Society of Toxicology
NEWSLETTER

SEPTEMBER/OCTOBER 1991

SOT Minority Outreach Program Earns Praise from Participants, Receives Additional Funding

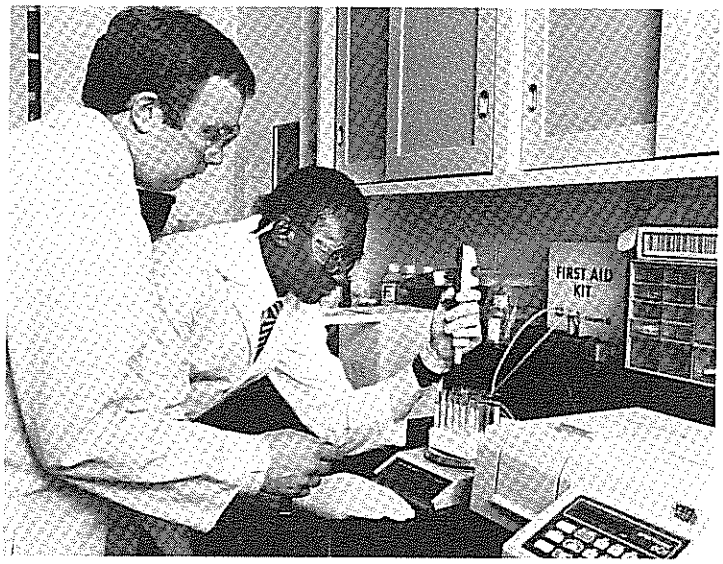
The SOT Education Committee recently completed a survey of participants in the 1991 Minority Outreach Program, which consisted of two days of events held in conjunction with the Annual Meeting in Dallas. Twenty-eight students, six science advisors, and nine host mentors responded to the questionnaire sent after the meeting. Thirty-nine of the 42 respondents ranked the program as excellent to outstanding. High marks were received for the special sessions, the mentoring program and the travel arrangements. Those surveyed recommended longer contact of students with the meeting and an improvement in advertising the program for next year.

The MARC Program of NIH will support a second year of funding for travel of minority undergraduate science majors to the SOT Annual Meeting in Seattle. A limited number of faculty members who advise undergraduate members of minority groups underrepresented in science will also be supported. The purpose of this program is to interest undergraduates in toxicology as a career choice; the Education Committee and the SOT *ad hoc* Tox 90s Educational Issues Task Force will again be sponsoring sessions in Seattle for these students.

About 20 host mentors for this minority outreach program are needed. Each mentor would be responsible for 1-4 students. These individuals would meet the students and escort them to the introductory toxicology sessions at the SOT meeting. They would also help these visitors feel genuinely welcome at the SOT meeting. Please contact Trish Small at SOT Headquarters, 202 371-1393, if you would like to serve as a minority mentor.

Funds for the minority outreach program of the Education Committee of SOT were recently supplemented by a gift from the R.W. Johnson Pharmaceutical Research Institute, Raritan, NJ. These funds will be used to support the travel of an undergraduate science major and his/her advisor to the Annual Meeting in Seattle. The SOT Education Committee will again be sponsoring a program to introduce toxicology to undergraduate science majors at this meeting.

Supplemental funds for this important program are gratefully accepted.



CIIT Summer Intern Jethro Ekuta (right) and Dr. David C. Dorman discuss analytical methods for the study of methanol toxicity in pigs. Dr. Ekuta is currently enrolled as a graduate student in the Department of Pharmacology at the University of Mississippi.

1991 Summer Internship Program a Success

The Society of Toxicology Summer Internship Program continues to generate strong support from both students and sponsors. In 1991, its third year, the program gave 15 undergraduates a real-life glimpse of a number of diverse toxicological settings. 207 students applied for summer internships sponsored by 21 organizations representing industry, academia, and government. Students were recruited on a national basis using flyers and applications distributed through science departments and undergraduate advisors at colleges and universities across the United States

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Deadline for next issues:

October 10, 1991
December 10, 1991

1992 SOT Annual Meeting
February 23-27
Seattle Convention Center
Seattle, Washington

President's Message

You may recall an important letter of March 29, 1990 sent by the Regulatory Affairs and Legislative Assistance Committee. It stressed the need for you to be more active and to make "your voice heard" on Capitol Hill. Now, more than one year later, it is even more critical that each of you get involved as the priorities for funding of domestic programs are being set.

What is different this year? Last year, the 1991 fiscal year (FY), the NIH budget passed by the Congress was $8.6 billion (9.6% over the previous year's $7.9 billion and overriding the 4.7% increase recommended by the President). This year, the federal budget is proposed as a zero-sum budget, and if Health and Human Services is to get more money, it requires that the money be taken from another domestic program. Thus, the proposed $8.8 billion for NIH will not survive without the efforts of many individuals, such as yourself, to prevent a "raid" on NIH programs.

Therefore, the budgeting process is different from last year. What does this all mean? As I understand it, stakes are higher and the scientific community must decide on and lobby for the programs of NIH that will provide the best compromise possible considering the inadequate funding for the various NIH programs. Some compromises have already been made by NIH in its prioritizing of program funding as requested by the administration. For example, some of us have been surprised to learn that certain long-standing NIH programs have been given a very low priority by NIH and most likely will not be funded next year: the Shared Instrumentation Grant (SIG) Program and the Biomedical Research Support Grant Program, both part of the National Center for Research Resources, are just two examples.

The SIG program is used to provide research instruments that can only be justified on a shared research basis. The President's budget for FY 1992 reduces the SIG program to one quarter of its present level. This is a cut from the 1991 budget of $32.5 million to the requested fiscal year 1992 budget of only $8.9 million.

Such a severe reduction in just one year indicates what can happen to any of NIH's programs -- they can simply be phased out in the President's budget. This has happened to the Biomedical Research Support Grant (BRSG) Program. The President's budget zeroed out this, the only program that provides funds to research institutions on a formula basis. The BRSG grants are very cost effective with no indirect costs and with the cost of the research proposal review borne by the institution. Funding for the BRSG program has declined steadily in recent years, from $59.8 million in 1987 to $22.3 million in FY 1991. However, for FY 1992, the Administration is requesting elimination of the BRSG program! Because of the low priority given to the BRSG program by NIH, the President's request has been accepted by the Appropriations Subcommittee on Labor, Health and Human Services, chaired by William H. Natcher (D-KY).

To me, this means that some budgets are reduced to "grease the squeaky wheel." Thus, NIH will be required to have another program next year as its lowest priority, and another program will be zeroed out by the Administration. Congress, in response to public pressure to increase spending on domestic programs, may concur with the Administration recommendation, and you will learn about it only when the program elimination has been completed. I hope you see the possible pattern resulting from a zero-sum budget. If we do nothing, another NIH program may be zeroed out next year and yet again the following year! What is distressing about this approach is that programs are eliminated on the basis of the budgets being decreased each year, which builds justification for their elimination! The rationale being that decreased yearly budgets can be equated with a lessening worth of the program.

Do I have your attention? Now is the time to get involved or the process will inevitably target your program -- if it hasn't already. I can only repeat what has been said by others, "We can no longer sit back and say, 'We're scientists and we do good things, and therefore we're entitled to X amount of dollars.'"

How do you go about expressing our interests to members of the administration and Congress? Your first efforts should be to communicate with your own congressman or congresswomen and to the two senators from your state. Members of congress rank spontaneous letters from constituents as having the highest impact

of all forms of communication -- with telephone calls ranking second. I urge you to study the process of lobbying and learn as much as you can about how to "make your voice heard." The SOT will assist you in obtaining materials useful to you for communicating with the appropriate members of Congress and to those within the Administration. Don't wait! Start your efforts today to make a difference in the funding of medical research by the federal government.

Sincerely,

Don Reed

Format Change for SOT Journals

Beginning in 1992, the Society of Toxicology's scientific journals, *Fundamental and Applied Toxicology* (FAAT) and *Toxicology and Applied Pharmacology* (TAP) will undergo a change in format. Both journals will increase in size from 6 7/8 x 10 inches to 8 1/2 x 11 inches. Along with the increase in size, the covers of both journals will undergo a change in design to enhance their position among the leading toxicology journals.

In addition to design and size changes, TAP will also undergo a change in frequency of publication. Instead of receiving five volumes of three issues each, TAP subscribers will now receive six volumes of three issues each. The number of pages published will be approximately equivalent to the number currently planned, so SOT members will receive approximately the same number of published papers. ●

Applications Sought for Robert L. Dixon Award

The SOT Education Comittee will administer the 1992 Robert L. Dixon Award, which will be granted to a full-time graduate student in the area of reproductive toxicology. The Award carries a stipend of $2,000 to enable the student to attend the International Congress on Toxicology VI in Rome, Italy, June 28 - July 3, 1992.

The Award was established in memory of SOT Past President Robert L. Dixon, who died in 1987, by his friends as a tribute to his dedication to the field of toxicology and student training.

To apply, please send a letter of application, two sponsor letters from Full or Associate members of SOT and a letter from the applicant's faculty advisor, research director or member of the applicant's advisory committee stating that the applicant is a full-time graduate student, giving the student's expected graduation date, and summarizing the student's training program. If the faculty advisor is an SOT member, that advisor letter can serve as one of the required two sponsor letters. If not, three (3) letters are required. The deadline for receipt of all application materials at the SOT office is November 1, 1991.

Applicants will be notified of the outcome of the Award selection process by January 10, 1992, with the successful applicant recognized at the SOT Annual Banquet in Seattle, February 26. ●

Summer Internship Success

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and Canada. This year's program built on the foundation of previous successes, which have established the SOT Summer Internship Program as one that will pay long-term dividends to the entire discipline of toxicology.

SOT members interested in supporting one or more interns during the summer of 1992 should complete the internship form enclosed in this newsletter. SOT also welcomes single page flyers or information sheets providing additional information on positions. In order to maintain a successful program, responses must be received at SOT Headquarters by December 13, 1991. The Society of Toxicology and the *ad hoc* Tox 90s Educational Issues Task Force extend a sincere thanks to sponsors of the 1991 Summer Internship Program, as well as to others offering encouragement, suggestions, and other forms of support. Additional sponsors are encouraged to invest in the future of toxicology by participating in the Summer Internship Program. ●

SOT Welcomes New Corporate Associate Members

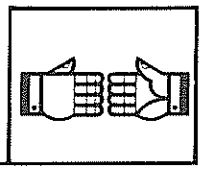
The Society of Toxicology is extremely pleased to welcome new Corporate Associate members for 1991: Abbott Laboratories, Cantox Inc., Daiichi Pharmaceutical Co., Genentech, Inc., The Gillette Company, The NutraSweet Company, Shionogi & Co., Ltd., UNOCAL Corporation. SOT Corporate Associate Members have played an especially valuable role in helping expand Society programs, furthering educational efforts and advancing the profession of toxicology throughout the world.

The fact that two of the newest SOT Corporate Associate members are based in Japan underscores the increasing international scope of the SOT. SOT looks forward to working with its new Corporate Associate members and encourages other companies to become involved in the global advancement of toxicology. ●

SOT Receives Student Travel Grant from FMC

The FMC Corporation has generously provided SOT with a grant for student travel for the 1992 Annual meeting. The SOT is grateful for this contribution to its educational activities. ●

Regional Chapter News



Central States Chapter Holds Annual Meeting

The 1991 Annual Meeting of the Central States Regional Chapter was held at the Monsanto Company in St. Louis, Missouri, April 12-13. The meeting was at-

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Regional Chapter News

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tended by 126 registrants, the largest attendance in the eight year history of the Chapter. The Program Committee, consisting of **Will Ridley,** Chairman, **David Brewster, Suzane Hendrich** and **Tom Pazdernik,** was responsible for organizing the two day program.

The Program Committee and all attendees are indebted to the efforts of the Monsanto Local Organizing Committee and the meeting sponsors which included Marion Merrell Dow, Inc.; Mobay Corporation; Monsanto Agricultural Company; Monsanto Environmental Policy Staff; and the Technical Community of Monsanto. ●

Mid-Atlantic Society of Toxicology Sponsors Symposium

The Mid-Atlantic Society of Toxicology will sponsor a one day symposium, "Principles and Practices of Developmental Toxicology," on Thursday, October 10, 1991 in Langhorne, Pennsylvania at the Royce Hotel. The presentations will include basic principles of developmental toxicology, and models used to assess developmental toxicology, both *in vivo* and *in vitro*. Other topics to be discussed include the following: molecular basis of cell to cell recognition during brain development, perturbations by toxicants of cell recognition and migration during neural development and regulatory issues concerning developmental toxicology.

For further details contact: **Theresa Kirley, Ph.D.,** Hoffmann-La Roche Inc., Department of Toxicology and Pathology, 340 Kingsland Street, Building 100/2, Nutley, NJ 07110. ●

Specialty Section News

Risk Assessment Specialty Section Award

The Risk Assessment Specialty Section Award, presented at the Annual Meeting, is open to all SOT members as well as non-members. Initial review of presentations is conducted using abstracts on risk assessment submitted to the Society. Selection of the award-winning presentation is based on supporting data (methodology, tables, graphs and other relevant information) provided by the author.

Participants must submit five copies of their abstract to the Risk Assessment Award Committee Chairman, **Dr. Charles Abernathy,** Health Effects Branch (WH-550D), USEPA, 401 M Street, SW, Washington, DC 20460, by October 15, 1991. Only the senior author (the one listed first on the abstract) is eligible for the award. The senior author (or representative) must provide copies of supporting data to the designated committee members at least four weeks prior to the opening date of the Annual Meeting. Presentations will be judged on originality and potential impact on risk assessment. ●

Student Awards Program of Carcinogenicity Specialty Section

The Carcinogenicity Specialty Section of the Society of Toxicology will offer three awards for the best carcinogenesis abstracts presented at the Annual Meeting in Seattle, Washington. Cash Awards: first ($500), second ($300), and third ($200) ranked abstracts will be presented with a framed certificate at the meeting of the Carcinogenesis Specialty Section in Seattle. It is expected that the recipients will be present to receive their award.

The abstract to the Annual Meeting of the SOT and a cover letter, both in triplicate, will constitute application for a student award. It is expected that the student will be the primary author of the abstract. An abstract can only be submitted to one Specialty Section. The cover letter must be from a sponsoring member of the SOT and should indicate the student's role in the project and may expand upon the importance of the work in the context of carcinogenesis.

Interested candidates should submit in triplicate both their abstract and cover letter by December 15, 1991 to: **Dr. B.D. Roebuck,** Department of Pharmacology and Toxicology, Dartmouth Medical School, Hanover, New Hampshire 03756.

Concerns regarding the application procedures should be addressed to Dr. Roebuck at (603) 646-7676 or fax (603) 646-6129. ●

Specialty Section News and Dues

Due to the increasing activities and expenses incurred by the Specialty Sections, the Specialty Section presidents recommended to SOT Council that dues be raised $5 in 1992. Council, considering the request and noting that Specialty Section dues had not increased since their inception in 1980, approved the recommendation, which will allow increased funds for activities of the Sections. Therefore, Specialty Section dues will be $15 in 1992, although students will receive reduced dues of $10. An additional request by the Specialty Section presidents was the authorization for the use of their funds to support speaker travel expenses to SOT regional chapter meetings. This was also approved by Council. ●

Member News

Marion Ehrich, Ph.D., represented the Society of Toxicology at the RCMI/NIEHS "Symposium on Environmental Health Sciences and Toxicology" held in Atlanta, April 24-25, 1991. The title of her presentation was "Training Tomorrow's Toxicologists."

Dr. Bernard A. Schwetz, D.V.M., Ph.D., Chief of the Systems Toxicity Branch at the National Institute of Environmental Health Sciences in Research Triangle Park, NC, is the recipient of the National Institutes of Health Director's Award, one of the major awards for NIH staff. The award recognizes Dr. Schwetz's outstanding leadership within the

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National Toxicology Program, and his development and strengthening of national research efforts in reproductive and developmental toxicology. This is the second major award Dr. Schwetz has received in recent months. He received SOT's Arnold J. Lehman Award at the 1991 Annual Meeting in Dallas. ●

Correction

The July/August 1991 SOT Newsletter incorrectly announced **Dr. James E. Klaunig's** new position. He has been appointed Professor and Director of Toxicology Division, Department of Pharmacology and Toxicology at Indiana University School of Medicine, Indianapolis. ●

Obituary

Bob D'Amato

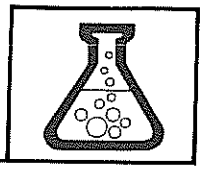
Robert D'Amato passed away on April 29, 1991 in Cincinnati, Ohio following a month of hospitalization for a respiratory illness. He had been employed by The Procter & Gamble Company for 17 years, and at the time of his death, was Manager, Worldwide Product Safety.

Bob's major area of expertise was risk assessment. He was instrumental in helping to establish programs addressing this scientific endeavor not only at Procter & Gamble, but at academic institutions such as Rutgers, the University of Arizona, the University of Texas and Ohio State University. He was also a major contributor to the development and effectiveness of the Regional Training Conferences on Quantitative Risk Assessment, and served on several advisory panels for the Food and Drug Administration and the Environmental Protection Agency. Bob was a member of the Board of the Chemical Industry Institute of Toxicology, representing Procter & Gamble since 1985, and was also influential in guiding the science and policy directions of the American Industrial Health Council and the International Life Sciences Institute.

Bob's contributions to the SOT were instrumental in establishing and maintaining several of the Society's educational/recruitment programs. He was an active supporter of the Graduate Student Fellowship Awards, the Summer Internship Program, and the minority programs that have recently been introduced at the Society's Annual Meetings. The Education Committee and the ad hoc Tox 90's Educational Issues Task Force routinely called on Bob for his insightful recommendations and support of new programs. He was an outstanding spokesperson for these efforts, and gave generously of his time to assure their success and promote them among his colleagues. Bob's dedication, generosity and enthusiasm will be greatly missed.

The Toxicology Education Foundation has received a number of contributions in memory of Dr. Robert D'Amato. ●

Placement Services



Environmental Analyst/Engineer

Responsible for conducting environmental impact studies on proposed and current facilities; coordinating clean-up efforts of contaminated sites owned by the company; documenting and ensuring the proper disposal of hazardous wastes through vendors; testifying on matters before the Department of Natural Resources, the Environmental Protection Agency, the MPSC and other regulatory agencies; and for monitoring federal, state and local legislation and environmental protection programs. Responsible for investigating proposed routes to ensure there is no encroachment on significant archeological sites. Interfaces with the Secretary of State's Office, the Bureau of History and the Survey and Land Department to negotiate routing changes as necessary when such sites are discovered. Evaluates social and economic impacts of proposed construction and provides written and oral testimony to Administrative Law Judges of the MPSC on proposed and alternative routes and locations for pipelines, compressor stations, lateral connections, etc. Prepares written and community groups. Performs other related duties as assigned. Two openings; analyst and engineer. Downtown Detroit; Shift: Monday - Friday; salary range: minimum $32,000, midpoint $40,800, maximum $49,000 plus. Comprehensive benefits package offered. Bachelor's degree in Environmental Engineering, Toxicology, Geology, Forestry, or a related field or equivalent field, approximately three (3) years plus experience with monitoring and testing regarding environmental protection regulations and/or experience in Toxicological work. Send resumes to: Michigan Consolidated Gas Company, Employment Office, G.B.2, 500 Griswold, Detroit, MI 48226, Attention: Naomi Taylor. ●

Product Stewardship Manager

Albright & Wilson Americas, a manufacturer of quality industrial and specialty chemicals, is seeking an experienced life science professional to manage our Product Stewardship Program. This will include the preparation of material Safety Data Sheets, evaluation and assessment of product safety issues and ensuring governmental compliance in countries of product end use, i.e., U.S. EPA, TSCA, FIFRA, OSHA Hazard Communications, Canadian WHMIS, etc. Additionally, this position will involve functioning as company representative on industry task groups and trade associations. Candidates need only respond who have a BS in life sciences and an MS in toxicology. A Ph.D. in toxicology is desired. In addition, 5-10 years of industrial work experience in product safety work in the chemical industry is preferred. As a division of the Fortune 50 company Tenneco Inc., we offer a competitive salary and an excellent benefits package. Please send letter of interest, resume, and salary requirements to: Employee Relations, Albright & Wilson Americas, P.O. Box 26229, Richmond, VA 23260-6229. EOE M/F/H/V ●

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Society of Toxicology

SEATTLE

While planning continues at Headquarters and among various committees for the 1992 Annual Meeting in Seattle, SOT members should begin thinking about their own plans for the meeting. The Headquarters office is available to assist members and answer any questions they might have about the upcoming meeting.

Reserving Space for Auxiliary Meetings

Specialty Sections, committees, alumni organizations and others who wish to hold a meeting or social function at the Seattle Convention Center during the week of the meeting should complete the Auxiliary Meeting Form included with the newsletter and return it to Clarissa Russell at SOT Headquarters no later than **December 1, 1991**. Space will be assigned on a first-come, first-served basis, after SOT scientific and social programs have been accommodated.

Forms will be sent to Committees, Specialty Sections, Chapters and other groups who have held an ancillary function within the last two years. ●

Placement Services

The Society of Toxicology Placement Service provides employers and job seekers with an opportunity to establish contacts relating to their specific needs and areas of interest.

Pre-Meeting

Both employers and candidates for positions must register with the SOT Placement Service and pay a nominal fee. Employers complete job description forms and candidates complete narrative resumes and computer forms. Information provided on the computer forms is used to help "match" candidates with positions described by employers. Employers registering before December 31, 1991 receive packets with resumes of registered candidates and "matches" for specific positions. Please contact the SOT office for additional Placement Service forms.

On-Site

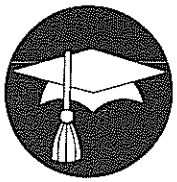
The SOT Placement Service will be open on Sunday from 10:00 am to 3:30 pm for registration of employers and candidates only, and Monday-Wednesday for full placement services. Although pre-registration is encouraged, registrations for the placement service are also accepted at the Annual Meeting. During the Annual Meeting, employers scan the complete packets of resumes at the Placement Service Suite. Candidates look over up-to-date job listings in a room adjacent to the Placement Service Suite. Contacts are made via a message board. The Placement Service does not arrange interviews. Neither employers nor candidates need be present, however, both are urged to use this opportunity for personal contact.

All job placement will be carried out via the Placement Service. No employer will be allowed to advertise positions elsewhere at the Annual Meeting.

Post Meeting

All candidates will receive a mailing about one month after the meeting that contains a list of all jobs posted at the Annual Meeting. Employers will receive a complete packet of candidates' resumes. The Placement Service should be notified promptly after positions are filled. ●

Continuing Education Courses for 1992 SOT Annual Meeting



The Continuing Education Committee, **Janice E. Chambers, Jon C. Cook, William F. Greenlee, Andrew Parkinson, Michael A. Trush,** and **Kendall B. Wallace** (Chairperson), is pleased to offer nine courses at the upcoming SOT Annual Meeting in Seattle, Washington. Three of the courses will be repeated in both the morning and afternoon sessions. Both basic and advanced course topics will cover target organ toxicity, the toxicity of selected agents, risk assessment, and computer based PBPK modeling. As in past years, the selection of courses was based on suggestions from the membership including those from previous years' questionaires. Note: the Continuing Education Committee courses at the 1992 Annual Meeting in Seattle will be held on **Sunday, February 23, 1992.** This is a change from the previous year's scheduling. ●

Implementing Physiologically-Based Pharmacokinetic Models - Interactive Computer Session AM/PM

Chairperson: Michele A. Medinsky, Chemical Industry Institute of Toxicology, Research Triangle Park, NC

The objectives of this basic course are to provide attendees with "hands-on" computer experience and to permit implementation of basic concepts in physiologically-based pharmacokinetic (PBPK) modeling. Course lecturers will guide the attendees through the exercises as a group and will provide individual consultations as needed. The first exercise will focus on the writing and running of PBPK models on the computer. The computer code and equations for setting up a model for a volatile organic chemical will be used as a starting point. The second exercise will involve adapting the model to simulate oral, as well as inhalation, exposure. Effect of altered gastrointestinal absorption on model simulations will be explored. The third exercise will focus on estimation of metabolic parameters (Vmax, Km, and Kf) using the model and *in vivo* data sets. The fourth exercise will go

beyond a single exposure and attendees will learn how to alter model code to perform simulations of chemical behavior over a range of doses to generate "dose-response" curves. The final exercise will introduce concepts and computer code describing chemical-protein binding. Binding constants that best describe a data set will be determined and a simple form of response modeling involving protein induction will be explored.

Writing and Running a PBPK Model for Volatile Organic Chemicals on the Computer, Rory B. Conolly, Chemical Industry Institute of Toxicology, Research Triangle Park, NC

Incorporating an Oral Exposure Route into a PBPK Model for Inhalation, Richard H. Reitz, The Dow Chemical Company, Midland, MI

Determining *In Vivo* Metabolic Parameters Using PBPK Models, Michael L. Gargas, Chemical Industry Institute of Toxicology, Research Triangle Park, NC

Setting Up Models for Evaluating Dose-Response Relationships, Harvey Clewell, III, ASD/SEH, Wright Patterson AFB, OH

Accounting for Chemical-Protein Binding and Induction of Protein Synthesis in PBPK Models for Dioxin, Melvin E. Andersen, Chemical Industry Institute of Toxicology, Research Triangle Park, NC

Case Studies in Risk Assessment: Emphasis on Exposure AM/PM

Chairpersons: Donald H. Hughes, Procter & Gamble Company, Cincinnati, OH, and Carol J. Henry, Risk Science Institute, International Life Sciences Institute, Washington, DC

This basic course will address the continuing interest scientists have in assessing health risks and in becoming more knowledgeable about the implications of exposures to environmental substances. Case studies will be used to demonstrate the principles and practices of risk assessment, with an emphasis on elements of exposure assessment. Determining the magnitude, frequency, duration, and route of contact with a substance in the environment is part of the overall risk analysis process, as is identifying the individuals and populations exposed under the circumstances of use of the substance. Formaldehyde, d-limonene, ethyl acrylate, and methyl mercury will be given detailed treatment to illustrate the source of the material, the ambient levels of material, the amount of material taken up by people using the material, the amount of material reaching critical target organs, and the characterization of the potential health risk from such an exposure. Conclusions and recommendations from current and ongoing risk assessments for these chemicals will be incorporated into the program.

Principles of Exposure Assessment: Consumer Use of Solvents, Michael Callahan, USEPA, Washington, DC

Physiologically-Based Pharmacokinetic Modeling for Ethyl Acrylate and Its Implications for Route-to-Route Extrapolation of Risk, Clay B. Frederick, Rohm & Haas Company, Spring House, PA

Methyl Mercury in California Lakes - Assessing the Health Risk from Contaminated Sport Fish, James W. Stratton, California Department of Health Services, Sacramento, CA,

Use of Mechanistic Data in the Risk Assessment of Formaldehyde, Thomas Starr, Environ Corporation, Arlington, VA

Risk Assessment of d-Limonene, Representing Chemicals that Induce Alpha-2u-Globulin Nephropathy and Renal Tumors in Male Rats, Gordon Hard, American Health Foundation, Valhalla, NY

Development and Safety Evaluation of Recombinant Products for Pharmaceutical and Agricultural Use AM

Chairperson: William F. Greenlee, Purdue University, West Lafayette, IN

This basic course is intended to provide the student with increased knowledge and understanding of the scientific basis and regulatory issues relevant to biotechnology products. Due in part to the rapid growth of the field and the unique character of some of the products produced by the genetically-engineered organisms, regulatory agencies accustomed to evaluating chemicals or pharmaceutical agents are presented with significant challenges when asked to assess and quantitate the potential human health risks associated with the use of biotechnology products. The first lecture will focus on the differences between development programs involving xenobiotics versus protein therapeutics. Through the use of case studies involving recombinant DNA molecules, the interactive and complementary roles of regulatory and experimental toxicology will be presented. An important component in safety evaluation is the acquisition of knowledge of biomacromolecule pharmacokinetic behavior across species. The second lecturer will discuss the use of this information for extrapolated preclinical safety and efficacy data to establish doses in clinical studies on the basis of pharmacokinetic equivalence rather than body weight. The third lecture will present the regulatory perspective, focusing on the issues and scientific needs relevant to human risk assessment of biomacromolecules. The final lecture will be on the development of biotechnology products in plant agriculture. This lecture will emphasize the evolving regulatory structure for these products.

Pharmaceutical Toxicology, James D. Green, Genentech, Inc., South San Francisco, CA

The Role of Pharmacokinetics in the Design of Toxicology Studies, Joyce Mordenti, Genentech, Inc., South San Francisco, CA

Regulatory Issues Associated with Preclinical Safety Evaluation of Biotechnology Products, Joy Cavagnaro, Center for Biologics Evaluation and Research, FDA, Bethesda, MD

Evolving Regulatory Structures for Biotechnology in Plant Agriculture, Alan Gould, DowElanco, Midland, MI

Developmental Toxicity: Cellular and Molecular Approaches PM

Chairperson: George P. Daston, Procter & Gamble, Cincinnati, OH

The objective of this advanced course is to describe the application of recent advances in biochemistry and cellular and molecular biology to specific problems in developmental toxicology. The impact of these new techniques on our understanding of teratogenesis, improving the sensitivity of developmental toxicity assessments, and in predicting human health effects is likely to be significant. The first lecture will describe the use of molecular techniques, including Western blotting, Northern blotting, two-dimensional gel electrophoresis, *in situ* hybridization, and transgenic animals, to detect chemically or physically induced changes in gene expression during development. The second lecture will describe recent advances in understanding the role of homeotic gene expression and morphogenetic gradients in establishing patterns in the embryo. The adverse effects of retinoic acid will be used to illustrate the role of these processes in normal and abnormal development. The third lecture will describe the use of cellular techniques to study mechanisms of abnormal development, including cell cycle analysis and vital staining, characterization of receptor expression, and model cellular systems. The fourth lecture will describe the role of xenobiotic metabolism, both embryonic and extra-embryonic, in abnormal development. The role of bioactivation, detoxification and elimination in susceptibility of humans and animals to teratogens such as anticonvulsants, benzo(a)pyrene and thalidomide will be discussed.

Molecular Approaches in Abnormal Development, Philip E. Mirkes, University of Washington, Seattle, WA

Homeotic Gene Expression and Teratogenesis, Joseph F. Grippo, Hoffmann-La Roche, Nutley, NJ

Cellular Techniques in Developmental Toxicology, John M. Rogers, U.S. Environmental Protection Agency, Research Triangle Park, NC

The Role of Metabolism in Chemical Teratogenesis, Peter G. Wells, University of Toronto, Toronto, Ontario

Molecular Control of Cell Proliferation AM/PM

Chairperson: David J. Doolittle, RJR-Nabisco, Winston-Salem, NC

The objective of this advanced course is to provide a state-of-the-art update on selected aspects of the signal transduction pathways controlling cell proliferation. Emphasis will be placed on growth factors and their receptors and on intracellular calcium fluxes. Rates of DNA synthesis and cell proliferation in mammalian tissues are controlled by intracellular molecular signal transduction pathways. Xenobiotic-induced disruption of these pathways is likely to result in toxicity. Chemical agents may affect intracellular signal transduction either directly (e.g. by altering intracellular calcium homeostasis) or indirectly (e.g. by altering extracellular growth factor concentrations). Substantial evidence indicates that increases in cell proliferation may play an important causal role in chemical carcinogenesis. Some components of the signal transduction pathways controlling cell proliferation are coded by genes termed proto-oncogenes and tumor suppressor genes. Since current evidence suggests that critical alterations in these genes may lead to uncontrolled DNA synthesis and cell proliferation, the biology of these genes will be discussed. Finally, the evidence suggesting a causal role for increased cell proliferation in chemical carcinogenesis will be reviewed.

Overview of Cellular Signal Transduction, David Doolittle, RJR-Nabisco, Winston-Salem, NC

Role of Ionized Cytosolic Calcium in Cell Proliferation and Differentiation, Benjamin Trump, University of Maryland, Baltimore, MD

Role of Growth Factors and Growth Factor Receptors in the Control of Cell Proliferation, David Bombick, RJR-Nabisco, Winston-Salem, NC

The Biology of Oncogenes and Tumor Suppressor Genes, Cheryl Walker, CIIT, Research Triangle Park, NC

The Importance of Cell Proliferation in Carcinogenesis, Bruce Ames, University of California-Berkeley, Berkeley, CA

Renal Toxicology PM

Chairperson: Lois Lehman-McKeeman, Procter & Gamble Co., Cincinnati, OH

The objective of this basic course is to provide an overview of the susceptibility of the kidney to injury, the kinds of chemicals that are nephrotoxic, and the mechanisms underlying the development of the toxicity. Special emphasis will be placed on species differences in nephrotoxicity and how these differences influence reliable extrapolation across species. The first lecture will discuss the anatomical and physiological features that influence toxicological events in the kidney. Activities associated with nephron heterogeneity will be highlighted. Routine tests of renal function, along with newer approaches, will also be discussed. The nephrotoxicity of therapeutic agents, including antibiotics, anti-neoplastic drugs and analgesics will be presented by the second lecturer highlighting the functional deficits observed clinically and experimentally. This lecture will also discuss current understanding of pathophysiological/biochemical mechanisms of drug-induced nephrotoxicity. The third lecture will focus on nephrotoxic agents of environmental concern, such as heavy metals, halogenated hydrocarbons, agricultural chemicals and petroleum products. Structure-nephrotoxicity relationships will be discussed for the halogenated alkenes. The fourth lecture will discuss key factors that contribute to species differences in nephrotoxicity, including contrasts in renal structure and function, and renal and extra-renal metabolism. The role of these differences in extrapolation from laboratory animals to humans will be considered.

Renal Anatomy, Physiology and Functional Assessment, William O. Berndt, University of Nebraska Medical Center, Omaha, NE

Therapeutic Nephrotoxicants, Robin S. Goldstein, Smith-Kline Beecham Pharmaceuticals, King of Prussia, PA

Environmental Nephrotoxicants, Gary O. Rankin, Marshall University School of Medicine, Huntington, WV

Species Differences in Nephrotoxicity, Edward A. Lock, ICI Corporation, Macclesfield, Cheshire, UK

Liver Toxicology AM

Chairperson: Harihara M. Mehendale, University of Mississippi Medical Center, Jackson, MS

The objective of this basic course is to provide an overview of the physiological, biochemical and histopathological mechanisms of liver injury. The first lecture will cover aspects of liver structure, physiology and function, that influence the responses of the liver to chemical toxins. These aspects include hepatic organization into functional units, dual blood supply, acinar oxygen gradients, and enterohepatic circulation. Ammonia detoxification will be described as an example of how the heterogeneous distribution of transport proteins and enzymes along the acini allow the liver to fine tune the removal of an endogenous waste product. The second lecture will focus on the role of mammalian cytochrone P-450 enzymes in the bioactivation and inactivation of xenobiotics. Experimental approaches for determining the role of individual cytochrome P-450 enzymes in the bioactivation and detoxication reactions in experimental animals and in humans will be emphasized. The third lecture will provide an overview of hepatobiology and the role of nonparenchymal cells in liver injury. The interactive role of endothelial, fat-storing, Kupffer, Pit, and bile duct epithelial cells will be considered, along with their reactive mediators and cytokines. The fourth lecture will focus on the mechanisms of liver injury. Experimental approaches employed in studying mechanisms of liver injury caused by single or chemical combinations and the role of endogenous hormetic mechanisms will be discussed.

Structure, Physiology and Liver Function, Mary Treinen Moslen, University of Texas Medical Branch, Galveston, TX

Role of Cytochromes P-450 in Bioactivation and Detoxication, James R. Halpert, University of Arizona, Tucson, AZ

Nonparenchymal Cells and Hepatotoxicity, Deborah L. Laskin, Rutgers University, Piscataway, NJ

Hepatotoxic Mechanisms, Harihara M. Mehendale, University of Mississippi Medical Center, Jackson, MS

Basic and Applied Hematotoxicity AM

Chairperson: Dan Wierda, Eli Lilly & Company, Greenfield, IN

This Basic course will review recent advances in our understanding of mechanisms of chemically-induced hematotoxicity. The first lecture will discuss the basic biology of bone marrow stem cells with respect to the interpretation and design of studies to evaluate the effects of drugs and chemicals on stem cells. The second lecture will discuss the development of novel *in vitro* methods for growing bone marrow stromal cells and hemopoietic cells which make it possible to identify some of the cell-interaction molecules that mediate communication between stromal cells and developing myeloid and lymphoid cells. The third lecture will describe the role of xenobiotic metabolism in the toxicity of chemicals to the bone marrow. Benzene and benzo(a)pyrene will be used as examples to illustrate the importance of bioactivation, detoxification and elimination, both within the bone marrow and other organs, as underlying factors in the development of toxicity to the bone marrow as a whole as well as to specific bone marrow cell lineages. The final lecture will provide an overview of different approaches that can be used to evaluate the hematotoxicity of anticancer agents during drug development. The bone marrow is frequently the dose-limiting organ of toxicity for anticancer and antiviral drugs and the accurate characterization of the relative hematotoxicity of these agents is important with respect to the design and development of more effective, but less toxic, drugs.

The Biology of Hemopoietic Stem Cells and Progenitor Cells, Richard D. Irons, University of Colorado Health Sciences Center, Denver, CO

Regulation of Myelopoiesis and Lymphopoiesis by Bone Marrow Stromal Cells, Kenneth Dorshkind, University of California, Riverside, CA

The Role of Xenobiotic Metabolism in Bone Marrow Toxicity, Michael Trush, The Johns Hopkins University, Baltimore, MD

***In Vitro* Methods for Evaluating the Hematotoxicity of Pharmaceutical Agents,** Dan Wierda, Eli Lilly & Company, Greenfield, IN

Toxicity of Halogenated Hydrocarbons PM

Chairman: Philip G. Guzelian, Medical College of Virginia, Richmond, VA

This basic course will describe and explain the types of toxicities induced by the alkane and alkene halogenated hydrocarbons. Hepatic and renal toxicity have long been documented as prominent effects induced by many of the halogenated hydrocarbons; these classic responses will be detailed by the first speaker. The second speaker will discuss the biochemical mechanisms responsible for the damage to the liver and kidney, with particular reference to the interactions these compounds have within cells. Next, the cytochrome P450 enzymes implicated in bioactivating these halogenated hydrocarbons to their toxic metabolites will be described, including the characteristics of the enzyme and the nature of the bioactivation reaction. Lastly, methods used to identify tissue targets of the reactive metabolites will be described. Binding sites for the activated metabolites can be identified immunochemically to aid in the characterization of the halogenated hydrocarbon-induced toxicity and the mechanisms responsible for this toxicity.

Halogenated Hydrocarbon Toxicity: Liver and Kidney, Gabriel Plaa, University of Montreal, Montreal, Quebec, Canada

Biochemical Mechanisms and Cellular Interactions, M. W. Anders, University of Rochester, Rochester, NY

Bioactivation of Halogenated Hydrocarbons by Cytochrome P450 Enzymes, Judy Raucy, University of New Mexico, Albuquerque, NM

Immunochemical Techniques for Determination of Tissue Targets of Reactive Metabolites of Halogenated Hydrocarbons, Lance Pohl, National Heart, Lung and Blood Institute, Bethesda, MD

Placement Services

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Toxicology Positions

McLaren/Hart, a top ten national environmental consulting firm, is setting the pace in the environmental industry. ChemRisk, a division of McLaren/Hart specializes in conducting human and wildlife risk assessments, environmental fate and transport modeling, exposure assessments, toxic tort litigation support, environmental and occupational toxicology, and air quality assessments. ChemRisk is currently expanding and is seeking high-quality, self-motivated and technically superior professionals to join our team. The positions available are:

Supervising Toxicologist

(Portland, ME, and Alameda, CA assignments)

Ph.D. in Toxicology or Health Sciences preferred with six to ten years environmental/risk assessments consulting experience required.

Environmental Toxicologist

(Houston, TX, and Portland, ME assignments)

M.S. Toxicology (Doctorate preferred) with two to five years experience in risk assessment. Prior consulting experience required.

Assistant Toxicologist

(Portland, ME, Alameda, CA, and Warren, NJ assignments)

B.S. in Toxicology (MSPH preferred) with one to two years experience in research and consulting required.

McLaren/Hart offers an excellent compensation/benefits package and a non-smoking work environment. Please send resumes and salary history to McLaren/Hart, Dept. SOT, 1135 Atlantic Avenue, Alameda, CA 94501. Affirmative Action Employer M/F/H/V. ●

Study Director (Developmental Toxicology)

Join us as we expand into our new world-class facility in Madison, Wisconsin. This position requires a Ph.D. and a minimum of 5 years experience in Developmental Toxicology; Neurobehavioral Toxicology experience desirable. Individuals with industrial experience and recognition as an expert in Developmental Toxicology preferred. Strong publication record, previous study direction experience, familiarity with regulatory guidelines, GLP's and automated data collection, and strong verbal and written communications skills required. Send letter of interest and resume to: Human Resources Dept., Hazleton Laboratories, 3301 Kinsman Blvd., Madison, WI 53704. AA/EEO Employer. ●

Study Director (General Toxicology)

Join us as we expand into our new world-class facility in Madison, Wisconsin. This position requires a Ph.D. with 3+ years industrial experience. Strong publication record, previous study direction experience, familiarity with regulatory guidelines, GLPs and automated data collection, and strong verbal and written communications skills required. Send letter of interest and resume to: Human Resources Dept., Hazleton Laboratories, 3301 Kinsman Blvd., Madison, WI 53704. AA/EEO Employer. ●

Study Director (Neurotoxicology)

Join us as we expand into our new world-class facility in Madison, Wisconsin. This position requires a Ph.D. and 5 years experience in neurotoxicology or neuropharmacology. Experience with animal neurobehavioral and electrophysiological techniques desired. Strong publication record, previous study director experience, familiarity with regulatory guidelines, GLPs and automated data collection, and strong verbal and written communications skills required. Send letter of interest and resume to: Human Resources Dept., Hazleton Laboratories, 3301 Kinsman Blvd., Madison, WI 53704. AA/EEO Employer. ●

Environmental Toxicologist

Newly established Environmental Toxicologist to serve as statewide expert on environmental issues dealing with pesticides, fertilizers and other agrichemicals. Also serve as administrative overseer of quality assurance laboratory. Ph.D. with a preference of at least 5 years experience in environmental toxicology, which includes familiarity with risk/benefit type analysis and quality control procedures required by EPA as well as lab management practices and procedures. Position located in Boise, Idaho. Salary range $43,971 to $58,947 plus benefits program. For more information contact Rod Awe, Idaho Department of Agriculture, Box 790, Boise, ID 83701, 208-334-3243. Closing date for applications is November 29, 1991. ●

Director (Toxicology)

This position requires a Ph.D. in Toxicology and/or Pharmacology and 10 years experience in the conduct of pre-clinical toxicology studies, including 5 years supervisory experience; Board certified preferred. Responsibilities include assigning studies, supervising other study directors, reviewing study design and consulting with other areas. We offer a professional environment that reflects our commitment to excellence. Plus, you'll enjoy working and living in the Washington, D.C. metropolitan area with all its cultural, educational, and recreational activities. Send letter of interest and resume to: Hazleton Laboratories, 9200 Leesburg Pike, Vienna, VA 22182. AA/EEO Employer. ●

Senior Toxicologist

A Ph.D./DVM and 5 years experience, or a Master's degree and 10+ years experience is required; Neurotoxicology experience preferred. Responsibilities include interpreting, analyzing, documenting and reporting study results. We offer a professional environment that reflects our commit-

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ment to excellence. Plus, you'll enjoy working and living in the Washington, D.C. metropolitan area with all its cultural, educational, and recreational activities. Send letter of interest and resume to: Hazleton Laboratories, 9200 Leesburg Pike, Vienna, VA 22182. AA/EEO Employer. ●

Toxicologists

The University of Nebraska Medical Center seeks an experienced Ph.D. toxicologist to develop a collaborative program to study the direct and interactive health effects of nitrates, pesticides and other ground water contaminants, in both animal models and humans. The appointee will be expected to develop a strong research program complementing ongoing research activities, seek extramural funding, supervise graduate students, and participate in intercampus toxicology and water-related teaching and research activities. Academic rank and salary in this tenure-leading position are dependent on qualifications and experience. Please send curriculum vitae, a summary of current research, and the names of three references to: Dennis D. Weisenburger, M.D., Chairman, Water Toxicologist Search Committee, University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-3135. An Equal Opportunity/Affirmative Action Employer. ●

Toxicologist

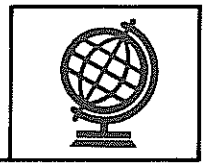
The Materials Safety/Toxicology Group of Xerox Corporation has an opening for a Ph.D. in Toxicology or Pharmacology or Biochemistry or other related fields with a minimum of 5-7 years experience in two of the three sub-specialties: immunotoxicology, neurotoxicology, reproductive toxicology. Sound knowledge of material sciences and/or industrial hygiene training is desirable. Some experience in risk evaluation would be helpful.

The successful candidate would be responsible for the determination and evaluation of the potential toxicologic risks posed by various materials and processes in the Xerox environment. This includes toxicologic risk assessment in the research, development, manufacturing, service and customer environments. The candidate's activities would include specifying testing requirements, monitoring the conduct and interpreting the results of externally contracted safety testing and monitoring of the relevant regulatory requirements.

We offer a competitive salary, excellent benefits and the opportunity to work with an industry leader. For prompt consideration, please send your resume with salary history to:

Raymond P. Pfeifer, Xerox Corporation, 800 Phillips Road, Building 205-99E, Webster, NY 14580. Xerox is an equal opportunity employer. Xerox, The Document Company. ●

Upcoming Conferences



Toxicology Update '91 Current Concepts and Advances in Immunotoxicology, October 7-9, 1991, The Johns Hopkins School of Hygiene and Public Health. Contact: Dr. Jacqueline Corn or Catherine Walsh, Department of Environmental Health Sciences, The Johns Hopkins School of Hygiene and Public Health, 615 North Wolfe Street, Room 6001, Baltimore, MD 21205; (301) 955-2609.

International Hazard Communication: Issues and Approaches, sponsored by American Industrial Hygiene Association's Product Health & Safety Committee, October 17-18, Holiday Inn Capitol, Washington, DC. Contact: The American Industrial Hygiene Association Continuing Education Department, (216) 873-2442.

Fourth North American International Society for the Study of Xenobiotics Meeting, November 2-6, 1992, Bal Harbour, FL. Contact: Ms. Nancy Holahan, ISSX Administrative Officer, P.O. Box 3, Cabin John, MD 20818; (301) 983-2434, fax (301) 983-5357.

International Symposium on the Health Effects of Gasoline, November 5-8, 1991, Doral Resort and Country Club, Miami, FL. Contact: Madeleine D. Sellouk, API/HESD, 1220 L St., NW, Washington, DC 20005.

Society of Toxicology of Canada 24th Annual Meeting, "Toxicology in the 90s," December 5-6, 1991. The Holiday Inn Crowne Plaza, Montreal, Canada. Contact: Society of Toxicology of Canada, C.P./P.O. Box 517 Beaconsfield, Quebec H9W 5V1 Canada.

Society for Risk Analysis Annual Meeting, "Risk Analysis in Support of Public and Private Sector Decision Making," December 8-11, 1991, Hyatt Regency Hotel, Baltimore, MD. Contact: Richard Burk, Jr., Executive Secretary, Society for Risk Analysis, 8000 Westpark Drive, Suite 130, McLean, VA 22102.

Society of Toxicology 1992 Annual Meeting, February 23-27, 1992, Seattle Convention Center, Seattle, WA. Contact: SOT Headquarters, (202) 371-1393.

ICT VI, June 28-July 3, 1992, Hotel Cavalieri Hilton, Rome, Italy. Contact: Secretariat, ICI-VI, Studio EGA, Viale Tiziano, 19, 00196, Rome, Italy; (06) 3221806, fax (06) 3222006.

Fourth European ISSX Meeting, "Toxicological Evaluation of Chemical Interactions: Relevance of Social, Environmental and Occupational Factors," July 4-6, 1992, Bologna, Italy. Contact: Organizing Secretariat, Sogepaco Convention and Travel, Piazza della Constituzione 5/c, I-40128, Bologna, Italy; tel +3951/6435111, fax +3951/6435149. ●

Watching Washington

1991 Recap of State Legislation Affecting Animal Research

During 1991, Arkansas, Iowa, Montana, North Carolina, North Dakota, Oklahoma, Texas, Washington and Wisconsin have approved **legislation protecting research and agricultural facilities** from illegal activities of animal rights activists. In addition to these states, similar protective legislation has been introduced in Nebraska, Nevada, New Jersey, New Mexico, Oregon, Pennsylvania, Rhode Island, and Virginia. The bill in OR awaits action by the governor. Bills in NJ and PA are still under consideration. Bills in KS, NE and RI will carry over into the 1992 session, while bills in NV and NM died upon adjournment of the 1991 session, and the VA bill was withdrawn. At present, 21 states have laws protecting research facilities, employees and animals.

State legislatures in Arizona, California, Connecticut, Illinois, Maryland, Massachusetts, New Jersey, New York and Vermont have introduced a total of 19 **bills limiting types of consumer product safety testing**. Five of these bills would limit cosmetic and household product testing, eight would limit only cosmetic testing and one would limit testing of "chemical products." Nine of the bills would ban the Draize test and two would ban use of the LD50 test.

Legislation in Connecticut, Maryland and New Jersey would prohibit specified tests on any products. A bill that died in the CT legislature would have prohibited the use of animals for testing, including "medical testing," whenever "equally viable alternatives" exist. In MD, legislation seeking a ban on the eye irritancy test on any type of product was defeated, while three bills in NJ seeking prohibition of the Draize or LD50 tests are pending.

In California, Illinois, Maryland, New York and Vermont, legislation was introduced to ban the use of live animals in testing cosmetic and household products. This legislation was passed by the CA Assembly and was due to receive attention from the CA Senate as this newsletter entered production. No action has been taken on a similar bill in NY. While no action was taken on similar legislation in IL and VT, the bills will carry over into the 1992 sessions. A similar MD measure was defeated.

Bills to ban the use of live animals in cosmetic testing are under consideration by the NY and MA legislatures but have died with the close of the 1991 session in AZ and CT.

In New Jersey, a bill prohibiting the Draize text for "chemical products," is pending.

Since 1987, nine states have seen 42 bills to limit specific product safety tests. Only the Berkeley City Council in California has enacted an ordinance prohibiting ocular and dermal irritancy tests.

Bills affecting availability of animals for research are pending in New York: current law prohibits release of pound animals for any purpose other than adoption or owner redemption; two bills pending would prohibit obtaining pound animals from outside the state for purposes of research, experimentation, testing, teaching or surgical demonstration. Legislation restricting the availability of research animals was killed in Virginia and died in Missouri and Wyoming at the close of the 1991 session.

Bills restricting the use of pound animals by researchers have been the most common legislation instigated by animal rights activists. Currently, Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia prohibit the release of pound animals for research. Only MA prohibits use of pound animals from any source. Arizona, California, Michigan, North Carolina, Ohio, Tennessee, Wisconsin, Colorado and Virginia allow the release of pound animals for research. Iowa, Minnesota, Oklahoma, South Dakota, Utah and the District of Columbia require pound animals be released for research purposes.

Legislative proposals relating to animals in education are pending in Massachusetts, New Jersey and New York. ●

House Approves Waxman Bill

The U.S. House of Representatives has passed H.R. 2507. The bill provides protection for research facilities from animal extremists and addresses the use of non-animal methods in biomedical research and testing. One provision of the Bill, which would overturn a ban on funding research using fetal issue, has sparked veto threats from President Bush. ●

APHIS Says Stipulation Agreements Speed Resolution of Some Animal Welfare Act Violations

The Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture (USDA) has announced that it will employ stipulation procedures where circumstances warrant to resolve certain violations of the Animal Welfare Act (AWA).

A stipulation agreement may be proposed by APHIS to alleged violators of the AWA instead of referring the case to the Department's General counsel for prosecution, a lengthy process leading up to and including appropriate judicial review. The stipulation procedure, which would not deprive alleged violators of notice and opportunity for a hearing, would better enforce the AWA by saving time and reducing the volume of cases referred to the General Counsel's Office. ●