

Fundamental and Applied Toxicology

Volume 3/Number 4

July/August, 1983

SYMPOSIA:**The Role of Cellular Redox Balance in Toxicology**Introduction. *Anne P. Autor* 199Cellular Redox Changes and Response to Drugs and Toxic Agents. *Helmut Sies, Regina Brigelius, Heribert Wefers, Armin Müller and Enrique Cadenas* 200Oxygen and Redox-Active Drugs: Shared Toxicity Sites. *Olen R. Brown and Richard Seither* 209Futile Redox Cycling: Implications for Oxygen Radical Toxicity. *Paul Hochstein* 215Modification of Chemical Toxicity by Selenium Deficiency. *Raymond F. Burk and James M. Lane* 218Redox Cycling and Lipid Peroxidation: The Central Role of Iron Chelates. *Steven D. Aust, John R. Bucher, Ming Tien and Lee A. Morehouse* 222**Some Innovating Models in Teratogenicity**Introduction. *John A. Thomas, Ph.D.* 227Model Systems and Their Predictive Value in Assessing Teratogens. *Robert Hill* ... 229Use of the Cricket Embryo (*Acheta domesticus*) as an Invertebrate Teratology Model. *Barbara T. Walton* 233Fish and Amphibian Embryos — A Model System for Evaluating Teratogenicity. *Wesley J. Birge, Jeffrey A. Black, Albert G. Westerman and Barbara A. Ramey* ... 237An Artificial 'Embryo' for Detection of Abnormal Developmental Biology. *E. Marshall Johnson, Ph.D. and Bradley E.G. Gabel* 243Correlating Pharmacokinetics and Teratogenic Endpoints. *Carole A. Kimmel and John F. Young* 250**SUBMITTED PAPERS:**Metabolic Disposition of Pyrithiones. *C. Mitoma, T. Steeger, J. Rogers, D. Thomas and J.H. Wedig* 256A 90-Day Vapor Inhalation Toxicity Study of Methyl Ethyl Ketone. *Finis L. Cavender, Harold W. Casey, Harry Salem, James A. Swenberg and Edward J. Gralla* 264Quantitative Structure-Activity Relationships and Possible Mechanisms of Action of Bispyridinium Oximes as Antidotes Against Pinacolyl Methylphosphonofluoridate. *Ching-Tang Su, Chia-Pin Tang, Chong Ma, Yu-Shan Shih, Chong-Yean Liu and Mou-Thai Wu* 271*Continued on following page*Publishing Director
William E. McCormickManaging Editor
Jill A. Weaver**Editors**William W. Carlton, D.V.M., Ph.D.
School of Veterinary Medicine
Purdue University
Lafayette, IN 47907Philip G. Watanabe, Ph.D.
Dow Chemical U.S.A.
1803 Bldg. — Tox. Lab.
Midland, MI 48640**Publisher's Editorial Statement**

FUNDAMENTAL AND APPLIED TOXICOLOGY, an official publication of the Society of Toxicology, publishes scientific articles and reports relating to those broad aspects of toxicology which are relevant to assessing the risk or effects of toxic agents (chemicals, including drugs and natural products or forms of energy) on human and other animal health. Examples include statistical and mathematical methods of risk assessment and safety evaluation studies which are structural, biochemical or functional in nature. FUNDAMENTAL AND APPLIED TOXICOLOGY also will consider manuscripts that are concerned with methods or systems of evaluation of toxicity as an alternative to the use of experimental animals.

Also included are papers on methods and equipment, regulatory issues on policy papers relevant to the practice of toxicology, scientific reviews on specific topics, and papers from symposia. Special sections will cover meetings, book reviews and letters to the editor.

FUNDAMENTAL AND APPLIED TOXICOLOGY (ISSN 0272-0590) is published bimonthly for \$50 per year to U.S. subscribers, \$60 elsewhere (prepaid, U.S. funds) by the Society of Toxicology, 475 Woll Ledges Parkway, Akron, OH 44311-1087. Single copies in U.S. \$12.00, elsewhere \$13.00. Airmail available; rates on request. Application to mail at second class postage rates is paid at Akron, OH 44309. POSTMASTER: Send address changes to Executive Secretary, Society of Toxicology, 475 Woll Ledges Parkway, Akron, OH 44311-1087.

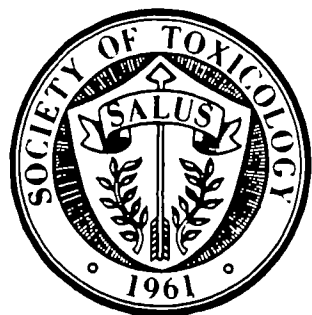
Editorial business offices at above address, phone (216) 762-2289. Copyright © 1981 Society of Toxicology. Isolated articles subject to this copyright may be photocopied in limited quantity for nonprofit classroom or library reserve use by instructors and educational institutions.

Back copies not available from SOT. For photocopies of articles from back issues, plus microfilm or microfiche copies of complete volumes, contact University Microfilms, Intl., 300 N. Zeeb Rd., Ann Arbor, MI 48106 (313) 761-4700.

Send change of address (6 weeks advance notice required) or claim for missing issues to business office. No claims allowed for insufficient notice of address change, issues lost in mail (unless filed within 60 days of publication date, U.S. & Canada, 90 days others) or issues missing in files, etc.

Right is reserved to edit all contributions and advertisements and to reject any not meeting high standards of the Society of Toxicology. No responsibility is assumed for statements and opinions of contributors. Articles appearing on serially numbered pages are all peer reviewed. Views expressed in editorial matter appearing in the "a" section, for information only, are those of contributors of individuals, have not been peer reviewed and do not necessarily reflect the official position of the Society of Toxicology, FUNDAMENTAL AND APPLIED TOXICOLOGY, or the institution with which the author is affiliated.

FUNDAMENTAL AND APPLIED TOXICOLOGY is covered in Current Contents Life Sciences and the Science Citation Index.



Fundamental and Applied Toxicology

Volume 3/Number 4

July/August, 1983

SUBMITTED PAPERS (Cont'd.)

- Renal Protein Degradation: A Biochemical Target of Specific Nephrotoxicants.**
*Constantin Cojocel, Jacqueline H. Smith, Keizo Maita, Stuart D. Sleight and
Jerry B. Hook* 278
- Subacute Toxicity of Several Ring-Substituted Dialkylanilines in the Rat.** *Charles R.
Short, Cathrine King, Patricia W. Sistrunk and Kirklyn M. Kerr* 285
- Clearance of Sulfuric Acid-Introduced ³⁵S from the Respiratory Tracts of Rats,
Guinea Pigs and Dogs Following Inhalation or Instillation.** *Alan R. Dahl, Sharon A.
Fellicetti and Bruce A. Muggenburg* 293
- Effects of Sulfur Dioxide and Ozone on Hypertension Sensitive and Resistant Rats.**
Robert T. Drew, Raymond S. Kutzman, Daniel L. Costa and Junichi Iwai 298
- The Perturbation of Hepatic Glutathione by α_2 -Adrenergic Agonists.** *Robert C.
James, Stephen M. Roberts and Raymond D. Harbison* 303
- The Metabolism of Arsenite and Arsenate by the Rat.** *Steven Lerman and
Thomas W. Clark* 309
- Chronic Toxicity and Oncogenicity Bioassay of Inhaled Toluene in Fischer-344 Rats.**
James E. Gibson and Jerry F. Hardisty 315

ISSUES:

- Quantitative Risk Assessment: State-of-the-Art for Carcinogenesis.** *Colin N. Park
and Ronald D. Snee* 320
- A Reexamination of False-Positive Rates for Carcinogenesis Studies.**
Joseph K. Haseman 334

- | | | | |
|-------------------------------|-----------|------------------------------|-----------|
| Errata |340 | Council |14/a |
| Letters to the Editor |3/a | Committees |15/a |
| Burroughs Wellcome Toxicology | | Meetings/Courses/Conferences |18/a |
| Scholar Award |13/a | New Products |22/a |
| Editorial Board |14/a | Information for Authors |24/a |