

**Guest Speaker:** Seymour Z. Lewin  
Department of Chemistry  
New York University

March 21, 1973

WEDNESDAY MORNING – ASTOR SALON

*Chairman:* T.W. Clarkson

*Assisted by:* R. Dagirmanjian, P.O. Nees

- 8:50 67. **Effects of Mercury on Mouse Spermatogenesis Studies by Cell Separation and Serial Mating.** I.P. Lee and R.L. Dixon, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
- 9:10 68. **Biliary Excretion of Mercury Compounds in the Rat; The Effect of Dose and Time after Administration on the Forms of Mercury in the Bile.** M.G. Cherian and J.J. Vostal, University of Rochester School of Medicine and Dentistry, Rochester, New York.
- 9:30 69. **The Ototoxicity of Methyl Mercury.** S.A. Falk, R. Klein, G.M. Sanders, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina, and D.J. Lim, Ohio State University Medical College, Columbus, Ohio (Sponsor: F. Oehme).
- 9:50 70. **Evaluation of Chronic Oral Administration of Lead Acetate to Rhesus Monkeys.** J.W. Goode, S. Johnson, and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.
- 10:10 71. **Long-Term Effects of Lead on Learning and Organ Development in the Growing Rat.** D.R. Brown, University of Maryland, School of Pharmacy, Baltimore, Maryland (Sponsor: D. Blake).

10-MINUTE BREAK

- 10:40 72. **Slowed Learning in Lambs Prenatally Exposed to Lead.** G.A. Van Gelder, T.L. Carson, and W.B. Buck, Iowa State University, Ames, Iowa.
- 11:00 73. **The Effects of Lead on Rat Liver Cytochrome P-450.** G.F. Egan and H.H. Cornish, School of Public Health, The University of Michigan, Ann Arbor, Michigan.
- 11:20 74. **Toxicity of  $\Delta$ -Amino Levulinic Acid.** G.L. Kennedy, Jr. and J.C. Calandra, Industrial Bio-Test Laboratories, Inc., Northbrook, Illinois.
- 11:40 75. **Nickel Chloride-Induced Changes in Glucose Metabolism in the Rat.** J.J. Clary and L. Vignati, National Institute for Occupational Safety and Health, Cincinnati, Ohio (Sponsor: H. Stokinger).

March 21, 1973

WEDNESDAY MORNING — BASILDON ROOM

*Chairman:* R. P. Giovacchini

*Assisted by:* C.F. Reinhardt, T.R. Torkelson

- 8:50 76. An Appraisal of Improved Lung Clearance of Particles in Rats Exposed to Low Levels of SO<sub>2</sub>. J. Ferin, School of Medicine and Dentistry, University of Rochester, Rochester, New York (Sponsor: R.A. Scala).
- 9:10 77. Sensory Irritation and Desensitization by Sulfur Dioxide. Y. Alarie, I. Wakisaka, and S. Oka, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania.
- 9:30 78. Cardiovascular Alterations Resulting from Inhalation of 1,1,1-Trichloroethane. P.A. Herd, H.F. Martin, and M. Litsky, Department of Pathology, Rhode Island Hospital, Providence, Rhode Island (Sponsor: L. Vinson).
- 9:50 79. The Effects of Bromotrifluoromethane on Myocardial Metabolism. K.C. Back and E.W. Van Stee, Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio.
- 10:10 80. The Cardiovascular Effects of Exposure to Bromochlorodifluoromethane. E.W. Van Stee and K.C. Back, Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio.

10-MINUTE BREAK

- 10:40 81. Fluoride Ion Excretion after Inhalation of Several Fluoroethylene Derivatives. J.V. Dilley, V.L. Carter, Jr., and E.S. Harris, Northrop Services, Inc. and NASA, Manned Spacecraft Center, Houston, Texas.
- 11:00 82. Pulmonary Histopathology of Hamsters Exposed to Smoke. F. Homburger, A.B. Russfield, and P. Bernfeld, Bio-Research Consultants, Inc., Cambridge, Massachusetts.
- 11:20 83. Response of Rats to Pyrolysis Products of Fluorinated Polymers. E.S. Harris, H.P. Warrington, J.W. Bailey, and J.V. Dilley, NASA, Manned Spacecraft Center and Northrop Services, Inc., Houston, Texas.
- 11:40 84. Respiratory Retention of Acetone and Ammonia in the Dog. J.L. Egle, Jr., Medical College of Virginia, Richmond, Virginia (Sponsor: J.F. Borzelleca).

March 21, 1973

WEDNESDAY MORNING -- JADE ROOM

Chairman: W. F. Durham

Assisted by: G. Levinskas, M.W. Woodard

- 8:50 85. The Influence of p,p'-DDE, a Model Liver Microsomal Enzyme Stimulator, on p,p'-DDT Toxicity in the Bluegill, *Lepomis macrochirus* (Refinesque). P.A. Spiegel and M.F. Cranmer, Environmental Protection Agency, Perrine, Florida.
- 9:10 86. The Effect of Age and Long-Term, Low-Level DDT Exposure on the Response to Enzyme Induction in the Rat. R.W. Chadwick, R. Linko, J. Freal, and A. Robbins, Environmental Protection Agency, Perrine, Florida (Sponsor: R.A. Scala).
- 9:30 87. Some Species Differences in DDT Metabolism and Tissue Distribution. R. Gingell and L. Wallcave, Eppley Institute for Research in Cancer, University of Nebraska Medical Center, Omaha, Nebraska (Sponsor: F. Oehme).
- 9:50 88. Urinary and Fecal Metabolites of p,p'-DDT in the Syrian Golden Hamster and Swiss Mouse. L. Wallcave, R. Gingell, and S. Bronczyk, The Eppley Institute for Research in Cancer, University of Nebraska Medical Center, Omaha, Nebraska (Sponsor: F. Oehme).
- 10:10 89. DDT, Heptachlor, Chlordane, and Parathion Toxicity in Adult, Newborn, and Phenobarbital Treated Newborn Rats. R.D. Harbison, Department of Pharmacology and Center in Toxicology, Vanderbilt Medical Center, Nashville, Tennessee.

10-MINUTE BREAK

- 10:40 90. The Extrahepatic Metabolism of Parathion to Paraoxon. R.E. Poore and R.A. Neal, Center in Environmental Toxicology, Department of Biochemistry, Vanderbilt University School of Medicine, Nashville, Tennessee.
- 11:00 91. Species Variations in the Activation and Degradation of Parathion by Mammalian Hepatic Enzymes. L. Whitehouse and D.J. Ecobichon, Department of Pharmacology, Dalhousie University, Halifax, N.S., Canada.
- 11:20 92. Comparative Toxicity, Anticholinesterase Action and Metabolism of Methyl Parathion, Parathion and Guthion in Sunfish and Mice. G.M. Benke, K.L. Cheever, and S.D. Murphy, Department of Physiology, Harvard School of Public Health, Boston, Massachusetts.
- 11:40 93. Cholinesterase Inhibition and Mortality of Japanese Quail Following Dietary Exposure to Parathion (0,0-Diethyl 0-p-nitrophenyl phosphorothionate). J.L. Ludke, E.F. Hill, and M.P. Dieter, Patuxent Wildlife Research Center, Laurel, Maryland (Sponsor: L.F. Stickel).

March 21, 1973

WEDNESDAY AFTERNOON – ASTOR SALON

Chairman: S. Laham

Assisted by: F.S.K. MacMillan, G.A. van Gelder

- 1:30 94. **Inorganic Tin Metabolism in Rats.** R.A. Hiles, Miami Valley Laboratories, The Procter & Gamble Company, Cincinnati, Ohio (Sponsor: W.R. Michael).
- 1:30 95. **Thirty Day Toxicity of Chronically Administered Sodium Pentafluorostannite in Male and Female Rats.** D.L. Conine, M.N. Yum, R.C. Martz, G.L. Ray, G.K. Stookey, and R.B. Forney, Indiana University School of Medicine, Indianapolis, Indiana.
- 2:10 96. **Biliary Excretion of Arsenic.** C.D. Klaassen, University of Kansas Medical Center, Kansas City, Kansas.
- 2:30 97. **Behavioral Changes to Define Threshold Concentrations of Metal Intoxication in Fish.** W.S. McClain, S.J. Eilts, P.A. Weir, and F.W. Weir, The Ohio State University, Department of Preventive Medicine, Columbus, Ohio.
- 2:50 98. **Cytotoxic Effects of Vanadium and Other Metals *in Vitro*.** M.D. Waters, D.E. Gardner, and D.L. Coffin, Environmental Protection Agency, Research Triangle Park, North Carolina.

10-MINUTE BREAK

- 3:20 99. **Suppression of Delayed Hypersensitivity to Beryllium in Guinea Pigs by Cyclophosphamide.** N.D. Krivanek and A.L. Reeves, Wayne State University School of Medicine, Detroit, Michigan.
- 3:40 100. **Tissue Levels of Cadmium in Different Disease States.** C.H. Hine, J. Wright, and D. Goodman, Department of Pharmacology and Experimental Therapeutics, School of Medicine, University of California, San Francisco, California.
- 4:00 101. **The Lack of Effects of Phenobarbital, Diphenylhydantoin, and Chloramphenicol on the Biologic Activity of Vitamin D<sub>3</sub> in Rachitic Rats.** T. Balazs and W.M. Hooper, Food and Drug Administration, Washington, D.C.
- 4:20 102. **The Effects of Pretreatment by Phenobarbital and Chlorpromazine on the Acute Toxicity of Benzene.** R.T. Drew and J.R. Fouts, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
- 4:40 103. **Cyanate and Thiocyanate: Acute Toxicity.** R.P. Smith, Dartmouth Medical School, Hanover, New Hampshire.
- 5:00 104. **Comparison of the Acute Toxicity, Distribution, Fate and Some Pharmacologic Properties of the Non-benzenoid Aromatic Compound Azuloic Acid with Those of Benzoic and Naphthoic Acids.** G.C. McCormick and T.J. Speaker, School of Pharmacy, Temple University, Philadelphia, Pennsylvania (Sponsor: J.F. Borzelleca).

March 21, 1973

WEDNESDAY AFTERNOON – BASILDON ROOM

*Chairman:* J.M. McNerney

*Assisted by:* F.E. Kohn, C.J. Terhaar

- 1:30 105. **Inhalation of a Powdered Aerosol Medication by Non-Human Primates in Individual Space-Type Exposure Helmets.** J. Scheimberg, O.P. McShane, S. Carson, H.E. Swann, Jr., and A.M.J.N. Blair, Food and Drug Research Laboratories, Inc., Maspeth, New York and Fisons Limited, Pharmaceutical Division, Loughborough, England.
- 1:50 106. **A Study of the Chronic Toxicity of Inhaled Disodium Cromoglycate in the Squirrel Monkey.** B.G. Proctor, R.G. Burford, A.M.J.N. Blair, and H. Mac Farland, Bio-Research Laboratories Ltd., Pointe Claire, Quebec, Canada; Fisons Limited, Loughborough, England.
- 2:10 107. **Testicular Atrophy from Inhalation of Ethylene Oxide Cyclic Tetramer.** B.K.J. Leong, T.O.T. T'so, and M.B. Chenoweth, Chemical Biology Research, The Dow Chemical Company, Midland, Michigan.
- 2:30 108. **Sensitization of Guinea Pigs by Inhalation of Aerosolized Proteins.** O.P. McShane, J. Scheimberg, S. Carson, and H.E. Swann, Jr., Food and Drug Research Laboratories, Inc., Maspeth, New York.
- 2:50 109. **Comparative Cataractogenic Studies of Dibenzoxazepines in Laboratory Animals.** P.J. Debaecke, J.S. Kulesza, and J.W. Poutsika, Squibb Institute for Medical Research, New Brunswick, New Jersey.

10-MINUTE BREAK

- 3:20 110. **Influence of 2,6-Dichloro-4-nitroaniline (DCNA) on the Hepatic Lysosomal Response to Iron Dextran in the Rat.** M.A. Gallo, R. Abraham, and L. Golberg, Albany Medical College, Albany, New York.
- 3:40 111. **Vacuologenic Activity of Nicotine in Macrophages.** S.L. Schwartz and J.E. Lundin, Department of Pharmacology, Georgetown University, Washington, D.C.
- 4:00 112. **Histochemical Quantitation of Lytic Enzyme Activity Associated with Plastic Implants.** T.N. Salthouse, B.F. Matlaga, and R.K. O'Leary, Ethicon Research Foundation, Somerville, New Jersey.
- 4:20 113. **Cytogenetic Effects of the Polychlorinated Biphenyls (Aroclor 1242) on Rat Bone Marrow and Spermatogonial Cells.** S. Green, K.A. Palmer, and E.J. Oswald, Food and Drug Administration, Washington, D.C. (Sponsor: L. Friedman).
- 4:40 114. **Cytotoxic Effects Induced by Various Agents in Rat Thymus Lymphocytes.** N.M. Fedynskyj, Department of Pharmacology, Medical Sciences Program, Indiana University, Bloomington, Indiana (Sponsor: R.P. Maickel).
- 5:00 115. **Subacute Toxicity Studies of a New Differential Immunosuppressant, Oxisuran, in Rats and Dogs.** D. Abrutyn, G. Briziarelli, J. Tornaben, and E. Schwartz, Warner-Lambert Research Institute, Morris Plains, New Jersey.



March 21, 1973

WEDNESDAY AFTERNOON – JADE ROOM

*Chairman:* M. Hitchcock

*Assisted by:* D.J. Clegg, J.A. Santolucito

- 1:30 116. **Metabolism and Elimination of Tri-*o*-tolyl Phosphate (TTP), a Neurotoxic Organophosphate, in Chicken.** R.P. Sharma and R.G. Watanabe, Utah State University, Logan, Utah.
- 1:50 117. **A Simplified Bioassay for Predicting Organophosphate Potentiation.** S.D. Cohen and S.D. Murphy, University of Connecticut School of Pharmacy, Storrs, Connecticut; Harvard School of Public Health, Boston, Massachusetts.
- 2:10 118. **Effects of Chronic Dieldrin Exposure on the Hepatic Microsomal Mixed Function Oxidase System from Male and Female Rats.** J.T. Stevens, S. Wagner, M. Zemaitis, and F.E. Greene, Department of Pharmacology, The M.S. Hershey Medical Center, Hershey, Pennsylvania.
- 2:30 119. **Distribution and Penetration of Lindane into Brains of Normal and Phenobarbital Pretreated Dogs.** C.L. Litterst, E. Miller, T. Michael, V. Olivita, and E.J. Van Loon, Food and Drug Administration and National Cancer Institute, Washington, D.C.
- 2:50 120. **Delayed Acquisition of a Successive Reversal Behavioral Task in Dieldrin Dosed Squirrel Monkeys.** G.A. Van Gelder and R.M. Smith, Iowa State University, Ames, Iowa; Alverno College, Milwaukee, Wisconsin.

10-MINUTE BREAK

- 3:20 121. **Lesions of Pesticide Poisoning in Fish.** A.H. Walsh and W.E. Ribelin, The Chas. Pfizer Company, Groton, Connecticut; University of Wisconsin, Madison, Wisconsin.
- 3:40 122. **The Biochemical Pathology of Rat Lung after Acute Paraquat Poisoning.** H. Witschi, University of Montreal, Quebec, Canada (Sponsor: C.I. Chappel).
- 4:00 123. **Factors Influencing Renal Excretion of Paraquet.** D.M. Ferguson (Sponsor: A.A.B. Swan).
- 4:20 124. **The Significance of Human Metabolism of Cocaine, Dextropropoxyphene and Methadone in Routine Urine Drug Screening.** D.A. Knowlton, S. Marenberg, and M. Shawky, College of Medicine, The Ohio State University (Sponsor: D. Couri).
- 4:40 125. **Replicate Control Values in Large-Scale Mouse Dermal Bioassays of Tobacco Smoke Condensates.** J.L. Gargus, J.J. Gart, R.P. Kwapien, and G.B. Gori, Hazleton Laboratories, Vienna, Virginia; National Cancer Institute, Bethesda, Maryland.
- 5:00 126. **An Assessment of the Delaney Clause after 15 Years.** B.L. Oser, Food and Drug Research Laboratories, Maspeth, New York.

March 22, 1973

THURSDAY MORNING – ASTOR SALON

*Chairman:* R. A. Neal

*Assisted by:* D.M. Serrone, J.A. Thomas

- 8:30 127. Further Studies on the Effect of Starvation and Microsomal Enzyme Induction on the Mobilization of DDT Residues in Rats. J. Brodeur and G. Lambert, University of Montreal, Canada.
- 8:50 128. Influence of Starvation on the Early Phase of Barbitol Disposition in Mice. J. Brodeur, J. Leroux, and S. Lalonde, University of Montreal, Canada.
- 9:10 129. The Effect of Spironolactone Treatment on Microsomal Enzymes in the Rat Testis. R.H. Menard, B. Stripp, and J.R. Gillette, National Heart & Lung Institute, Bethesda, Maryland.
- 9:30 130. Effect of Substrates on Carbon Tetrachloride Stimulated Malonaldehyde Formation by Induced Hepatic Microsomes. G.C. Fuller, B.I. Schultz, and G.P. Carlson, University of Rhode Island, Kingston, Rhode Island.
- 9:50 131. A Study of Some Possible Effects of Chronic Murine Pneumonia (CMP) on Certain Hepatic Microsomal Drug Metabolizing Enzymes. F.E. Greene and C.H. Barthel, The Pennsylvania State University, Hershey, Pennsylvania.
- 10:10 132. Effects of Chlorinated Naphthalenes on Liver Levels of Detoxication Enzymes and Vitamin A. D.J. Wagstaff, University of Missouri, Columbia, Missouri.

10-MINUTE BREAK

- 10:40 133. The Interaction of Adrenalectomy, Partial Adrenal Replacement Therapy, and Starvation with Hepatotoxicity and Lethality after 1,1-Dichloroethylene Intoxication. R.J. Jaeger, M.J. Trabulus, and S.D. Murphy, Harvard School of Public Health, Boston, Massachusetts.
- 11:00 134. N-Demethylation of Aminopyrine and *p*-Chloro-N-methylaniline by Isolated Perfused Rabbit Lungs. V.L. Armstrong, R.W. Niemeier, and E. Bingham, University of Cincinnati College of Medicine, Cincinnati, Ohio (Sponsor: A.M. Wolven).
- 11:20 135. Effect of Phenacetin on Salicylate Absorption and Excretion in the Rat. B.B. Coldwell, B.H. Thomas, and G. Solomonraj, Department of National Health and Welfare, Ottawa, Canada (Sponsor: C.I. Chappel).

March 22, 1973

THURSDAY MORNING – BASILDON ROOM

Chairman: J. L. Emmerson

Assisted by: D. Couri, R.S. McCutcheon

- 8:30 136. Subacute Toxicity Studies with Prostaglandins in Laboratory Animal Species. K.S. Rao, F.E. Reno, and R.G. McConnell, Searle Laboratories, Chicago, Illinois; Hazleton Laboratories, Vienna, Virginia (Sponsor: V.A. Drill).
- 8:50 137. Repeated-Dose Toxicity of a New Antimetabolite, s-triazine-2(1H)-1, 4-Amino-1-B-D-Ribofuranosyl-5-Azacytidine in the Rhesus Monkey. P.E. Palm, E.P. Arnold, P.C. Rachwall, and M.S. Nick, Arthur D. Little, Inc., Cambridge, Massachusetts.
- 9:10 138. The Parenteral Toxicity of Clindamycin-2-Phosphate in Laboratory Animals. J.E. Gray, R.N. Weaver, J. Moran, and E.S. Feenstra, The Upjohn Company, Kalamazoo, Michigan.
- 9:30 139. Renal Toxicity Produced by  $\alpha$ -Methyl-4-phenylmandelic Acid in the Rat. D.G. Hoffman, G.C. Todd, N.R. Bernhard, and G.F. Kiplinger, Eli Lilly & Company, Greenfield, Indiana.
- 9:50 140. *In Vivo* and *In Vitro* Metabolic Studies of <sup>14</sup>C-labeled Prophan and Chloroprophan in the Rat and Rat Tissues. S.C. Fang, E. Fallin, and V.H. Freed, Oregon State University, Corvallis, Oregon.
- 10:10 141. Studies of the Metabolism of Saccharin in Man. E.W. McChesney and L. Golberg, Albany Medical College, Albany, New York.

10-MINUTE BREAK

- 10:40 142. Drug Mediated Displacement of Protein Bound Bilirubin. R.A. Yeary and D.R. Davis, The Ohio State University, Columbus, Ohio.
- 11:00 143. Perinatal Development of Biliary Excretion. S.W. Hwang and R.L. Dixon, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
- 11:20 144. Correlation between Biliary Flow and Hepatic Excretion of Intravenous Cholangiographic Agents. D.R. VanDeripe and A. Valenti, Mallinckrodt Pharmaceuticals, St. Louis, Missouri (Sponsor: T.W. Tusing).
- 11:40 145. An On-line Computer System for Chronic Toxicity Studies. Y. Shiras, T. Usui, K.W. Takahashi, H. Inomata, and H. Ohashi, The Institute of Environmental Toxicology, Tokyo, Japan; Naka Works, Hitachi Company, Ibaraki-ken, Japan.

March 22, 1973

THURSDAY MORNING – JADE ROOM

*Chairman:* C. L. Winek

*Assisted by:* R.W. Fogleman, W.R. Pool

- 8:30 146. Dibutyryl Cyclic AMP – An Antidote to Hypnotic, Sedative and Tranquilizer Overdosage in the Rat. M.L. Cohn, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania (Sponsor: M. Eisler).
- 8:50 147. Spontaneous Tumors of the CNS of the Rat. L.E. Mawdesley-Thomas and A.D. Newman, Huntingdon Research Centre, Huntingdon, England.
- 9:10 148. Effect of Succinic Acid, Pargyline or L-Ascorbic Acid on Brain Ammonia and Glutamine: A Mechanism of Protection Against Hyperbaric Oxygen (OHP) Toxicity. R. Schatz and H. Lal, University of Michigan, Ann Arbor, Michigan; University of Rhode Island, Kingston, Rhode Island.
- 9:30 149. The Toxicity of Hyperosmolar Solutions of Sorbitol, Mannitol, and Dextrose in Dogs. S.R. Bowers, P.J. Garvin, and R.K. Ausman, Travenol Laboratories, Inc., Morton Grove, Illinois.
- 9:50 150. The Use of Females in Clinical (Human) Bioavailability Studies: The Effect of Menstruation. A.S. Tegeris and P.N. Panteleakis, Pharmacopathics Research Laboratories, Inc., Laurel, Maryland.
- 10:10 151. The Detection of Thiazide Diuretics in Urine; Column Extraction and Thin-Layer Chromatography. D. Sohn, J. Simon, M.A. Hanna, G. Ghali, and R. Tolba, New York, New York (Sponsor: H. Birnbaum).

10-MINUTE BREAK

- 10:40 152. Studies of Tumorigenic and Diabetogenic Potential of Certain Oral Contraceptive Steroids in Female Dogs and Monkeys. F.X. Wazeter, R.G. Geil, V.R. Berliner, and J.K. Lamar, International Research and Development Corporation, Mattawan, Michigan; Food & Drug Administration, Rockville, Maryland.
- 11:00 153. Effect of Phenobarbital on Production of Bladder Cancer (Dog) by 4-Amino-biphenyl. W.E. MacDonald, W.A.D. Anderson, M. Coplan, F. Woods, and W.B. Deichmann, University of Miami, Coral Gables, Florida.
- 11:20 154. A Comparison of the Tumorigenicity of Cyclophosphamide and Urethan in Newborn Mice. W.A. Kelly, L.W. Nelson, H.C. Hawkins, and J.H. Weikel, Jr., Mead Johnson Research Center, Evansville, Indiana 47721.

**Notes:**



