



# Society of Toxicology NEWSLETTER

NOVEMBER/DECEMBER 1988

## Alexander Hollaender Postdoctoral Fellowship Program Established by Department of Energy

In order to offer research opportunities to recent recipients of doctoral degrees, the U.S. Department of Energy has established the Alexander Hollaender Postdoctoral Fellowship Program. This program, administered by Oak Ridge Associated Universities, enables fellows to spend up to two years at DOE labs conducting research in energy-related life, biomedical and environmental sciences.

Applicants should have received a doctoral degree in an appropriate discipline within two years of the desired starting date, or expect to complete all such requirements prior to the desired starting date, which must be between April 1 and September 30, 1989.

Fellows receive an annual stipend of \$35,000 the first year and \$37,000 the second year. Travel and moving expenses are reimbursed according to the Oak Ridge Associated Universities Standard Travel and Moving Policies.

Completed applications and supporting materials must be received by January 17, 1989. For more information and application material contact: Hollaender Postdoctoral Fellowships, University Programs Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, Tennessee 37831-0117, (615) 576-3190.

## Member News

**Dr. Hasan Mukhtar** has been appointed to the Editorial Board of the *Journal of Toxicology and Environmental Health*.

**Dr. Harold C. Hodge** of Forsyth Dental Center's Toxicology Dept. and a founder of the Society of Toxicology, along with Dr. Finn Brudevold of Forsyth's Inorganic Chemistry Dept., will share the Prize in Preventive Odontology. The award for 150,000 Swedish kroner (over \$25,000) was made by the Swedish Patent Revenue Fund in collaboration with The Swedish Medical Research Council and The Karolinska Institute in Stockholm.

**Dr. Oliver Flint** has been appointed North American editor of the journal *Alternatives to Laboratory Animals* (ATLA).

**Dr. Ernest Hodgson**, Toxicology Program, North Carolina State University, has been selected as the recipient of the 1988 Burdick and Jackson International Award for Research in Pesticide Chemistry. This award is sponsored by Baxter Healthcare Corporation, Burdick and Jackson Division, and is administered by the Agrochemicals Division of the American Chemical Society. The award's purpose is to recognize and encourage outstanding contributions to research in pesticide chemistry.

## Student Research Internships in Toxicology

The Society of Toxicology is initiating a Toxicology Research Internship Program. The objective of this program is to acquaint science students with the discipline of toxicology. The long-term goal is to increase both the quality and quantity of professionals entering the field. The Society is presently seeking organizations to participate in this program by sponsoring one or more interns.

Students will be recruited nationally and apply through the Society of Toxicology office. The candidates will be matched based upon the qualifications provided by sponsoring organizations and the interest of the students. Potentially suitable applications will be mailed to the sponsor for review. Final appointment of the student would be by mutual agreement between student and sponsor.

Most students will be available in the summer months. Typical appointments might range from 8 to 12 weeks. The students should be involved in projects in which they can become acquainted with the discipline of toxicology. Level of stipend, travel reimbursement, or fringe benefits would be set by the sponsoring organization.

The Toxicology Research Internship Program will be of benefit to all involved: the student, who will be better able to define career objectives; the sponsor, who derives benefit from the accomplishments of enthusiastic, intelligent interns; and the Society of Toxicology, which benefits from the development of future professionals.

If you wish to support this program or would like additional information, please contact the Society offices. The program will begin in the summer of 1989, thus commitments from potential sponsors are needed by February 1, 1989.

### Inside

## 1989 Society of Toxicology ANNUAL MEETING

### Outlook

*Atlanta*

February 27–March 3, 1989

Atlanta Hilton and Towers  
Atlanta, Georgia

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#### MARK YOUR CALENDAR!

#### 1989 SOT ANNUAL MEETING

February 27–March 3  
The Atlanta Hilton and Towers  
Atlanta, Georgia

#### Deadline for next

issues: **January 15, 1989**  
**March 15, 1989**  
**May 8, 1989**  
**July 8, 1989**  
**September 8, 1989**

## President's Message

Dear Fellow Members:

I hope by now you have had a chance to read "Preparing for the Twenty-First Century: Report of the Tox-90's Commission" that appeared in an October 1988 issue of Toxicology and Applied Pharmacology (Toxicol. Appl. Pharmacol. 96, 1–6, 1988). I have referred to this report in several of my messages this year and have pointed out how the work of the commission is important in establishing the activities and plans of the Society of Toxicology for now, and in the future. Your officers and councillors have taken the report seriously and I can tell you that many of the 21 recommendations of the report are being implemented.

To assist in meeting the goals of the Society in the future in the general area of toxicology education, two special *ad hoc* groups have been formed. One is the "Tox-90's Education Issues Task Force" under the leadership of A. Jay Gandolfi, assisted by Michelle Medinsky, David Eaton, Harihara Mehendele, and Robert Dudley. Curtis Klaassen is the council liaison. The activities of this group are of great importance to the future of the Society and we plan to have a briefing of these activities at the Issues Session at the Annual Meeting in Atlanta in February. One area receiving attention by the task force is that of graduate student recruitment. The programs being planned are extensive and include items such as descriptive brochures and posters, direct contact with college and university career counselling advisors, a role for regional chapters in recruiting, summer workshop programs for chemistry teachers, foreign student recruiting and summer internship programs. As you can see, this task force is very energetic and welcomes discussion of their initiatives at the Issues Session.

The *Ad Hoc* Endowment Funds Committee is being chaired by Seymour Friess. Members are John Doull, Perry Gehring, Charles Reinhardt, William Rinehart and myself. The committee has accepted the responsibility for proposing a strategy for raising and preserving funds to be used in support of the educational activities of the Society in perpetuity. Other committees and Council will have the responsibility for the appropriate distribution of the funds raised, but certainly one use of the funds will be continued support of graduate student travel grants.

The Technical Committee under the direction of Robert Scala is in the process of seeking funds to support a survey to determine manpower supply in different areas of toxicology as well as the future need for individuals trained in these areas. Funds are being sought from foundations and charitable trusts. If you have knowledge of such institutions that should be approached to help support this important program of the Society, please do not hesitate to contact me or Bob Scala.

The work of many of the Societies' committees will be evident in Atlanta. The Program Committee and the Continuing Education Committee have both done an outstanding job in fulfilling their respective missions. The Awards Committee and The Burroughs Wellcome Toxicology Scholar Award Advisory Committee have similarly met their challenge. The Placement Committee is well prepared to help prospective employers and employees match themselves appropriately. The Public Communications Committee again will be on hand at the Annual Meeting with a special presentation. I will report on the accomplishments of these committees and others not mentioned here in more detail in Atlanta. However, let me add that the Nominating Committee has put together an excellent slate for you to consider. Please be sure to return your ballots on time so that your selection will be registered.

Many of you have written in support of the Society's efforts to explain the necessity for the use of animals in research. I thank you for this support and assure you that these efforts are receiving the highest priority within the Society. Good progress has been made by the Animals in Research Committee under the direction of Shayne Gad to develop informative position papers on this subject. They have been assisted in their task by other committees and council. This has the advantage of having a larger involvement of the membership, but the disadvantage of slowing the process. However, I can promise that we will soon have products available for your use in dealing with the issue as an individual scientist, or on behalf of your organization.

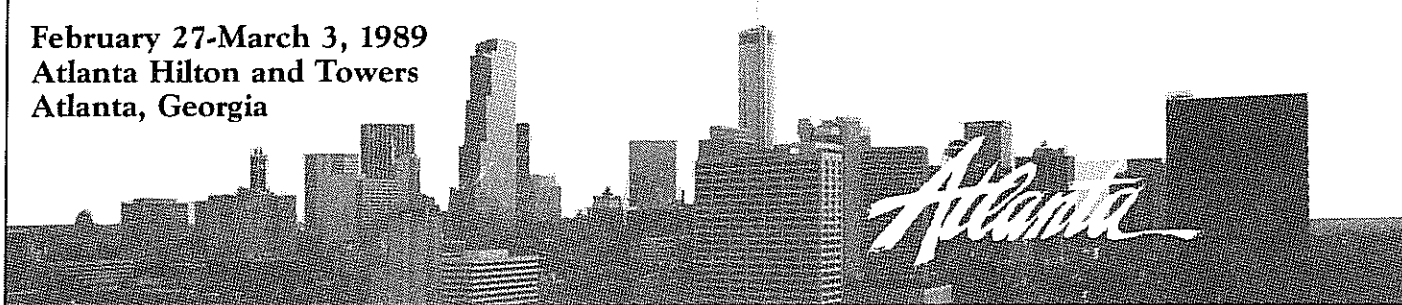
Finally, let me end with another reminder about the Fifth International Congress of Toxicology coming up July 16–21, 1989 in Brighton, England. The deadline for abstracts is January 31, 1989. If you did not receive a copy of the preliminary program and the abstract forms, they are available from the office of the Executive Secretary.

Best wishes,

*James P. Miller*

# 1989 SOCIETY OF TOXICOLOGY ANNUAL MEETING OUTLOOK

February 27-March 3, 1989  
 Atlanta Hilton and Towers  
 Atlanta, Georgia



## General Platform Session: "Frontiers in Toxicology"

To acknowledge excellence in toxicology research, the SOT Program Committee has planned a General Session for the 1989 Annual Meeting in Atlanta. The session, "Frontiers in Toxicology," scheduled for Wednesday afternoon, March 1, will highlight platform presentations of forefront, top-quality research, selected by the Program Committee from submitted abstracts.

All meeting registrants should plan to attend this session. The session will be chaired by Drs. Roger O. McClellan and Curtis D. Klaassen, and will be composed of up to ten presentations of 15 minutes duration with five minutes discussion for each.

The Program Committee intends that it be a special honor to have been selected for this session and that those selected should pay exceptional attention to the presentation of the substance and the slides used in the presentation.

A space is provided on the abstract form should you not desire your abstract to be considered for presentation in the General Session. Your abstract will be considered for submission unless you specifically indicate that it should not.

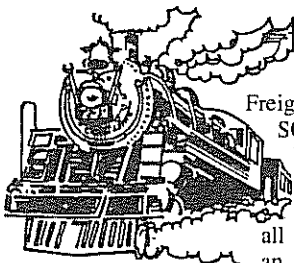
## Poster/Discussion Sessions

Poster/Discussion Sessions, which have been popular over the past two years, will be held once again. Abstracts will be selected by the Program Committee for presentation in these sessions and grouped into suitable topic areas.

## Annual Meeting Banquet

All meeting registrants may sponsor and prepay for tables of 10 at the Annual Meeting Banquet and Awards Presentation held Thursday evening, March 2. Registrants who purchase individual seats either in advance or at registration may choose their seating arrangements prior to the banquet. Requests will be honored on a first come, first served basis.

## A Night at the Old Georgia Freight Depot



On Tuesday, February 28, the Society of Toxicology will sponsor a Southern Bar-B-Que at the Georgia Freight Depot, Atlanta's oldest structure. SOT guests will be taken by bus to the Depot, which is just minutes away from the Atlanta Hilton. You will be greeted by a Dixieland Band playing all the favorites of yesteryear, and served an all-you-can-eat Southern Bar-B-Que dinner. Further information will be provided in the preliminary program.

## SOT Accepts Visa and MasterCard

Members will be pleased to learn that the Society of Toxicology now accepts Visa and MasterCard payments for Annual Meeting registration, payment of annual dues, and other Society expenses. Using your credit card is convenient and efficient. International members also avoid the problems of converting funds to U.S. dollars.

Please remember to complete the appropriate form (e.g., registration or dues renewal) and return it to headquarters to ensure proper credit.

## Guest Hospitality Center and Program

Guests must be registered for the Annual Meeting to have access to the Hospitality Center and to be eligible for the discounted tour rates. Guests can register by using the Annual Meeting registration form.

A special Guest Program has been planned for this meeting. The Hospitality Center will be open daily beginning Sunday, February 26 during the following hours:

Sunday, February 26	4:00 p.m.—8:00 p.m.
Monday, February 27	8:00 a.m.—5:00 p.m.
Tuesday, February 28	8:00 a.m.—5:00 p.m.
Wednesday, March 1	8:00 a.m.—5:00 p.m.
Thursday, March 2	8:00 a.m.—5:00 p.m.

The Center will be staffed Sunday through Wednesday with a representative from Guidelines Atlanta, Inc. who can provide you with information on the city, register you for the tours offered through the Society, or distribute tour tickets purchased in advance of the meeting.

The Guest Program will be mailed with the Preliminary Program in early December.

## Placement Service Seminar

The Placement Service Committee will sponsor a seminar, "Career Planning in Toxicology" at the 1989 Annual Meeting on Monday afternoon, February 27, 4:15 p.m.—6:00 p.m. in Salon D of The Atlanta Hilton and Towers. The seminar will address the basics of seeking employment in:

- Industry
- Government
- Academia
- Consulting

All meeting registrants are invited to attend this informative session.

## Registration Packets

Registration materials have been mailed. If you have not received your packet, please contact SOT Headquarters, 1133 Fifteenth Street, NW, Suite 1000, Washington, DC, 20005 (202) 293-5935.

## SOT 1989 Annual Meeting Symposia

Participants at the 1989 Society of Toxicology Annual Meeting will want to reserve adequate time to attend Annual Meeting Symposia. An informative and diverse range of topics will be covered by this year's symposia. 1989 Annual Meeting Symposia begin on Tuesday, February 28 and run through Friday morning, March 3.

### Lung Cancer Risk of Exposure to Radon

*A.V. Nero; B. Stewart; C.H. Hobbs; J. Samet; and R.F. Henderson, Chairperson*

The symposium will cover four major areas: 1) the potential for exposure to radon—in the environment, indoors in homes and offices, and in underground mines; 2) the factors affecting internal dosimetry from exposure to radon, including deposition of radon daughter particles and the alpha radiation dose to critical cells; 3) information known from animal studies in which exposures have been to radon or to radon and cigarette smoke; and 4) epidemiological studies in underground uranium miners. In the latter area, the interaction between cigarette smoking and radon daughter exposure in lung cancer production in the miners will be described. Finally, approaches to assessing the increased risk for lung cancer from inhalation of radon atmospheres will be discussed.

### Neurotoxicant-Induced Alterations in Cellular Interactions

*K. Reuhl; R.B. Mailman; L.G. Costa; S. Bondy; and D.A. Fox, Chairperson*

This symposium will address the toxicological consequences following the disruption of cellular and molecular interactions in the nervous system by known neurotoxicants. The participants will discuss the use of state-of-the-art techniques in molecular biology, biochemistry, and histology in answering these neurotoxicological problems. Discussions will focus on: neuronal and neuro-glia cellular adhesion molecules as they relate to development and maintenance of brain cytoarchitecture following toxicant insult; the susceptibility of different stages of brain development to toxicant insult, particularly migration; primary and secondary effects of drugs and toxicants on receptor-ligand interaction utilizing the dopamine receptor as a model, with emphasis on functional changes occurring in the absence of quantitative changes in the number of receptors. Also addressed will be changes in phosphoinositide metabolism following activation of several different classes of receptors by known neurotoxicants, with specific attention on the role of protein kinase C and inositol in nervous system toxicity; and the role of intracellular free ionic calcium as a mediator of toxic damage in the central nervous system, with several regulatory sites of action where calcium may mediate toxic damage being discussed.

### Mechanisms of Lung Injury by Systemically Administered Chemicals

*R.A. Roth, T.L. McLemore; and A.R. Buckpitt and G.S. Yost, Chairpersons*

A growing list of xenobiotics cause organ-selective damage to pulmonary tissues in laboratory animals and man after systemic exposures. A significant number of these compounds are not toxic *per se* but must be metabolized to electrophilic intermediates that cause selective destruction of pulmonary cells. This symposium will address the mechanisms of bioactivation and toxicities of several pneumotoxins to endothelial and epithelial cells from laboratory animals, and to normal and neoplastic lung cells from humans. Methods of evaluation of the chemical and biochemical mechanisms of organ and cell toxicities

include the use of whole animals, explants, isolated cells, cellular fractions and purified cytochrome P-450's. The importance of factors such as pathological progression of injury, detoxication pathways, cellular or organ-selective distribution of reactive intermediates, and P-450 isozyme selectivity for bioactivation will be presented to explain the selectivities of these compounds for lung damage.

### Molecular Biology Applications to Toxicology

*L. Pohl; F. Gonzalez; D. Liggett; and R. Billings and S. Bigelow, Chairpersons*

This symposium will provide an overview of topics that will illustrate how modern techniques of molecular biology can be used to solve toxicological problems. The symposium is intended to complement the Continuing Education course on Concepts in Molecular Biology, which will provide the framework of basic knowledge of the technology.

The symposium will cover a diverse group of topics including identification of protein adducts, cloning and expression of cytochrome P450 genes, and uses of transgenic animals.

### Pulmonary Immunotoxicology: Species Comparisons

*R.D. Irons; G.R. Burleson; D.E. Bice; P. Bromberg; and M.H. Karol and J.A. Graham, Chairpersons*

The goal of the symposium is to summarize the state-of-the-art of lung immunotoxicology as related to risk assessment. The pulmonary immune system is an increasing focus of attention as its susceptibility to inhaled chemicals becomes more recognized. This has resulted in a relatively rapid pace of research advancements.

By focusing on recently discovered interspecies similarities and differences of the major limbs of the pulmonary immune system, this symposium will consolidate current knowledge that will ultimately serve as the foundation for species-to-species extrapolation of lung immunotoxicology, an essential factor in understanding human health risk based on animal studies. Key aspects of this research area will be presented. Both structural and functional elements of the pulmonary immune system, with and without chemical challenges, will be presented with a view towards interspecies comparisons. Functional elements addressed include humoral and cell-mediated immunity; defensive (i.e., anti-microbial and anti-tumor) responses and injurious responses (i.e., allergy, inflammation) are also included. Recent human data will be highlighted. The closing presentation will seek to integrate the state-of-the-art of lung immunotoxicology from the perspective of human health risk assessment.

### Alternate Models in Immunotoxicology

*P. Haley; J.H. Exon; T.J. Hayes; J.C. Bloom; and C.D. Koller and G.M. Henningsen, Chairpersons*

The objectives of this symposium are to present the most current knowledge and data pertaining to immunotoxicity testing which is being performed in species other than the mouse models. Attention to develop and validate animal models for use in testing for toxicity to organs and cells of the immune system has been largely focused on murine models. An extensive summary of much of that work has been published and presented in a Continuing Education Course at the 1988 SOT meeting in Dallas. Initial studies in that species were logical because of the extensive use of the mouse in immunologic research and the baseline data available for genetics and immunologic responses. However, other species such as the rat, dog and primate are more commonly used in conventional descriptive toxicity testing. Therefore, it is desirable to also utilize these species in immunotoxicity testing to facilitate comparisons of all data from the same species. An objective of this symposium is to present the current status of development and validation of assays in rat, dog and primate models

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## 1989 Annual Meeting Symposia

(continued from page 4)

for use in immunotoxicologic studies. Another objective is to compare this data for similarity or differences observed in mice and humans. It is anticipated that each species may have particular characteristics, in terms of immunologic responses, which may facilitate or prohibit their use in accurate extrapolation to human health risk assessment.

### Correlation between Morphologic and Functional Changes Induced by Xenobiotics: Is every Change a Sign of Toxicity?

*B.R. Broxup; G.T. Burger; S.M. Cohen; I. Leav; D.G. Scarpelli; and Z. Ruben and B.M. Wagner, Chairpersons*

This symposium is a continuation of the 1988 symposium on the subject, and its objective is to increase awareness for in-depth judgment on the toxic significance of changes induced by xenobiotics. Examples of changes induced in the urothelium, prostate, respiratory system, nervous system and in the pancreas will be addressed with a focus on pathogenic mechanisms, significance of toxicity and on correlation between morphologic and functional findings. The moderator of the panel discussion session, will encourage participation (questions and comments) from the audience.

### Gerontotoxicology: Age-Related Susceptibilities to Toxicity

*E. Masoro; M. Weksler; H.C. Pitot; P. Spencer; A. Richardson; G. Martin; and E.A. Pfitzer and L. Birnbaum, Chairpersons*

Aging itself is not a disease. It consists of incompletely understood processes that lead to the termination of life. Whether or not aging processes, genetic constitution, life-style or unhealthy environment are responsible, it is a reality that our increasing population of elderly have significant susceptibilities to chemicals in their environment. This symposium introduces the role of nutrition, immunocompetence, drug usage, and physiological status of the elderly on age-related diseases, such as cancer and neurological disorders. Emphasis will be placed on mechanisms for age-related susceptibilities. Animal and non-animal model systems for the evaluation of toxic agents affecting aging or age-related diseases and research needs for progress in the field of gerontotoxicology will be discussed.

### Reproductive Endocrinology and Toxicity: Mechanisms of Action

*J.J. Heindel; R.Z. Sokol; M.J. Brabec; A.A. Levin; and R.E. Chapin, Chairperson*

This Symposium focuses on how toxicants disrupt the endocrine and paracrine regulation of the reproductive system. The speakers detail the effects of toxicants on the CNS and end organs, ranging from the effects of heavy metals on hormone production, through the effects of phthalates and vitamin analogs on receptor function, to changes in ovarian function, and the effects of metals and glycol ethers on Sertoli cell energetics and secretory activity *in vitro*. Each speaker also highlights promising new areas and techniques. The emphasis is on both the strategic approaches to the problems, and the most recent data on the possible mechanisms of these toxicants.

### Refinements of Animal Experiments in Toxicology

*S.A. Pakes; A.N. Rowan; G.N. Rao; J.H. Dean; R.L. Dixon; and A.L. Aronson and S.C. Gad, Chairpersons*

This symposium will focus on practical considerations in improving both the design and conduct of animal studies in toxicology so as to alleviate animal pain and distress while still generating necessary in-

formation to allow the safe use of materials. It will start by reviewing the current status of efforts to reduce the number of animals used and replace them by other systems. Then considerations will be given to how unwanted and unintentional variables can be introduced into an experiment if an animal experiences pain or distress. Refined procedures and practices that alleviate animal pain and distress which are also compatible with experimental objectives can enhance the validity of experimental results. Such refinements will be presented and evaluated.

### Early Embryo Loss As a Factor in Reproductive Failure

*A. Cummings; S.K. Dey; A. Wilcox; P. Working; and H. Zenick, Chairperson*

Reproductive loss may occur at any stage of pregnancy. However, the greatest percent of loss appears to occur quite early in pregnancy with only about 25 percent of non-contracepting females achieving a clinically recognized pregnancy in any given cycle. In this symposium, a number of the genetic and non-genetic mechanisms will be discussed that may be responsible for reproductive loss occurring during the post-fertilization through the implantation period. An overview will be provided of the early development of embryo, the alterations in the uterine environment in preparation for implantation and the synchronized communication between the embryonic unit and the uterus. Subsequent talks will focus on the genetic mechanisms underlying pre-implantation loss, the toxicologic mechanisms that may alter the implantation process, and an evaluation of the current assays being employed to detect early pregnancy loss in humans.

### AIDS Drug Development and Toxicology

*D. Barry; M. Boyd; C. Grieshaber, R. Ruprecht; R. Yarchoan; and G. Hitchings and S. Niemi, Chairpersons*

This symposium will focus on development and safety evaluation of current and novel AIDS therapeutics. Speakers from academia, government, and industry will present information on the virology and HIV and related retroviruses, and *in vivo* and *in vitro* AIDS drug screening assays for anti-retrovirus activity; the National Cancer Institute program for new AIDS drug development and pre-clinical safety testing will be reviewed, as with the NCI clinical trials process and recent results in AIDS patients; the only drug currently approved in the US for AIDS therapy will be discussed with respect to its efficacy and safety and new clinical applications.

### Risk Assessment for Carcinogens: A Slowly Turning Ship

*B.N. Ames; R.H. Reitz; J.A. Swenberg; W. Farland; and T.M. Farber and T.B. Starr, Co-Chairpersons*

This symposium will provide an interview of the important changes that are evolving in the characterization of carcinogenic risk. The symposium's lead-off speaker will provide a perspective on how the characterization of carcinogenic risk has changed over the past several decades as our level of knowledge of mechanisms of carcinogenicity has improved. The second will consider the critical elements of physiologic-based pharmacokinetic modeling emphasizing high-to-low exposure and cross-species extrapolations. The third paper will proceed to consider critical factors that drive dose-response relationships. The last paper in the session will consider the potential for incorporating information on mechanisms of action of chemicals into quantitative assessments of carcinogenic risk.

## Continuing Education Courses

Be sure to reserve Monday, Feb. 27, 1989 for participation in the Continuing Education Courses at the Annual SOT Meeting. The Continuing Education Committee will offer one advanced course each year beginning with the 1989 meeting. The course this year is "Advanced Renal Toxicology." The Committee has organized the following seven courses with an outstanding slate of speakers:

8:00 a.m.—12:00 noon

1. Advanced Renal Toxicology
2. Concepts in Molecular Biology
3. Neurotoxicology
4. Regulatory Toxicology

1:30 p.m.—5:30 p.m.

5. Assessment of Human and Environmental Health Hazards
6. Concepts in Molecular Biology\*
7. Dermatotoxicology—1989 vs. 1969
8. Statistics for Toxicologists

\*"Concepts in Molecular Biology" will be given both in the morning and afternoon. A related symposium on Molecular Biology will be offered later in the week.

These Continuing Education Courses provide a great opportunity for you to improve your understanding of these specialty areas of toxicology! Be sure to register early.

Continuing Education course evaluation forms will be handed out with each course syllabi. Please expend the time and effort to complete them and hand them in to the course moderators. Your input and critique will be welcome and essential to maintaining and improving the quality of future Continuing Education Courses. We are very excited about the courses being offered this year and look forward to seeing you in Atlanta.

### Advanced Renal Toxicology Course

*J. Diamond; W. Kluwe; T. Jones; R. Schnellman; S. Sabatini; and R. Goldstein, Chairperson*

This course will be the first "advanced" course in the Continuing Education Program and will assume an understanding of the basic principles of renal toxicology, i.e., nephron structure and function, physiological basis for susceptibility of kidneys to toxic insult and assessment of renal (dys)function. The Advanced Renal Toxicology course will focus in depth on mechanisms of site-specific damage within the nephron, devoting a full lecture to mechanisms of injury to each of the different segments—regions of the nephron, specifically, the glomerulus, proximal tubule, thick ascending limb/distal tubule and collecting duct/pailla.

### Risk Assessment of Health Hazards

*B. Beck; B. Bishop; D. Woltering; L. Tollefson; S. Brett; C. Whipple; and D. Paustenbach and T. Marshall, Chairpersons*

Risk assessment has become an important part of regulatory decision making and, as such, a relatively new area of responsibility for the toxicologist. This course will provide an overview of the principles of environmental and human health risk assessment; hazard identification, dose-response assessment, exposure assessment and risk characterization. The application of these principles to solve actual problems will be illustrated through the presentation of four case studies by the scientists primarily responsible for conducting the assessments. The case studies will address contaminated soil, potential human and aquatic hazards of detergents in municipal water, a hazardous waste site, and the use of *de minimus* levels in risk characteri-

zation and risk management. Persons who participate in the course will become familiar with literature-based parameters, as well as, the site-specific or chemical specific information that are needed to conduct a risk assessment. Each participant may purchase a copy of the recently published book entitled *The Risk Assessment of Environmental and Human Health Hazards: A Textbook of Case Studies* by Dennis Paustenbach (John Wiley and Sons, New York). It is a 34 chapter (1200 page) compilation of case studies which illustrate the application of toxicological principles and risk assessment methodologies. (There will be an order form in the syllabi offering this text book at a greatly reduced price.)

### Dermatotoxicology—1989 vs. 1969

*H. Maibach*

Dermatotoxicology has rapidly expanded in clinical content, clinical description, mechanisms, and models in the last twenty years. This course will summarize the state of the science and art as it relates to: irritation, allergic contact dermatitis, photo irritation, photo allergic contact dermatitis, percutaneous penetration, systemic toxicity, and contact urticaria.

Each participant may purchase a copy of the book entitled *Dermatotoxicology* by Manulli and Maibach (Hemisphere Press, New York). This 500 page textbook will illustrate important issues in dermatotoxicology. (There will be an order form in the syllabi offering this textbook at a greatly reduced price.)

### Neurotoxicology

*A.M. Verity; B.W. Wilson; R.J. Anderson; D.A. Cory-Slechta; and C.A. Kimmel*

One of the main objectives of the course is to provide an update for interested participants in terms of the latest developments and current methodologies used in the four main disciplines of neurotoxicology, including neuropathology, neurochemistry, neurophysiology and neurobehavior. These presentations would systematically describe the fundamental concepts necessary to study neurotoxicants at each of the respective levels of neural organization. Included in these presentations would be at least three examples of selected neurotoxicants studied in each of the four disciplines, e.g., acrylamide or n-hexane, organometals (methylmercury) and dieldrin. These compounds are fairly representative of the range of neurotoxicants existing in the environment and for which there are sufficient data to make cross discipline comparisons. This approach would provide a continuity of thought and information between each of the four talks.

This course will also demonstrate how information derived from neurotoxicological studies is used in risk assessment. The last presentation would outline current guidelines and regulations concerning neurotoxicological endpoints, and would include a discussion of recent data obtained from studies using a functional observation battery to screen for potential neurotoxicity.

### Concepts in Molecular Biology

*M.Z. Gilman; H.L. Liber; T.R. Skopek; and W.F. Greenlee, Chairperson*

The course will emphasize concepts important to understanding the design and interpretation of contemporary research in molecular biology with emphasis on experimental approaches relevant to mechanistic toxicology. The first session will focus on principles, to include a review of DNA structure, discussion of the concepts of complementarity, polarity, replication and repair, an overview of RNA and protein synthesis, and mechanisms of regulation of gene expression. The

# October and November 1988 Membership Changes

## Returned Mail:

SOT mail addressed to the following members has been returned undelivered. If you know where any of the following individuals may be found, please notify the SOT headquarters office of his/her address or telephone number.

**Gordon Loewengart, Ph.D.**  
Morristown, NJ

**Harriet M. Maling, Ph.D.**  
Topsfield, MA

**Bruce Albert Trela**  
West Lafayette, IN

**Lawrence R. Weiss, Ph.D.**  
Wheaton, MD

**Robert F. Willes, Ph.D.**  
Orono, ONT.  
CANADA

## Name Changes:

**Julie Melia to Julie Stickney**

## Address Changes/ Corrections:

**Abrutyn, Donald, VMD**  
Johnson & Johnson Research Foundation  
Route #1  
North Brunswick, NJ 08902

**Amdur, Mary O., Ph.D.**  
Institute of Environmental Medicine  
New York University Medical Center  
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Tuxedo, NY 10987

**Beumel, Gregory A.**  
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Washington, DC 20005  
(202) 429-9188

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**Michael W. Conner, DVM**  
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King of Prussia, PA 19406-0939  
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(318) 674-7871

### In Memoriam

**Edward Eagle, Ph.D.**

**Victor A. Drill, MD, Ph.D.**  
A Founder of the  
Society of Toxicology



second session will concentrate on methodologies and strategies for gene cloning. This session will emphasize the rationale underlying current cloning approaches and focus on the importance of gene manipulation to the study of protein function. The third session will cover molecular approaches for the study of mutagenesis using the well characterized bacterial human gene, hypoxanthine phosphoribosyl transferase (HPRT), as a model. The course will conclude with a session including basic concepts of the molecular biology of oncogenes and anti-oncogenes. The emphasis of this session will be on principles and will focus on the interaction of these important growth regulatory genes as determinants of transformation susceptibility.

### Regulatory Toxicology

R.W. Hart; J. Martonik; J.A. Moore; L.A. Dehins; and C.M. Schiller, Chairperson

This course provides an introduction and overview for this particular area of toxicology which is a unique blend of science, toxicology, law and public policy. An overview of each agency organization, process, jurisdiction and responsibility will be presented as well as current programs, recent projects and proposed rules. Specific examples will be utilized to illustrate the application of toxicology principles in regulatory decision making in each agency.

### Statistics for Toxicologists

S.C. Gad; A. Roth; C.S. Weil; and A.K. Thakur

This course will focus on the practical aspects of statistics as utilized by toxicologists. The full range of standard techniques and approaches to experimental design, analysis, modeling and presentation of data will be presented in a nonmathematical manner, along with considerations of their limitations and advantages. The daily application of these methods in toxicology studies will be explicitly addressed.

The newer techniques of trend analysis as applied to toxicology will be presented, along with practical application to the full range of *in vivo* toxicology studies. Finally, low dose extrapolation models and techniques for carcinogenesis studies will be overviewed and characterized.

## Liaison Societies

The Society of Toxicology has a variety of liaison societies. From time to time, a brief description of a few of these societies will be published in the SOT Newsletter. This is the first of this series of descriptions.

### Environmental Mutagen Society

The Environmental Mutagen Society brings together scientists of diverse backgrounds and varied interests who are working in the field of mutagenesis and molecular genetics, whether in academia, industry, or government. Basic and applied research, safety evaluation and regulation are among topics of concern for member scientists. Established in 1969, the Society has attracted geneticists and toxicologists interested in the study of mutagens in the human environment, particularly as they may affect public health. The dissemination of information relating to the field of mutagenesis is aided by the official journal of the Society, *Environmental and Molecular Mutagenesis*, which publishes original research papers on mutation and mutation-related topics, including mechanisms of mutagenesis, environmental modification of DNA, repair of DNA damage, genetic and cytogenetic methods, mutagenicity screening and epidemiology relating to environmental mutagens. In addition, the Society publishes a semiannual newsletter and holds annual meetings featuring symposia with invited speakers, contributed papers, poster sessions and workshops. These are structured to provide a forum for the presentation of both basic and applied research. For more information and an application for membership

contact Dr. Elizabeth Von Halle, Chair, Membership Committee, EMCT Information Program, Bldg 9207 MS 3, P.O. Box Y, Oak Ridge, TN 37831.

### World Federation of Associations of Clinical Toxicology Centers and Poison Control Centers

Founded in 1975, the World Federation is a World Health Organization associated organization that has the aims of studying the clinical, analytical, physio-pathological and social aspects of human poisonings, fostering the international organization of Clinical Toxicology Centers and Poison Control Centers to deal with intoxication problems, and supporting relations with appropriate governmental ministries and national and international organizations interested in dealing with the problems of clinical toxicology. Currently 28 countries are members of the World Federation with at least 34 others in the process of organizing toxicology and poisoning control programs and designated as corresponding members. The World Federation sponsors workshops on special topics in collaboration with international organizations such as the International Program for Chemical Safety several times yearly, forums or annual meetings on a yearly basis, and international Congresses on Clinical Toxicology and Poison Control every four years. The Federation publishes a Bulletin six times yearly that is a portion of the international journal, *Journal de Toxicologie clinique et experimentale*. Membership in the Federation is open to representatives of national and regional organizations that deal with clinical toxicology and poison control efforts. For additional information and membership details, please contact: Professor Louis Roche, Secretary-General, World Federation of Associations of Clinical Toxicology Centers and Poison Control Centers, 45, boulevard des Belges, 69006 Lyon, FRANCE.

### The Toxicology Forum

The Toxicology Forum is a non-profit organization formed from interactions between scientists in academia, government and industry. From its inception the Forum has had a commitment to the principle that issues in science and public health are most effectively evaluated in an open and candid dialogue among experts.

Since its incorporation in 1975, the Toxicology Forum has sponsored a series of meetings devoted to the open discussion of general principles and scientific advances in toxicology as well as to the application of toxicological data in the formation of public health policy and resolution of regulatory questions.

As a result, the Forum has grown into a well-established and widely recognized organization that has provided a setting for many discussions of contemporary issues in toxicology. The Toxicology Forum membership represents chemical, drug, food and petroleum industries, research institutions, trade associations, universities and governments. The structure of the Forum includes a Board of Directors representing academia, government and industry with an international representation in all three areas.

### American Association for Accreditation of Laboratory Animal Care

The American Association for Accreditation of Laboratory Animal Care (AAALAC) is a non-profit corporation directed by representatives of 31 member organizations from the scientific and professional community. AAALAC was organized in 1965 to conduct a voluntary program for the accreditation of laboratory animal care facilities and programs. The accreditation program is concerned with encouraging high standards for the care and use of laboratory animals including appropriate veterinary care, controlling variables that might adversely affect animal research and protecting the health of animal research workers.

(continued on page 9)

## Publications of Interest

- Chemical and Physical Behavior of Human Hair*, 2nd ed., Springer-Verlag New York, Inc. \$62.50, P.O. Box 2485, Secaucus, NJ 07096-2491.
- Chemical Hazard Communication Guidebook. OSHA, EPA, and DOT Requirements*, 0-88-57-990-O/B8120. \$75.00, Executive Enterprises Publications Co., 22 West 21st St., New York, NY 10010-6904.
- Emergency Planning and Community Right-to-Know Law, a New Videotape on Section 313*, ¾inch: \$30.75. Beta I or II: \$22.95. VHS: \$22.00. Color Film Corporation, Video Division, 770 Connecticut Avenue, Norwalk, CT 06854, (800) 882-1120.
- Good Laboratory Practices: An Agrochemical Perspective*, U.S. & Canada \$39.95, Export \$47.95. American Chemical Society, Dept. 390, 1155 Sixteenth St., NW, Washington, DC 20036, (202) 872-4600.
- Guide to State Environmental Programs*, BNA Books, \$40.00. BNA Books Distribution Center, 300 Raritan Center Parkway, C.N. 94, Edison, NY 09919, (please include your state's sales tax and shipping charges of \$3.00 for the first book and \$1.00 for additional copies), telephone orders call (201) 225-1900.
- Handbook of Drugs for Tropical Parasitic Infections* 085066-404-7. Taylor and Francis, 242 Cherry St., Philadelphia, PA 19106-1906, 1-800-821-8312.
- Handbook of Hazardous Waste Management For Small Generators*, \$39.95, Russell H. Phifer and William R. McTigue, Jr., Lewis Publishers Inc., 121 South Main St., P.O. Drawer 519, Chelsea, MI 48118, phone orders: 1-800-525-7894.
- Health United States 1987*, \$13.00 (checks payable to Superintendent of Documents), U.S. Government Printing Office, Dept. SSMC Washington, DC 20402.
- Monographs on the Evaluation of Carcinogenic Risks to Humans*, International Agency for Research on Cancer, Supplement #7, \$41.00, WHO Publications Center, 49 Sheridan Ave., Albany, NY 12210, (518) 436-9686.
- New Developments in Biotechnology: Field Testing Engineering Organisms*, \$7.50 (checks payable to the Superintendent of Documents), U.S. Government Printing Office, Dept. SSMC, Washington, DC 20402.
- Occupational Safety and Health Law*, \$85.00, BNA Books Distribution Center, 300 Raritan Center Parkway, C.N. 94, Edison, NJ 08818, phone orders (201) 225-1900.
- Pesticide Metabolism: Extrapolation from Animals to Man*, J. Miyamoto, \$22.50, Blackwell Scientific Publications, Inc., 667 Lytton Ave., Palo Alto, CA 94301.
- Quality Assurance of Chemical Measurement*, 0-87371-09705, John Keenan Taylor, Lew Publishers, Inc., 121 South Main St., P.O. Drawer 519, Chelsea, MI 48118.
- A Question of Safety, On the Need for Laboratory Animals in Product Safety Testing, Federal I.I. #04-2746997*, VHS or Beta: \$35.00. ¾ U-matic: \$40.00. The Foundation for Biomedical Research, 818 Connecticut Avenue, NW, Suite 303, Washington, DC 20006.
- Selectivity and Molecular Mechanisms of Toxicity*, F. DeMatteis-E. Lock, \$65.00. MacMillan Publishing Co., 866 3rd Ave., New York, NY 10022.
- Aneuploidy, Part A: Incidence and Etiology, Aneuploidy, Part B: Induction and Test Systems*, Baldev K. Vig and Avery A. Sandberg, eds., Pt. A \$140.00, Pt. B \$160.00.
- The Malformed Fetus and Stillbirth: A Diagnostic Approach*: R.M. Winter, S.A.S. Knowles, F.R. Beiber, and M. Baraitser, \$115.50.
- The Journal of Trace Elements in Experimental Medicine*, Ananda S. Prasad, ed., four issues \$120.00.
- Teratology. The International Journal of Abnormal Development*, 12 issues \$432.00.
- Toxic Shock Syndrome and the Other Staphyococcal Toxicoses*, Hans-Christian Mittag, \$49.50.
- Chirality: The Pharmacological, Biological, and Chemical Consequences of Molecular Asymmetry*, 4 issues \$120.00.
- Advances in Air Sampling*, \$49.95, the American Conference of Governmental Industrial Hygienists, Lewis Publishers, Inc., 121 South Main St., P.O. Drawer 519, Chelsea, MI 48118, phone orders: 1-800-525-7894.
- Toxicology of the Lung*, \$99.00, D.E. Gardner, J.D. Crapo, and E.J. Massaro, eds., Raven Press, 1185 Avenue of the Americas, New York, NY 10036.
- New Developments in Biotechnology—U.S. Investment in Biotechnology*, \$13.00, Office of Technology Assessment—Congress of the United States, U.S. Government Printing Office, Dept. SSMC, Washington, DC 20402.
- USP DI Volume III: Approved Drug Products and Legal Requirements*, \$59.00. Contact: Keith W. Johnson, Director of Research and Development, USP Drug Information Division.
- 1988 Annual Book of ASTM Standards Catalog*, 1916 Race Street, Philadelphia, PA 19103-1187.
- Recent Advances in Receptor Chemistry*, \$123.75, Carlo Melchiorre and Mario Giannella, eds., Elsevier Science Publishers, P.O. Box 1663, Grand Central Station, New York, NY 10163.
- Lipid Peroxidation in Biological Systems*, \$85.00, Dr. Alex Sevanian, ed., American Oil Chemists Society, P.O. Box 3489, Champaign, IL 61821.
- Dictionary of Toxicology*, \$82.50, E. Hodgson, Houndsmills Basingstoke Hampshire R621 2XS, U.K.
- The Biological Alkylation of Heavy Elements* (Special Publication No. 66) \$89.00, F. Glockling and P.J. Craig, The Royal Society of Chemistry, Distribution Center, Blackhorse Road, Letchworth, Herts SG6 1HN, U.K.
- Year Book of Toxicology* (first edition 1989), \$45.00, CRC Press, Inc., 2000 Corporate Blvd., N.W., Boca Raton, Florida 33431.
- Toxicology and Environmental Health Series* (pending), Lewis Publishers, Inc., 121 South Main Street, P.O. Drawer 519, Chelsea, MI 48118.
- Workplace and Chemical Safety* (catalog available), Van Nostrand Reinhold, P.O. Box 668, Florence, KY 41022-9979.
- Interdisciplinary Principles and Guidelines for the Use of Animals in Research, Testing, and Education*, Ad Hoc Committee on Animal Research, The New York Academy of Sciences, New York, NY 10021.
- They Threaten Your Health: A Critique of the Antivivisection/Animal Rights (AV-AR) Movement*, \$13.95, Nutrition Information Center, 255 N. Granada, No. 2058, Tucson, AZ 85701.
- Computerized Data Systems for Nonclinical Safety Assessment, Current Concepts and Quality Assurance*, September 1988, \$45.00, Drug Information Association, P.O. Box 3190, Maple Glen, PA 19002.

## Coming Events

**A Symposium on the Public Health Significance of Natural Toxicants in Animal Feeds**, sponsored by the American Academy of Veterinarian and Comparative Toxicology, February 6-7, 1989, Transpotomac Plaza Conference Center, 1199 N. Fairfax St., Alexandria, VA. For more information, contact: Dr. Val Richard Beasley, Dept. Veterinary Biosciences, College of Veterinary Medicine, University of Illinois, 2001 S. Lincoln Ave., Urbana, IL 61801.

**Envirotech Vienna 1989**, February 20-22, 1989. For information contact: The Austrian Trade Commissioner in Washington, 1875 Connecticut Ave., N.W., Suite 1114, Washington, D.C. 20009.

**4th International Symposium on the Biological Oxidation of Nitrogen in Organic Molecules**, March 17-21, 1989, Munich. Contact Prof. P. Hlavica, Walther-Straub-Institute of Pharmacology and Toxicology, Nussbaumstrasse 26, D-8000, FRG, Tel: 089-5 38 41 Ext 219.

**American Society of Preventive Oncology Annual Meeting**, March 20-21, 1989, Hyatt Regency-Bethesda, Bethesda, MD. For information contact: Richard R. Love, M.D., American Society of Preventive Oncology, 1300 University Ave.-7C, Madison, WI 53706, (608) 263-6919.

**Spring Symposium "Oncones and Onco-Suppressor Genes,"** March 30-April 1, 1989, Athens, Greece. Contact Prof. D.A. Spanididos, National Hellenic Research Foundation, 48, Vass. Constantinou Ave., GR-11635, Tel: 30-1-7229811.

**Carcinogen Risk Assessment** (4th annual course), sponsored by the Society for Risk Analysis, April 3-5, 1989, One Washington Circle Hotel, Washington, DC. For further information please call: Dr. Curtis C. Travis, 615-576-2107 or FTS 626-2107 or Mary Oran 615-574-8438 or FTS 624-8438.

**In Vitro Toxicology—New Directions**—a part of The Johns Hopkins Medical Institutions continuing education program, April 4-5, 1989 sponsored by The Johns Hopkins Center for Alternatives to Animal Testing. Contact Program Coordinator, Office of Continuing Education, Turner 22, 720 Rutland Avenue, Baltimore, MD 21205, (301) 955-2959.

**8th International Symposium, A Modern Approach to Toxicologic Pathology of the Nervous System**, May 21-25, 1989, The Hyatt Regency, Cincinnati, OH. Contact Nancy Streett, Planning Unlimited, PO Box 220, New London, PA 19360, (215) 869-0702. Deadline for abstracts March 15, 1989.

**The Second Meeting of the International Neurotoxicology Association (INA)**, May 22-26, 1989, will be held in Sitges, Barcelona, Spain. For more information on the meeting, please contact: Dr. E. Rodriguez Fare, Secretariat II INA Meeting, Dept. of Pharmacology and Toxicology CSIC, Jorge Girona Salgado, 18-26, BARCELONA, E-08034, Spain.

**Association for Behavior Analysis, 15th Annual Convention**, May 24-28, 1989, Hyatt-Regency Hotel, Milwaukee, WI. Contact ABA, Western Michigan University, 258 Wood Hall, Kalamazoo, MI 49008-5052, (616) 387-4494.

**Fifth International Conference on Environmental Mutagens**, July 10-15, 1989, Cleveland, OH. Contact Fifth ICEM 1989, Department of Environmental Health Sciences, School of Medicine, Case Western Reserve University, 2119 Abington Road, Cleveland, OH 44106, (216) 368-6213.

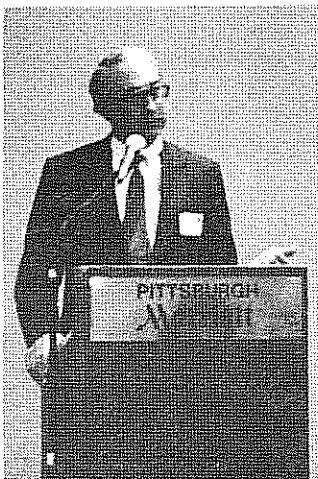
**Fifth International Congress of Toxicology**, July 16-21, 1989, Brighton, United Kingdom. Contact IUTOX '89, Congress House, 65 West Drive, Sutton, Surrey SM27NB, UK.

**Third International Symposium on Poisonous Plants**, July 23-29, 1989, The Conference and Institute Division of Utah State University, Logan, UT. Contact Dr. Lynn F. James, USDA-ARS Poisonous Plant

Research Laboratory, 1150 East 1400 North, Logan, UT 84321, (801) 752-2941.

**The Gordon Research Conference-Mechanisms of Toxicity**, July 24-28, 1989, Kimball Union Academy, Meriden, NH. For further details contact: Dr. John A. Thomas, The University of Texas Health Science Center at San Antonio, TX 78284-7722.

## Chapter News



SOT President Gibson addresses Inaugural Meeting of the Allegheny-Erie Regional Chapter.

The Allegheny-Erie Regional Chapter of SOT held its inaugural meeting on October 14 in Pittsburgh. This new regional chapter encompasses the Pittsburgh, PA, Cleveland, OH and Morgantown, WV areas. There are a total of 100 active members in this new regional chapter and 75 individuals were in attendance at the first meeting. The speaker for the evening was Dr. Bernard Cohen of the University of Pittsburgh who spoke on the topic "Radon and Indoor Air Pollution."

## Liaison Societies

(continued from page 7)

The AAALAC encourages optimal care for laboratory animals by providing a mechanism for peer evaluation of animal care programs by the scientific community. Humane treatment of laboratory animals, protection of personnel from hazards associated with the use of animals and control of variables that could affect animal research adversely, the AAALAC believes, are goals that can be accomplished while maintaining the freedom of scientific inquiry.



## Watching Washington

### Massachusetts Farm Animal Referendum Loses

Massachusetts voters on election day overwhelmingly defeated an animal activist referendum calling for strict state regulation of farm animals. The referendum, rejected by 70 percent of the voters, called for the state commissioner of agriculture to issue regulations for transportation, slaughter, diet, housing and surgery of farm animals, and the establishment of a farm animal welfare board.

### Pet Theft Bill Hearings Continue in House

The House Agriculture Subcommittee on Department Operations, Research and Foreign Agriculture held a public hearing early in the fall of 1988 regarding the Pet Theft Act, S. 2353. Senator Wendell Ford (D-KY), sponsor of the bill, stated at the hearing that the bill will only prevent the blatant sale of stolen animals and defended the bill against modifications that he claimed would "gut the bill."

Testifying on behalf of the U.S. Department of Agriculture Animal and Plant Health Inspection Service, Dr. James W. Glosser stated he is opposed to the legislation on the grounds that it would limit the Secretary's ability to adapt the animal welfare program in response to changing needs. Dr. Glosser further cited agency records of only five or six cases where theft was "strongly" suspected and claimed that in such cases more effective enforcement would occur if his agency could issue temporary restraining orders or injunctions to suspend operations of individuals under suspicion.

### FDA Publishes Regulatory Agenda, Clarifies LD<sub>50</sub> Position

The Regulatory Program of the U.S. Government, released this fall, outlined the FDA's proposed regulatory actions, which included a final rule on the bulk animal drug proposal set for November, a later date than initially expected due to the complexity of issues raised by the public. Other regulatory items include: a final health claims proposal, predicted for September; the promulgation of FDA infant formula proposal under the Infant Formula Act in October; final action in January for the proposal to revoke the common or usual name regulation for diluted fruit or vegetable juices; and final action on cholesterol labeling postponed until March 1989 to allow time for a broad review of cholesterol, fat and fatty acids labeling.

In response to complaints from animal welfare groups, FDA clarified its position on the classical lethal dose (LD<sub>50</sub>) test. The agency stated that it no longer requires the test for toxicity testing and does not contribute to its further use, but that it would not stop reviewing data from such tests as they contribute to safety decisions. FDA said it "supports efforts to eliminate continued conduct of the 'classical' LD<sub>50</sub> tests and to reduce the numbers of animals used in acute toxicity testing without sacrificing information necessary in the interest of human safety."

### National Research Council Reports Animal Research Essential

A recent report published by a National Research Council committee stated that laboratory animals, including those obtained from animal shelters and pounds are a "critical and necessary part" of human health research. The report urged the U.S. Congress to allocate sufficient funds to enable research facilities to meet federal animal care requirements and assist the U.S. Department of Agriculture with enforcing the Animal Welfare Act.

The Committee suggested that a recent publication, the Guide for the

Care and Use of Laboratory Animals, prepared for NIH by the Institute of Laboratory Animal Resources of the National Research Council, could provide guidance for researchers working with animals. The Committee also called for the use of fewer animals when possible and an increase in the use of data bases and other sources of information for those seeking appropriate research models.

### PAWS Vows Fight on National Institutes of Health AIDS Funding

The Progressive Animal Rights Society (PAWS) has begun a public campaign aimed at preventing the National Institutes of Health (NIH) from funding a \$2 million AIDS research project using monkeys at the University of Washington. The PAWS action marks the first time an animal rights group has moved against a project before the project has received funding. PAWS received a copy of the NIH grant application from a University secretary who typed the proposal.

## Animals Journal Seeks Articles

*Alternatives to Laboratory Animals* (ATLA) is an established journal published four times per year by the registered British charity Fund for Replacement of Animals in Medical Experiments (FRAME). The aim of the journal is to provide news and information about progress in the development of methods that may eventually lead to the reduction and replacement of animals in biomedical research and toxicology. The information consists of meetings reports, book reviews, biographical notes of key figures, reports on government legislation and any other relevant topic. The journal also invites comments and letters, reviews and original articles covering all aspects of the development, validation, introduction and use of alternatives to laboratory animals in biomedical research and toxicity testing. These are reviewed in the usual way by independent referees.

If you are contributing an article or review in North America, please send your material to the North American editor, Dr. **Oliver Flint**, Pharmaceutical Research and Development Division, Bristol-Myers Company, P.O. Box 4755, Syracuse, New York 13221, USA. Comments and letters should be sent to the managing editor, Dr. Michael Balls, FRAME, 34 Stoney St., Nottingham NG1 1NB, UK. Dr. Balls will be happy to consider applications for the supply of free copies of ATLA to libraries and institutions. The normal rate for ATLA is £16.00 per volume of four issues.

### Missing Journals?

Academic Press is mailing back issues to members who did not receive recent issues of FAAT and TAP. If you are still missing issues, please contact:

Eleanor Berner  
Academic Press, Inc.  
1250 Sixth Avenue  
San Diego, CA 92101  
(619) 699-6567