

# Communiqué

Special Issue 1999

## SOT AWARD WINNERS

Award	Recipient
Achievement	Michel Charbonneau
Colgate Palmolive Visiting Professorship	San Diego State University, Visiting Professor: Robert Chapin
Education	Jules Brodeur
Merit	Thomas Clarkson
Public Communications	Ann de Peyster
Zeneca Travelling Award Lectureship	Alvaro Puga

### Board of Publications Best Paper Awards In:

#### Fundamental and Applied Toxicology and Toxicological Sciences

*Use of Sequentially Administered Stable Lead Isotopes to Investigate Changes in Blood Lead During Pregnancy in a Nonhuman Primate (Macaca fascicularis).* (1997), Vol. 39, pp. 109-119.

.....	C. A. Franklin
.....	M. J. Inskip
.....	C. L. Baccanale
.....	C. M. Edwards
.....	W. I. Manton
.....	E. Edward
.....	E. J. O'Flaherty

#### Toxicology and Applied Pharmacology

*Diet Restriction Enhances Compensatory Liver Tissue Repair and Survival Following Administration of Lethal Dose of Thionacetamide.* (1998), Vol. 150, pp. 12-21.

.....	S. K. Ramaiah
.....	M. G. Soni
.....	T. J. Bucci
.....	H. M. Mehendale

*Low-level Lead Exposure Selectively Enhances Dopamine Overflow in Nucleus Accumbens: An In Vivo Electrochemistry Time Course Assessment.* (1998), Vol. 150, pp. 174-185.

.....	C. L. Zuch
.....	D. J. O'Mara
.....	D. A. Cory-Slechta

## Fourth Triennial Toxicology Salary Survey

The 1998 Triennial Toxicology Salary Survey was conducted as a joint project by the American College of Toxicology and the Society of Toxicology. In addition to the two parent organizations, 19 others (the Teratology Society, the Association of Government Toxicologists, and 16 of 17 regional chapters of the Society of Toxicology) supported the effort by providing mailing labels for their membership.

A total of 6,360 survey instruments were mailed in June/July, with 143 of these eventually being returned as undeliverable, making the effective mailing 6,217.

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## AP/TAP Agreement

The SOT is pleased to announce that it has renewed its agreement with Academic Press to publish *Toxicology and Applied Pharmacology* (TAP) as an official journal of the Society. TAP was first published by Academic Press in 1959 and was adopted by the Society as an official journal shortly after the Society was formed in 1961.

Under this new three-year agreement between Academic Press and SOT, SOT will continue to be the editorial guardian of TAP. Editorial policy will be developed by the SOT Board of Publications and will be implemented by an editor who is

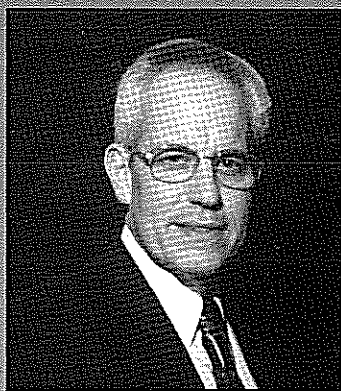
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# PRESIDENT'S MESSAGE

## Regional Chapters as Embassies of SOT: A Call for Grass Roots Action



Steven D. Cohen, D.Sc.  
1998-99 President of the  
Society of Toxicology

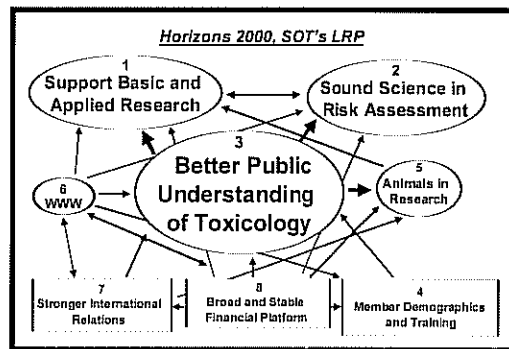
### FUTURE SOT ANNUAL MEETINGS

- 1999: March 14-18  
New Orleans,  
Louisiana
- 2000: March 19-23  
Philadelphia,  
Pennsylvania
- 2001: March 25-29  
San Francisco,  
California
- 2002: March 18-22  
Nashville,  
Tennessee

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During this, my final *Communiqué* message, I wish to emphasize an oft-mentioned theme, i.e., **There is a growing rift between scientific research and public understanding.** For SOT this has a very significant impact. There must be greater public appreciation of the importance of scientific research to our nation's health and economic well being. Otherwise, we can not hope to see the day when integration of sound toxicological science into risk assessment and regulatory action become the rule rather than the exception. As noted in my earlier messages, addressing this issue with emphasis on toxicology is a central point of *Horizons 2000 - SOT's Long-Range Plan (LRP)*. As the chart shows, our strategic initiatives are heavily interdependent. Importantly, our other major extramural initiatives (1, 2 and 5) will be advanced if we achieve **Better Public Understanding of Toxicology**. This may be the biggest challenge we face now and in the future. How can we best attain this important objective? Many SOT committees (e.g., Committee on Public Communications, Regulatory Affairs and Legislative Assistance, Education (RALA), World Wide Web Task Force, etc.) will have positive impacts on this issue. However, our largest and potentially best resource for advancing this initiative is our 18 **Regional Chapters** which now cover the entire map of the contiguous United States and parts of Canada. Recently, I visited the **South Central and Lake Ontario SOT Regional Chapters** to discuss the importance of chapters to SOT - *What they can do for SOT and what SOT can do for them?* I see the chapters as "embassies" of SOT and chapter members as the ambassadors. All chapters can and should play a very significant role in helping to advance SOT's strategic initiatives at the local level.



Perhaps, the most important of these for the long-term benefit of our science and profession is the initiative on public understanding of toxicology. An enlightened public, knowing that "*the dose makes the poison*," and appreciating the importance of toxicology research to human and environmental health, will be more likely to respond in a rational manner when confronted with science hysteria and sensationalized junk science. An enlightened and responsible journalist will be less likely to sensationalize junk science. Enlightened regulators and legislators will be more likely to demand that sound science be carefully and appropriately considered in the establishment of statutes and regulations. (Please see related article in this issue, "EPA Backs Away From Science-Based Risk Assessment," page 4.) Importantly, enlightened legislators, encouraged by an enlightened constituency, will be more likely to continue and to increase our national investment in toxicology and related research.

So—what's a Chapter to do? Examples of the many ways a chapter can contribute beyond holding a traditional chapter meeting are noted in Box 1 (see page 26). Important among these are educating the public, the media and your legislators. Speak out or sponsor a forum or Web site on local issues where toxicological expertise is needed. I encourage you to come up with new, innovative initiatives. Chapters should serve as focal points for encouraging members in the region to take a more active role in public outreach activities. In

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# Diet and Obesity Meeting Summary

The Society of Toxicology hosted a three-day symposium on October 26-28, 1998 in Reston, Virginia to promote the dissemination of scientific knowledge on the roles of dietary macro- and micronutrients and total caloric intake in aging and the pathogenesis and prevention of debilitating diseases, including diabetes, cardiovascular diseases and cancer.

The meeting was well attended with scientists from the pharmaceutical and chemical industries, government including the EPA and FDA, and academia. In addition to 25 invited speakers, there were more than 30 poster presentations. The meeting received significant media coverage, including an article distributed by Reuters News Service ("Lack of Vitamins May Cause Cancer," *Yahoo News*, 28-OCT-1998) and *Science* magazine ("Low Calories Diet May Slow Monkeys Aging," *Science* 282, p.1018, 06-NOV-1998). Papers from the invited speakers will be published in a special issue of *Toxicological Sciences*.

The keynote talk, by **Dr. Bruce Ames** of the University of California, emphasized the need of inclusion of micronutrients such as folic acid, vitamins B12, B6, E in our diet to retard the onset of aging and cancer. His research

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# SOT Graduate Fellowships Nurture Toxicologists

Since 1979, 54 graduate students have been supported on fellowships provided through SOT by generous corporate sponsors. Evidence that these fellowships enable students to complete their graduate work and continue a career in toxicology is the involvement of 81% of all the recipients with SOT in the past three years. Just over half are currently members of SOT. Excluding the year of the award, 79% have attended the Annual Meeting between 1996 and 1998, and one-third of the recipients attend every year. Six have served as regional officers, and two have served on SOT committees or subcommittees.

Students who were supported by SOT graduate fellowships are now employed equally by industry and universities (44% each), with the remainder in government positions. Two recipients are working for the sponsor of their fellowship.

SOT highly values the corporate partners that make these fellowships possible. For 1999, sponsors include the **Procter and Gamble Company** and **Novartis** (formerly Ciba-Geigy) Corporation. Additional sponsors have included **Covance** (formerly Hazleton) Corporation, **Hoffmann-LaRoche, Inc.**, and **Stauffer Chemical Company**. If your company would like information on graduate fellowship sponsorship, please contact **Betty Eidemiller** at SOT Headquarters.

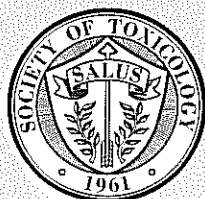
## New Edition of Resource Guide Planned for Fall 1999

SOT Headquarters is soliciting submissions from toxicology programs for inclusion in the next *Resource Guide to Careers in Toxicology*, which will be available in Fall 1999. New means of communication call for new strategies, and the Fourth Edition will be somewhat different than the last edition published in 1995.

The *Resource Guide* will be available in both print and electronic form. However, the print copy will be reduced in length. Each program listing will consist of contact information for that program, including the URL for the program Web site, and a list of program strengths. This information should be accurate for the 1999-2002 interval for distribution of the print version, which is mailed annually to over 3,500 relevant undergraduate programs in the U.S. and Canada as well as by request. The electronic version will be accessible from the SOT home page and will contain direct links to the Web pages of the programs listed. These links will provide students the most current information about individual programs.

Submission forms were included in the *Winter Communiqué*.

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The *Society of Toxicology Communiqué* is published 5 times annually in Reston, Virginia, for members of the Society of Toxicology.

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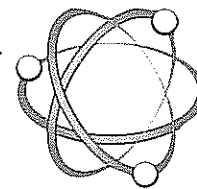
A. Jay Gandolfi, Ph.D.

### Deadlines for

### Upcoming Issues:

April 3, 1999 (Spring Issue)  
June 3, 1999 (Summer Issue)  
August 3, 1999 (Fall Issue)

# EPA Backs Away From Science-Based Risk Assessment



Earlier this year, the EPA proposed to employ a threshold-based approach in setting a drinking water standard for chloroform (Federal Register 63: 15673-15692, March 31, 1998). This was supported by a substantial body of toxicological data, including detailed information concerning the mode of action by which chloroform may act as a carcinogen. The proposal was viewed as a strong signal that EPA was committed to the Agency's 1996 draft cancer risk assessment guidelines which place a strong emphasis on the use of mechanistic/mode of action information. However, as rumored/predicted in recent months, EPA published a final rule in which an MCLG (maximum contaminant level goal) of zero was promulgated for chloroform (Federal Register 63: 69389-69476, December 16, 1998), based upon a linear, no-threshold, default approach. Remarkably, the EPA's December 16th write-up includes the following statements: "The Agency recognizes the strength of the science in support of a non-linear approach for estimating carcinogenicity of chloroform" and "EPA believes the nonlinear cancer extrapolation approach is the most appropriate means to establish an MCLG for chloroform based on carcinogenic risk." Indeed, we have a curious situation. First, EPA officially proposes a chloroform standard grounded upon a science-based non-linear dose-response. Then, while continuing to state that the science supports a non-linear dose-response approach, the Agency issued a final rule, said to reflect an interim risk management decision, which

embraces a default no threshold assumption! Thus, for now, unfortunately, science appears to have been outmaneuvered. The Agency states it had to take action at this time due to a deadline mandated by Congress and indicates that the issue will be revisited after receiving input from its Science Advisory Board (SAB), and other groups. Yes, at first this rationale may sound reasonable. However, a second look reveals that this is a simple piece of sophistry. Clearly, the Agency has had more than ample time to seek advice from the SAB (and receiving advice from the SAB prior to making a decision is most appropriate), and other groups, either prior to issuing its request for comment on the non-linear approach or during the comment period. Alternatively, EPA could have gone forward with the March 1998 proposal and then sought further input. We are now in the regrettable situation where the old default no threshold assumption is in place and, perhaps, years of additional discussion are in front of us. One negative ramification of the current EPA decision is that this may be viewed as a disincentive to perform additional risk assessment-related research. I am an optimist. It is significant to note that EPA states its belief that the science supports a non-linear dose response for chloroform in a clear fashion. There is an opportunity here for SOT to work with EPA and help move this notion forward to the point that it can serve as a basis for rule making. Therefore, an important task before all of us is to continue to strive for better ways to

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## Specialty Section News

### Occupational Health Section News

First, I would like to invite anyone with an interest in worker health to join our specialty section. At the Annual Meeting, we will be holding a joint symposium on Molecular Epidemiology, with the Molecular Biology Specialty Section. You are invited to attend our section's reception, which will be held Wednesday, March 17 starting at 6:00 PM, at the Hilton New Orleans Riverside Hotel. All section members are invited to our business meeting, which will be held Tuesday, March 16 starting at 7:00 AM. In addition, our section will be granting a student award of \$250. If you are interested in competing for this award, please contact **Dr. Edward V. Sargent**, Merck & Co., Inc., PO Box 100, WS2F-45, Whitehouse Station, NJ 08889-0100, or telephone at (908) 423-7906.

*Submitted By Ross Jones, Ph.D., MPH, DABT*

### Mechanisms Section News

The Mechanisms Section received 20 applications for the 1999 Graduate Student Awards. From this outstanding pool of applicants, 12 were selected as finalists. The winners will be announced at the Mechanisms Section Annual Meeting to be held Wednesday, March 17, from 6:00 to 7:30 PM.

**Bob Snyder** has agreed to become the Historian for the Mechanisms Section. Anyone with documents or items that might be of interest as he works to organize the history of our section is encouraged to contact him at: Rutgers University, Robert Snyder, Ph.D., Dept. of Pharmacology and Toxicology, Rutgers University, 170 Frelinhuysen Rd., Piscataway, NJ 08854-8020. E-mail: [rsnyder@eohsi.rutgers.edu](mailto:rsnyder@eohsi.rutgers.edu).

**Jim Stevens**, Vice-President Elect, is soliciting symposia and continuing education course proposals for the 2000 meeting. Traditionally, Mechanisms has been very strong in its participation in both symposia and continuing education course offerings. All topics must be submitted to the SOT shortly after the 1999 meeting in New Orleans. The Mechanisms Executive Committee will be considering proposals at the meeting in New Orleans. Please contact Jim with your proposals. You can reach him by email at [jstevens@northnet.org](mailto:jstevens@northnet.org). After the first of the year, Jim will be relocating to the Department of Pathology, College of Medicine, Soule Medical Alumni Building, University of Vermont, Burlington, VT 05405. Tel: (802) 656-0359.

# ANIMALS IN RESEARCH

Reprinted from the November 20, 1998, issue of *Science*.

*The Animals in Research Committee believes that, for the foreseeable future, animals will be required to ensure human health and environmental protection. While the Society of Toxicology advocates the development and validation of research designed to reduce, refine, or replace the need for animals, we must not forget the critical nature of the knowledge we gain by observing complex biological systems such as intact animals. As stated in the following editorial originally published in Science 282 (20 Nov. 1998), p. 1417, it is our responsibility as scientists to educate the public as to the importance and necessity of animals in biomedical research.*

## Animal Rights: Reaching the Public

### Scientists must communicate their message to the public in a compassionate way.

To paraphrase 18th-century statesman Edmund Burke, "all that is needed for the triumph of a misguided cause is that good people do nothing." One such cause now seeks to end biomedical research because of the theory that animals have rights precluding their use in research. Scientists need to respond forcefully to animal rights advocates, whose arguments are confusing the public and thereby threatening advances in health knowledge and care. There is little logic in emotional campaigns to end the practice of animal experimentation. A 1990 study found that although 63 percent of animal rights literature concerns the use of animals in science, such use each year involves 0.003 percent of the number of animals consumed for food. Only half as many animals undergo medical procedures in research as endure surgery ordered by pet owners for cosmetic reasons.\* Faulty logic, however, may be good strategy. Leaders of the animal rights movement target biomedical research because it depends on public funding, and few people understand the process of health care research.

Roger Caras, president of the American Society for the Prevention of Cruelty to Animals, reported to a recent conference on Public Responsibility in Medicine and Research that most people just don't understand what health researchers do. Many are not old enough to remember how devastating childhood diseases used to be, for instance. Hearing allegations of cruelty to animals in research settings, they are perplexed that anyone would deliberately harm an animal.

For example, a grandmotherly woman staffing an animal rights booth at a recent street fair was distributing a brochure that encouraged readers not to use anything that comes from or is tested in animals—no meat, no fur, no medicines. Asked if she opposed immunizations, she wanted to know if vaccines come from animal research. When assured that they do, she replied, "Then I would have to say yes." Asked what will happen when epidemics return, she said, "Don't worry, scientists will find some way of using computers." Such well-meaning people just don't understand.

Scientists must communicate their message to the public in a compassionate, understandable way—in human terms, not in the language of molecular biology. We need to make clear the connection between animal

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## AP/TAP Agreement

*Continued from page 1*

mutually selected by SOT and Academic Press. **Edward Bresnick**, who has done an excellent job as editor of *TAP* for the last six years, has graciously agreed to continue to serve as Editor for the 1999 year.

Under our new agreement, the subscription to *TAP* is no longer mandatory for members, but members are encouraged to take advantage of the special, reduced SOT-member rate of \$75 per year. If you would like to subscribe, but did not include your subscription on your dues renewal form, please contact **Stephanie Smith** at Academic Press, telephone (619) 699-6496.

The SOT Council and the Board of Publications envision that *TAP* will continue to be one of the leading journals for the publication of mechanistic research in toxicology and an excellent venue for the publication of

member research. SOT continues to support both *TAP* and *ToxSci*. Members should be aware that only just over 10% of the literature in Toxicology journals appears in these two journals. We hope to increase the market share by encouraging submissions to both journals over the next few years.

The SOT Council would like to acknowledge the support that Academic Press has given to the Society for nearly four decades. Particularly worthy of recognition over the last few years are **Dr. Jasna Markovac**, **Dr. Graham Lees**, and now, **Ms. Tari Paschall**, who has assumed the role of primary SOT contact at Academic Press. The SOT Council and the Board of Publications look forward to a very productive collaboration with Academic Press as we continue with *TAP* as an official journal of the Society.



# Annual Meeting

## Visit SOT Booths!

Show your support of SOT programs by visiting SOT-sponsored booths in the Exhibit Hall.

**Animals in Research**—The Society of Toxicology is committed to research of the highest quality and views the use of laboratory animals necessary to protect human health and the environment, except where alternative techniques have been validated. Stop by the booth to pick up your copies of updated SOT statements concerning the use of animals in research. On display will be educational materials, including videotapes, brochures, and sources of information.

**K-12 Education**—This is your chance to see and use the excellent classroom resources that improve science skills of students and increase their understanding of toxicology. The booth will showcase web resources, videos, print materials, and activities that can be used by teachers and the toxicologists that visit classrooms and community groups. Come share with the Subcommittee on K-12 what YOU are doing in your local area.

**Toxicology Education Foundation**—TEF will unveil the selected middle school curriculum that is the thrust of the TEF fundraising campaign. Classrooms across the nation will use these lessons in toxicology and environmental health, with SOT members making the national implementation possible. Learn more about the campaign and check that your name is on the contributors' list. Fresh baked goodies are promised!

**Write Your Congressperson**—The Regulatory Affairs and Legislative Assistance committee has made writing to congress an easy process. Stop by their booth to personalize letters already drafted for your use. Letters topics include the need for increased funding for the Food and Drug Administration, National Institutes of Health, and the National Institute of Environmental Health Sciences, as well as the importance of the use of animal data in risk assessment. Computer terminals—complete with congressional directories—will be available. Letter writers will receive a small gift as well as a chance to win dinner for two in New Orleans!

## Retired Members Register at a Reduced Rate for Annual Meeting

It is well known that the SOT retired members lend history and continuity to the Society. To encourage retired members to come and share their knowledge at the SOT Annual Meeting, the registration fee is \$115 on-site. If you are retired, please consider joining your colleagues in New Orleans.

## Leadership Workshop

Make plans now to attend the 1999 Leadership Orientation Workshop scheduled for 1:30 PM - 3:30 PM Saturday, March 13 at the Ernest N. Morial Convention Center in New Orleans. **All SOT members serving on committees are strongly encouraged to attend.**

With new committee assignments taking affect on May 1, 1999, the workshop is intended to provide guidance and answer questions that new and continuing committee members and chairs may have. The SOT strategic plan, administrative practices and procedures (e.g., budgets) and other important information for new chairpersons are just a few of the areas to be covered. The meeting also serves as an opportunity for Committees to get a head start on setting priorities for the year. Committee chairs will be encouraged to keep in touch with their committees via conference calls and meetings during the year.

Council recognizes that some members will be unable to attend the training. As the Annual Meeting moves around the country each year, the training will become more convenient for some and less convenient for others to attend in any given year. The Saturday afternoon time slot was selected to accommodate the full Annual Meeting program schedule. A formal invitation to this important event, including logistical details, and an agenda will be sent in February. Thank you for your continued support of the Society.

## Sponsorship Opportunities

Sponsorship opportunities are available for the 1999 Annual Meeting. Your sponsorship serves as visible evidence of your organization's commitment to the science of toxicology. In addition, your sponsorship provides an opportunity for you to increase the overall awareness of your company by SOT members and over 5,000 Annual Meeting attendees. There are four levels of sponsorship available: platinum (over \$5,000 or more), gold (\$2,000 - \$4,999), silver (\$1,000 - \$1,999) and contributor (\$500 - \$999). Acknowledgement signs will group sponsors by level of giving and will be displayed at the following functions: Minority Student Program; Evening Social; Educational Program Refreshments; Poster Session Refreshments; Graduate Student Luncheon; Graduate Student Social; K-12 Teachers Program Luncheon; Media Training Workshop; Media Training Reception; Continuing Education Course Refreshments; Welcoming Reception; and Final Night Reception. In addition, sponsors will be recognized in the Final Program, the *Toxicologist*, the pre- and post-meeting newsletter and in the meeting registration materials.



# March 14 - 18 • New Orleans

## 25-Year Member Reception

Sunday, March 14, 7:30 PM - 8:30 PM

Have you been a member of the Society for 25 years (or perhaps many more)? If so, you will be recognized as a group at the SOT 1999 Annual Meeting in New Orleans, Louisiana. Please consider joining us at the Annual Meeting so we can extend our gratitude for the solid foundation on which the Society has grown.

## Electromagnetic Fields: Toxicology, Epidemiology and NIEHS

"Electromagnetic Fields: Toxicology, Epidemiology and NIEHS" will be presented from 6:00 PM until 7:30 PM on Wednesday, March 17, 1999, at the New Orleans Hilton Riverside Hotel in Ballroom A, during the Society of Toxicology Annual Meeting. This program is organized by the Epidemiology Specialty Section of SOT and Dr. Arnold Schecter, Professor, SUNY, Binghamton, NY.

The program will be chaired by Dr. George Lucier, Director, Environmental Toxicology Program, NIEHS and will include a presentation by Dr. Christopher Portier, a senior scientist at NIEHS who coordinated an extensive governmental effort to evaluate existing evidence relating to electromagnetic fields (EMF) and cancer. Also presenting will be Dr. Daniel Wartenberg, an Associate Professor in the Department of Community and Environmental Medicine at the Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey. Dr. Wartenberg is currently conducting research on characterizing populations living near high voltage transmission lines, has been involved with EMF through the National Academy of Sciences committee on the Possible Effects of Electromagnetic Fields on Biologic Systems, the NIEHS Working Group, and the New Jersey Commission on Radiation Protection.

For more information, please contact Dr. Richard Parent, Chairman, Epidemiology Specialty Section at (207) 563-2300 or E-mail: rparent@consultox.com.

## Golf Tournament

Anyone interested in playing in a golf tournament on Saturday, March 13, 1999, should contact Mike Kangiser at (609) 924-7272. The format will be a Scramble, sometimes called a Captain and Crew, so individual ability is not important.

## Women In Toxicology

Are you interested in networking with other women in toxicology? Would you like to be a mentor to younger women entering the field? Do you have other concerns/interests related to women in toxicology? Then join us for an informal meeting on Monday, March 15th from 4:30 PM to 6:00 PM to discuss the formation of a Women in Toxicology Group. Watch the meeting program for the location. Questions or ideas? Contact Gina Pastino, Tel: (914) 785-4487 or E-mail: gina.pastino@cibasc.com; or Annie Jarabek, Tel: (919) 541-4847 or E-mail: jarabek.annie@epamail.epa.gov.

## Media Training Workshop for Toxicologists

By Kalish Communications of Washington, D.C.  
Saturday, March 13, 4:00 PM - 6:30 PM

This media training workshop is designed to teach participants how to:

- Develop easy-to-communicate toxicology messages and get them into every interview;
- Not to be misquoted;
- Handle both tough interviews and sensitive issues;
- Dress, sit, stand and gesture appropriately for all media interviews;
- Get reporters to print/air what you want them to; and
- Learn to ask 10 key questions before every media interview.

Learn to control the message and the media! This workshop is lively, fun, creative, challenging and loaded with critical information. This seminar is for beginning and advanced media savvy toxicologists.

Registration is free for SOT Media Resource Specialists and \$50 for all others. Sign up on the Registration Form located on page 47 of the Preliminary Program or check the SOT Web site at [www.toxicology.org](http://www.toxicology.org). The Media Training Workshop will be held at the Ernest N. Morial Convention Center in New Orleans.

All attendees will receive a free reference guide.

## Car Rental

Do you need a rental car during the SOT Annual Meeting in New Orleans? To receive SOT's special meeting rate for SOT Members and Non-Members, please call AVIS at 1-800-331-1600. Use Discount # T534999.

## Introduction

The Society of Toxicology encourages members to organize scientific sessions, on timely topics, for its 2000 Annual Meeting. Proposals may be submitted by any member, committee, Specialty Section or Chapter of SOT. Proposals intended for presentation at the 2000 Annual Meeting must be submitted by the session chairperson by April 15, 1999. Proposals must be communicated in writing to the Chairman of the Program Committee or the Vice President of the Society. All proposals with Specialty Section sponsorship must include a letter to this effect from the Specialty Section President. Proposals may not be submitted without the proper documentation forms.

## Proposals

Proposals should present reasons the session is desirable and provide some details. The following points should be addressed:

- 1) Justification of need for a session in the particular field. The number of sessions approved will be limited and the justification will be important in the Committee's evaluation. The justification should include the timeliness of the topic and whether a similar session has been presented at a scientific meeting in the recent past. Consultation with the appropriate SOT Specialty Section is required.
- 2) Proposed title.
- 3) Chairperson(s) **(must be SOT member)**
- 4) Names of proposed speakers, their professional affiliations, SOT membership status, titles of their presentations, and a one or two sentence synopsis of their topic (a maximum of two speakers per institution is recommended).
- 5) The intended year of presentation of the session.
- 6) Financial requirements, if any. (SOT will provide financial assistance to non-SOT member speakers, on a case-by-case basis.)
- 7) Specialty Section endorsement and/or Specialty Section financial sponsorship.
- 8) Publication plans, if any.

## Types of Sessions

### Symposia -

#### Subject Matter:

- "Cutting-edge" science, new areas for toxicologists; new concepts or approaches, new data.

#### Total Presentation Time:

- Three hours or less.

#### Speakers and Presentations:

- Chairperson and 4-5 speakers.
- Approximately 30-35 minutes per speaker.
- Summary of symposium by last speaker.

#### Comments:

Format designed for presentation of new information. Short period for questions and discussion suggested following each presentation. Symposium should be concluded with a brief summary and short period for general discussion.

### Workshops -

#### Subject Matter:

- Topic requiring intensive study and discussion.

#### Total Presentation Time:

- Three hours or less.

#### Speakers and Presentations:

- One to five speakers.
- Informal, interactive presentations.
- Emphasis on discussion.

#### Comments:

Format design for conveying detailed "how-to" information.

### Roundtables -

#### Subject Matter:

- Controversial subjects.

#### Total Presentation Time:

- Approximately 1 and 1/2 hours.

#### Speakers and Presentation:

- Moderator and 2-4 speakers.
- Moderator presents overview.
- Each speaker makes a 3-5 minute statement (Moderator coordinates the comment).
- Balance of time for questions and discussion.

#### Comments:

Format design for discussion of controversial information between speakers, with audience participation encouraged.

### Innovations in Toxicological Sciences and in Applied Toxicology -

The Society of Toxicology's Long-Range Plan directs the Program Committee to respond to two areas of concern: 1) Shrinking research funding resources, and 2) Training needs in applied research. For SOT members to compete effectively for funding for basic research or to conduct state of the art applied toxicology research, they must keep abreast of the latest technological and scientific discoveries. The SOT Annual Meeting can and should be an important source of information and training on the latest and most significant advances in both basic and applied research. To address this, the Program Committee developed two new initiatives. Beginning with the 1999 Annual Meeting, a limited number of symposia and/or workshops shall be designated Innovations in Toxicological Sciences (ITS) or Innovations in Applied Toxicology (IAT). ITS will introduce new technologies or scientific disciplines to the membership, and IAT will introduce innovative approaches in applied research. Please refer to the article on page 11 for additional information.

## Approval of Sessions

After receipt of a proposal, it will be presented to the Program Committee in May. The results of committee action will be transmitted promptly to the proposed chairperson(s) by the chair of the Program Committee. If the session is approved, the chair of the Program Committee will then provide further instructions concerning follow-up correspondence with speakers, completion of the session overview and speaker abstracts, finalization of the program, date of the session, and publication procedures if it is to be published. Final information will be due at SOT Headquarters during the month of July.

## Publication

All SOT-sponsored sessions come under the general guidelines for publication of SOT-related activities, (i.e., the editors of the official journals, *Toxicological Sciences* and *TAP*, have first right of refusal regarding publications from the SOT sessions).



## Introduction

The Society of Toxicology is committed to presenting Continuing Education Courses at its Annual Meeting. The emphasis is on quality presentations of generally accepted, state-of-the-art knowledge in toxicology. These courses meet the requirements of the membership for information on new developments in toxicology and related disciplines, as well as provide education applicable to the requirements of many certifying and licensing boards.

Courses run for three and one-half hours, and a detailed syllabus of course content is provided. Each course is classified as basic or advanced. A brief overview (10-15 minutes) by the course's chairperson precedes presentations by the instructors (usually four). The emphasis is on teaching excellence. Clarity of presentation, attention to detail and organization are priorities.

Typically, seven courses are offered in the morning and another six in the afternoon. The Continuing Education Committee is responsible for screening courses proposed by the membership and identifying additional priority areas of instruction. In the latter instances, the Committee solicits assistance from qualified professionals who contact potential instructors. The Committee recommends a slate of courses to Council for consideration.

## Organizing Continuing Education Courses

Courses may be proposed by any member, Committee, Specialty Section or Chapter of SOT. Proposals intended for consideration for the following year's meeting must be submitted to the Continuing Education Committee by April 15. A cover letter should state why the proposed course is a priority and summarize major aspects of course content. The proposal should contain the following items:

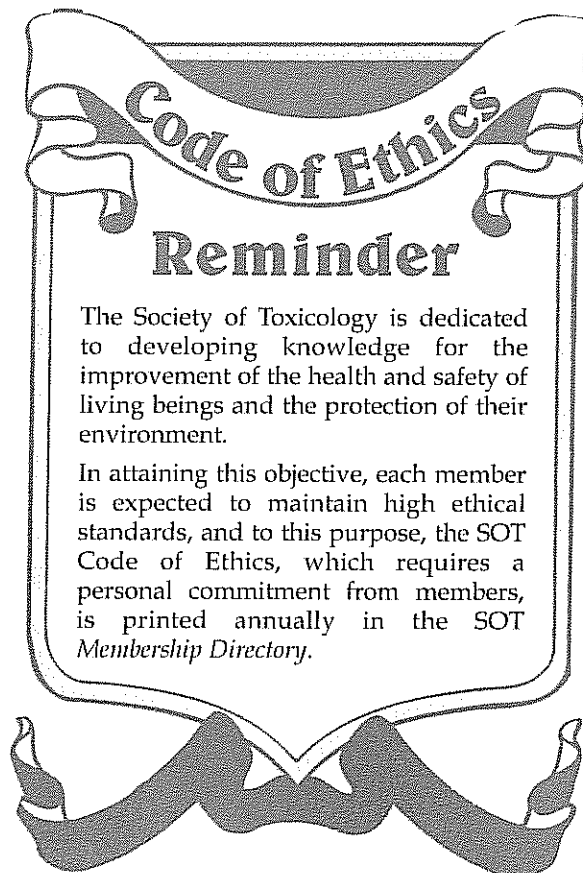
1. Proposed title. Note whether this should be a basic or advanced course.
2. Chairperson(s) (**must be SOT member**). A \$100 consideration is provided to each course chair to offset administrative costs associated with the course.
3. Names, affiliations, SOT membership status, presentation titles and presentation summaries (two to four sentences) for proposed instructors. Please remember that the emphasis is on selecting excellent teachers.
4. Specify the year the course is to be offered. Please be aware that rigid time-lines are imposed for presentation of the course syllabus. Drafts for each presentation are due in early November and final copy is required in early December. Take this into account when planning a proposal and contacting potential instructors.
5. Financial requirements, if any. SOT will provide travel assistance for up to one non-SOT member per course (in certain instances, funding may be provided to more than one speaker, if justified and approved by the Committee); all SOT members are responsible for their own travel expenses. A \$500 consideration is provided to each instructor to offset the cost of slides and other materials.

## Approval of a Continuing Education Course

The chairperson of the Continuing Education Committee presents proposals to committee members for consideration in May. Both the proposal's quality and the need for balance in course offerings are major considerations in the evaluation process. A matrix of past course offerings and the responses of attendees to these courses is used. There is a concerted effort to provide courses in each year's offerings that update fundamentals, integrate advancing technologies, and provide new perspectives. Meeting the needs of a diverse audience with evolving careers is paramount. The committee forwards a slate of proposed courses to Council in May. The recommendation of the Committee and the decision of Council are forwarded to initiators of proposals soon thereafter.

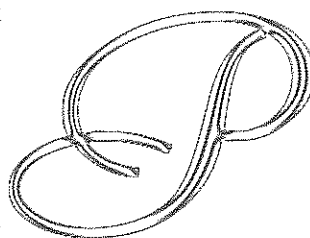
## Course Organizers

A member of the Continuing Education Committee serves as a liaison for each course. She/he is the immediate link between SOT and the chairperson for each course. While the chairperson selects and organizes instructors, review and revision of the course syllabus is a coordinated activity of the chairperson and course liaison. The course liaison will assist in communications between SOT and the chairperson and assure logistical support for the course by SOT staff before and during presentations at the Annual Meeting.



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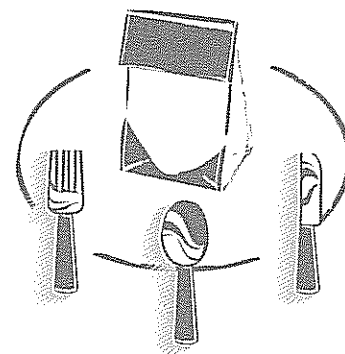
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Platinum sponsors contributed \$5,000 or more.  
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Silver sponsors contributed between \$1,000 and \$1,999.

## Socratic Dinners

To enable Annual Meeting attendees to enjoy the wide variety of culinary delights of New Orleans while having lively discussion on focused subjects, SOT has arranged a series of Socratic Dinners during the SOT Annual Meeting in New Orleans. Subjects will include: apoptosis, cell cycle, DNA repair, oxidative stress, genetically engineered plants, metals, susceptibility genes, signal transduction and reactive intermediates. Easels listing the subject area, time, date, and the restaurant, along with 10 blanks for participant names will be located in the Registration Area of the Convention Center. Registration will be on a first-come, first-served basis. Participants will meet in the first floor lobby of the Hilton New Orleans Riverside Hotel 15 minutes prior to dinner and will walk as a group to the restaurant. The discussions will not be facilitated and each individual will be responsible for his or her own bill for dinner. Sign up and share your ideas with colleagues who share your interests.



## Brown Bag Lunch

Make the most of your lunch break and join speakers from the morning symposium and workshop sessions in the Exhibit Hall. Speakers from several of the morning sessions will be available in a more intimate setting to discuss their presentations. These "Brown Bag Lunches" are designed to allow you to spend time with the speakers according to your lunch time availability. Grab a lunch from the concession area and join one, two or all of the speakers to obtain more in-depth answers to your questions. Detailed information regarding who will be available will be posted on-site in the Exhibit Hall and registration areas.

SOT appreciates the speakers taking time to join SOT meeting attendees for lunch. We hope all attendees will take advantage of this valuable opportunity.

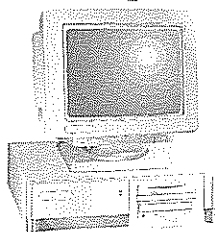
## Submit a Proposal for Innovations in Toxicological Sciences and in Applied Toxicology

Proposals by SOT members for special Innovations in Toxicological Sciences (ITS) and in Applied Toxicology (IAT) symposia or workshops will be submitted in the same format and at the same time (April 15, 1999) as regular proposals.

- To compete for ITS designation, the proposal will require an accompanying letter explaining the innovative nature of the proposed session and how the topic may impact the science and/or practice of toxicology e.g., documentation of how the technology could be used in one's own research.
- To compete for IAT designation, the proposal will require an accompanying letter explaining how the proposed session demonstrates innovation in applied toxicology and how the topic may impact the practice of toxicology e.g., documentation of how the technology could be used in applied research.
- In addition, each letter should explain how the speakers were selected and indicate what efforts were taken to identify potential SOT members as speakers, e.g., literature search.

Those proposals which are not selected by the Program Committee for ITS or IAT designation and which involve one, or possibly two, nonmembers will automatically be considered for inclusion in the Program as a regular symposium or workshop.

## PROGRAM DISK ON THE INTERNET!



The SOT 1999 Annual Meeting Program will be available on the SOT Web site ([www.toxicology.org](http://www.toxicology.org)) at no charge. This program will be in the familiar IBM format. The Meeting Diskette Search Program provides the ability to search the abstract titles of papers and posters programmed for presentation at the Annual Meeting. The user can search the meeting Program by key words and phrases, author names, and sessions. By printing your selections, you can create your own personal itinerary for the meeting. Please confirm your itinerary with the printed Program as the time or location of some presentations may have been changed.



## Announcement of Report Availability

ILSI, HESI Repro Endpoints Report

### An Evaluation and Interpretation of Reproductive Endpoints for Human Health Risk Assessment

Progress in basic toxicological research is inevitably followed by changes in the methods used to assess the potential for chemicals to produce adverse health effects. Significant changes have recently been made to testing guidelines for pesticides, commodity chemicals, and pharmaceutical agents that were intended to improve the sensitivity and broaden the scope of the methods by which developmental and reproductive toxicants are detected. These changes were precipitated both by collective experience with existing test methods and by the realization that a number of techniques developed in basic toxicology and reproductive biology may be useful in toxicity screening. Given the general lack of experience in measuring and interpreting several of these nontraditional reproductive endpoints, the ILSI Health and Environmental Sciences Institute convened a workshop to assess and build scientific consensus regarding the value, application, and interpretation of both commonly measured and newly proposed reproductive endpoints.

This report is the culmination of a series of commissioned papers that formed the basis for workshop panel discussions, perspectives, and comments received during

and after the workshop. The endpoints that are addressed in this report include: (1) parameters associated with the developing organism (ano-genital distance, balanopreputial separation, vaginal patency, and sexual maturation) and (2) adult reproductive parameters (oocyte quantitation, sperm parameters, vaginal cytology, histology of testis and ovary, and circulating hormone levels). Reproductive performance, which has traditionally been the ultimate measurement of reproductive function, provides a context against which to evaluate the newer endpoints. For each endpoint, current methods for measurement are discussed, including the role of endocrine influences, the interrelationship with other reproductive endpoints, information on species differences, and how the data from such studies should be interpreted for human health risk assessment.

The inclusion of additional endpoints in reproductive toxicity studies should improve our ability to detect chemical hazards. The increased complexity of the study designs presents a challenge for those who perform and interpret these studies. The purpose of this volume is to provide guidance in those areas. It is an important step in the standardization of approaches to the evaluation and interpretation of reproductive endpoints for human risk assessment.

To order a copy of this report, please submit your request and contact information by E-mail to [hesi@ilsi.org](mailto:hesi@ilsi.org) or by fax to HESI at (202) 659-3617. In early 1999, the report will be available through the HESI site on the ILSI Web page ([www.ilsi.org](http://www.ilsi.org)).

## Task Force Encourages Risk Assessment Integration

Risk assessment continues to play an increasing role in the symposia, workshops, and roundtables presented at the Annual Meeting of the Society of Toxicology. In an effort to further this process, the Risk Assessment Task Force has developed guidance on ways to enhance the relevance of such presentations to risk assessment. If you plan to incorporate risk assessment into a submission for the 2000 SOT meeting, please consider the following ways to demonstrate relevance to risk assessment:

Improved characterization of dose-response relationships, from a broad mechanistic perspective (e.g., threshold versus non-threshold) to quantitative dose-response modeling at a cellular/molecular level.

- Fuller description of sources of variability in risk assessment, either in the exposure to dose relationship or in the dose to response relationship.
- Development of new experimental models for use in risk assessment, e.g. *in vitro* tissue models of cell proliferation.
- Clarification of the biological significance of cellular and molecular changes in response to toxicants, e.g., what constitutes an adverse effect.

- Improvements in ways to reduce uncertainty in risk assessment, e.g. enhanced understanding of differences in animal versus human responsiveness as related to the use of certain animal models in risk assessment.

The above list is not meant to be fully inclusive, but to provide key examples of ways to demonstrate the relevance to risk assessment of proposals for the symposia, workshops, and roundtables for the 2000 SOT.

### SOT Fax-On-Demand Service

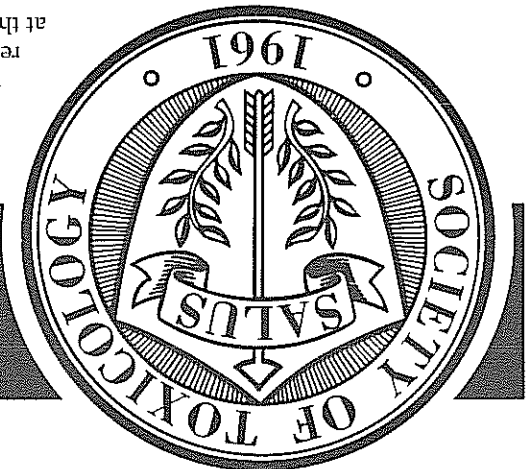
Call the toll-free SOT information line

**1-800-529-8635**



# SOT'S 1999

The Society of Toxicology honors all 25-Year Members. A special membership lapel pin will be mailed to the 1999 25-Year Members from Steven Cohen, SOT President, prior to the Annual Meeting. All 1998 25-Year Members received lapel pins last year and are encouraged to wear the pin at the Annual Meeting. A special recognition will be given to all 25-Year Members. When you see them wearing their pin at the Annual Meeting, stop and congratulate them.



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MID-ATLANTIC CHAPTER

The Mid-



Atlantic Regional Chapter (MASOT) held its annual fall meeting on October 21, 1998, in East Windsor, NJ, with over 70 members attending. The topic for the program was "Designing Safer Products: Toxicology and Innovation." Invited speakers included Dr. Oliver Flint (Bristol Myers Squibb), who opened the meeting with a presentation entitled

"New Approaches to Product Discovery and Development," Dr. Herbert Rosenkranz (Univ. Pittsburgh), who spoke on "Development, Characterization and Applications of SAR Models," Dr. Frank Gerberick (Procter and Gamble), "Use of SAR in Skin Sensitization Risk Assessment," Dr. Chul-Hoon Kwon (St. John's Univ.), "Metabolism-Based Anticancer Drug Design," Dr. Patrick Hardesty (DuPont Agrochemical), "Integrating Toxicology into the Discovery Process," and Dr. Stephen Devito (US EPA).

"Approaches to Designing Safer Chemicals." To wrap up the sessions Dr. Flint facilitated a lively forum among the speakers and attendees. The afternoon ended with a collegial reception. Please check the MASOT Web site ([www.masot.org](http://www.masot.org)) for information on our upcoming spring meeting. MASOT members should reserve time at the SOT meeting in New Orleans for the MASOT breakfast to be held Tuesday morning, March 16th.

NATIONAL CAPITAL AREA CHAPTER

The theme



of the 1998 fall meeting of the National Capital Area Chapter of the Society of Toxicology (NCAC-SOT) was: *The Emergence of Integrated Risk Assessment Approaches: Multipathway, Multimedial, and Multidimensional Asses-*

*ments.* The meeting was held November 10, 1998, at the National Library of Medicine's Lister Hill Auditorium, Bethesda, Maryland, and was cosponsored by the American Industrial Health Council (AIHC) and the Association of Government Toxicologists (AGT). The keynote speaker, Dr. Gail Charney, President-Elect of the Society for Risk Analysis, discussed the current state of the science for integrated risk assessment, focusing on the recommendations of the Presidential/Congressional Commission on Risk Assessment and Risk Management. The Commission endorsed a public health approach to environmental health risk management which focuses on the problem, what's causing it, and how to solve it, rather than a chemical by chemical assessment approach. The public health approach emphasizes prevention, makes it possible to determine the effectiveness of various management actions, and fosters better cooperation between public health

and environmental science. Dr. Charney proposed that risk management be done using a "bubble" approach in which the government delegates responsibility to committees within a bubble to negotiate levels of emissions within their area, so that the aggregate total of emissions is the same as if the goal for each had been met individually. This approach would give local communities power, increase economic efficiency, and decrease the administrative burdens of government.

The morning session of the meeting on Integrated Risk Assessment was chaired by Dr. Barbara Levin, National Institute for Standards and Technology and President of AGT. Dr. Resha Putzath of the Georgetown Risk Group, spoke on the topic of Multiple Chemical Exposures, and discussed the various ways in which chemical mixtures can be assessed. She emphasized that when combining responses or doses of chemical mixtures, it is inappropriate to combine upper bounds (e.g., q1\* for cancer potency); rather, the central estimates should be combined, then an upper bound calculated. She suggested that the use of response-surface models and physiologically-based pharmacokinetic (PBPK) modeling would allow for interactions that are difficult to evaluate using conventional means. Dr. Annette Guisepi-Elie, Exxon

Miller, from the U.S. Environmental Protection Agency's (EPA) Office of Pesticide Programs, who spoke about the Food Quality Protection Act (FQPA): Aggregate Exposure and Cumulative Risk. He discussed the fact that FQPA requires that exposure to pesticides in food and drinking water, as well as residential exposures, be aggregated when considering tolerances or exemptions for pesticides. In addition, risks of exposure to pesticides that have a common mode of action must be combined to determine cumulative risk. So far, EPA has been using a deterministic approach to calculating aggregate exposures, but is developing probabilistic methods. Several efforts are underway to evaluate the methodology that have been in use by OPR, and to develop new approaches and methodologies. Draft aggregate exposure and cumulative risk policies will be published in the Federal Register in April 1999 and June 1999, respectively. The EPA will continue to evaluate methodologies and update approaches as better methods become available.

The afternoon session on Applications of Integrated Risk Assessment was chaired by Ms. Nancy Doerter, AHC. The first speaker was Dr. Paul Chrostowski of The Weinberg Group, who spoke about modeling issues. He described models as theoretical constructs that use empirical data, as well as mechanistic deductive approaches to describe physical, chemical and biological processes. Models are not a string of unrelated algorithms. There are a number of advantages to using mathematical modeling: they allow spatial and temporal extrapolation, they are cost-effective and rapid, and the uncertainties can be precisely measured. There are also a number of disadvantages: models are contingent on operator skill, input, and data quality, and uncalibrated models are often used without regard to loss of accuracy. Dr. Chrostowski then reviewed the history of multipathway risk assessment modeling and discussed what the future holds, emphasizing that government, industry and other

stakeholders can all bring convergence to the way in which such models are applied. Mr. Matthew Lorber from EPA/NCEA, spoke about Dioxin: A Case Study. He discussed the Columbus Incinerator which began operation in 1983 and was a major source of dioxin contamination to the city of Columbus, OH. Testing for emissions of dioxins from the stack of the Columbus Waste to Energy (WTE) municipal solid waste combustion facility in 1992 implied that during its operation (1983-1994), it released nearly 1,000 grams of dioxin Toxic Equivalents (TEQs) per year. This compares to a 1987 estimate of 16,000 g TEQ/yr from all sources emitting dioxins into the air in the United States which was down to an estimate of 4,000 g TEQ/yr in 1995. In mid-1994, US EPA's Office of Research and Development (ORD) and EPA's Region 5 Office collaborated on a screening risk assessment to evaluate the potential indirect impacts of these emissions. The exposure setting is a hypothetical dairy farm where individuals on the farm obtain their beef, milk, and vegetables from home sources. Soil dermal contact, inhalation, and breast milk exposures were also considered for this assessment. The "source" term, or dioxin loadings to this setting, were derived from air dispersion modeling of emissions from the Columbus WTE using the ISC-LT2 model. Dioxin enters the food chain by a process of deposition onto soil and fodder, followed by cattle (or other farm animal) exposure to these media. A key finding of the assessment was that exposures to dioxin in beef and milk dominated the estimated risks, with excess cancer risk from these two pathways estimated at  $2.8 \times 10^{-4}$  (note: this increment is in addition to a background risk of  $1 \times 10^{-4}$  for a 50 pg TEQ exposure/yr for 70 years). Thus, about 90% of this lifetime risk had already occurred from modeled incinerator impacts between 1983 and 1994. Infant breast milk exposures were estimated to have increased by about a factor of 10 during the incinerator's operation, being estimated at 600 pg TEQ/kg-day, which compares to a normal background estimate from this

pathway of 60 pg TEQ/kg-day. Mr. Lorber also discussed procedures and current issues surrounding non-cancer risk characterization. An RfD has not been estimated for dioxins, since its estimation using current procedures (health effects testing on animals including uncertainty factors) would lead to an RfD that is about an order of magnitude lower than background exposures to dioxin. Without the RfD, EPA has turned to a "margin-of-incremental-exposure" approach, which is defined as the ratio of a daily dose attributed to a specific source divided by normal background exposures. The last speaker was Mr. Bob Hites from EPA's Office of Air Quality Planning and Standards (OAQPS), who discussed Using the Total Risk Integrated Methodology (TRIM) in EPA's Air Program. TRIM is a modeling system that acts as a framework for estimating and assessing health and ecological risks. TRIM has a flexible modular design that includes a temporal and spatial scale. TRIM is designed to be scientifically defensible; include multiple pollutants, media, and pathways; conserve mass; include stochastic approaches, and include an iterative risk assessment. The model currently works for organics and is being refined for metals and other agents. A beta model for TRIM will be available in FY 2000. A panel discussion, moderated by Dr. Stephen Olin, ILSI Risk Science Institute, concluded the meeting.

A short business meeting was held after the symposium at which Dr. Peter Goering (FDA/CDRH), chair of the student awards committee, announced the travel awards competition for pre- and post-doctoral students who have submitted abstracts for the 1999 SOT Annual Meeting in New Orleans. The chapter intends to make available two travel awards to offset travel expenses to the annual meeting. The membership also discussed ideas for a spring NCAC-SOT meeting and how to involve more students in the activities of the regional chapter.

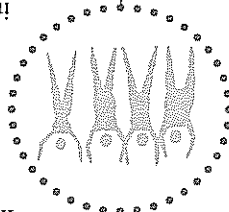
# Diet and Obesity Summary

Continued from page 3

showed that feeding of conditional micronutrients such as acetyl carnitine and lipoic acid to old rats reversed the aging process, lowered mitochondrial oxidative damage and apparently rejuvenated the old rats. This was followed by a series of talks on the role of dietary macronutrients, caloric intake, micronutrients, non-nutrient dietary chemicals in the retardation/prevention of aging, cancer, obesity and diseases such as diabetes and coronary artery diseases. The major conclusions from the symposium are as follows:

1.

The rodent models of life-long caloric restriction have provided a useful system to understand basic mechanisms of aging, and degenerative diseases, including diabetes, cardiovascular and renal diseases, and cancer. The work conducted by MRL scientists from the Safety Assessment laboratories in West Point and MSD-Chilbert, France have shown that moderate caloric restriction (25% less than maximal ad libitum intake) using a measured feeding regimen increases survival, reduces variability, delays and retards the onset of many diseases (renal and cardiovascular diseases, endocrine-related cancers) and overall improves the sensitivity of toxicity tests and carcinogenicity bioassays to detect treatment-related effects. **Drs. Hart (NCTR), Kritchevsky (Wistar Institute), Keenan (Merck), and Weindruch (University of Wisconsin)** provided equivocal evidence that the caloric restriction (about 25 to 40% of maximal caloric intake with essential nutrients) retards the onset of aging and



2.

Like rodents, non-human primates, when subjected to a moderate caloric restriction (30% reduction in caloric intake compared to control monkeys), improved their risk factors for diabetes and cardiovascular diseases such as reduced body weight and body fat, reduced trunk: leg fat ratio, reduced triglycerides, increased HDL, and low insulin (**Dr. Weindruch, University of Wisconsin; Dr. Lane, National Institute of Aging**), improved insulin sensitivity and reduced intraabdominal obesity, and low blood pressure (**Dr. Cefalu, Hansen, University of Maryland**). Collectively, these investigators demonstrated that a moderate reduction in calories significantly improved biomarkers of aging and risk factors for diseases, such as diabetes and atherosclerosis in monkeys.

3.

Humans subjected to a moderate (about 25% less than the average intake) caloric restriction for two years (1800 kcal and nutrients rich diet) in an enclosed ecological space (Biosphere 2) demonstrated a sustained weight loss of 10-18% with reduced risk factors for many diseases, including reduced blood lipids, cholesterol, IGF-1, insulin, glucose, glycosylated hemoglobin, renin, testosterone, etc. These beneficial

# Animals in Research

Continued from page 5

research and a grandmother's hip replacement, a father's bypass operation, a baby's vaccinations, and even a pet's shots. To those who are unaware that animal research was needed to produce these treatments, as well as new treatments and vaccines, animal research seems wasteful at best and cruel at worst.

We have heard college-educated citizens testify to public agencies that we can advance health exclusively through epidemiology, cell culture, and computer simulation. We may bemoan such a lack of scientific sophistication, but we should leap at the chance to help people understand that epidemiologists can provide clues to the causes of disease but can't develop effective treatments; that, whenever they can, researchers do use cultured cells derived from animal tissue; and that scientists depend on computers for processing data that we already possess, but can't use them to explore the unknown in the quest for new information.

Much can be done. Scientists could "adopt" middle school classes and present their own research. They should be quick to respond to letters to the editor and

opened pieces, lest animal rights misinformation go unchallenged and acquire a patina of truth. Research institutions could be opened to tours, to show that laboratory animals receive humane care. Finally, because the ultimate stakeholders are patients, the health research community should actively recruit to its cause not only well-known personalities such as **Stephen Hawking**, who has made courageous statements about the value of animal research, but all who receive medical treatment, perhaps through patient groups such as the Incurably Ill for Animal Research in the United States and the Seriously Ill for Medical Research in England. If good people do nothing, there is a real possibility that an uninformed citizenry will extinguish the precious embers of medical progress.

Written by **P.M. Conn**, professor of physiology and pharmacology at Oregon Health Sciences University in Portland, OR, and associate director of the Oregon Regional Primate Research Center in Beaverton, OR, and **J. Parker**, public information officer at the Oregon Regional Primate Research Center. \*C.S. Nicoll, *Endocrinology* 127, 985 (1990).

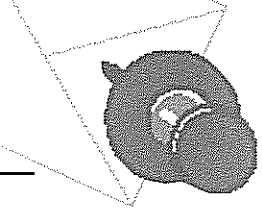
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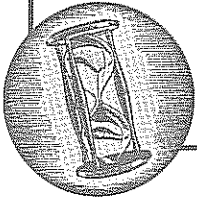


Are you frustrated by instances of biased or incorrect reporting of news involving toxicology? Then apply to be an SOT Media Resource Specialist. Applications for one-year terms are being accepted until June 1, 1999. Specialists are SOT members who are authoritative sources of science-based toxicology information, as well as effective communicators.

When reporters call SOT Headquarters or check the Web site to seek toxicology experts, the names and contact information of experts are provided according to their specialties.

Qualifications include being an acknowledged expert in one or more aspects of toxicology and conversant

## Media Resource Program June 1st Deadline Approaching



with issues of concern to the public; being an SOT member; possessing demonstrated expertise in oral and written science communication, preferably to the general public; willingness to interact with the media; and having the recommendation of SOT Council, Specialty Section, Regional Chapter or standing Committee.

For more information and application, check the SOT Web site at <http://www.toxicology.org/medexperts.html> or contact Deborah Hyman at SOT Headquarters by telephone (703) 438-3115, ext. 327 or E-mail at [deborahh@toxicology.org](mailto:deborahh@toxicology.org).

**Positions Available:**

**Senior Toxicologist**

Chrysalis PreClinical Services, located in Scranton, PA, a recognized leader in global drug development, is looking for a Senior Toxicologist.

This position in the General & Reproductive Toxicology area requires an experienced toxicologist to manage and coordinate the scientific aspects of preclinical toxicology studies. Responsibilities include study design, data interpretation and reporting and extensive client interaction. Qualified candidates should have a Ph.D. in toxicology or related field plus 4-8 years experience or equivalent of education and experience. Experience in a contract research organization would be an advantage.

Chrysalis emphasizes an atmosphere of collaboration, intellectual honesty and scientific integrity. We offer an excellent work environment with a competitive benefit and compensation package. Please send resume to:

**Human Resource Department  
Chrysalis PreClinical Services  
Scott Technology Park  
100 Discovery Park  
Olyphant, PA 18447  
Fax: 717-585-2384  
www.chrysalisintl.com**

**Environmental Scientist/Toxicologist**

Foth & Van Dyke offers comprehensive engineering/scientific consulting services to clients throughout the United States. Located in the Midwest (Green Bay, WI), Foth & Van Dyke employs more than 300 individuals with solid engineering/scientific/technical backgrounds. Founded in 1938, the firm is privately held and has sales averaging \$27 million annually.

Candidates should possess a M.S. in Environmental Science, Toxicology or related degree with 5+ years experience, preferably in a consulting environment. Strong environmental science background as well as experience in risk assessment and RBCA desired. Responsibilities include environmental studies, investigations, data analysis and report/proposal writing. Ability to conceptualize problems and effectively consult with clients is essential for success.

Come join a winning team! We offer an attractive salary/benefit program, a formalized career development program and stock ownership opportunities in our privately held firm. If you are committed to making the most of your career with a progressive consulting firm, this could be the opportunity for you. Submit resume and salary history in confidence to Foth & Van Dyke, Nicole Gear, P.O. Box 19012, Green Bay, WI 54307-9012; Fax (920)497-8516; E-mail: ngear@foth.com. Visit our Web site [www.foth.com](http://www.foth.com).

**Toxicologist/Pharmacologist**

Exciting job opportunity! The U.S. Army Medical Research Institute of Chemical Defense (USAMRIID) is the Army's lead laboratory in the discovery and development of medical treatments for chemical warfare agent injury. To enhance our research efforts, we anticipate opening two full-time Toxicologist/Pharmacologist positions in the Basic Assessment Branch of the Drug Assessment Division at Aberdeen Proving Ground, Maryland. Only U.S. citizens may apply. The successful candidate will serve as a principal investigator responsible for planning, initiating, conducting, and directing individual *in vivo* and/or *in vitro* experimental research projects directed at determining the efficacy, safety and stability of candidate pretreatment and treatment compounds against chemical warfare agents. The performance of these duties primarily requires application of professional knowledge of toxicology, pharmacology, pharmaceuticals, chemistry and bio-chemistry and experimental design, biostatistics and data handling. Laboratory space, support services and monetary support are available.

Job announcement can be found at [www.usajobs.opm.gov](http://www.usajobs.opm.gov) or you can call (410) 306-0080 to request an application package. Initial consideration will be given to those received by February 26, 1999.

**Toxicology Technologist**

Legacy Health System, located in Portland, Oregon, an integrated network of four tertiary care hospitals, has been ranked one of Oregon's top ten employers for the fourth consecutive year! Portland is a city known for its livability, noted for its spectacular urban neighborhoods, and is within close proximity to the majestic Cascade Mountains and the panoramic Oregon Coast.

Toxicologist/Medical Technologist with a minimum of four years' forensic toxicology experience. We are looking for a team player with medical and forensic toxicology proficiency including EIA, TLC, and GC/MS skills; Bachelor's in life sciences and successful completion of the ASCP, AMT or CLS accreditation program for toxicology or medical technology; excellent communication and technical skills. This is a full-time position with a 3 p.m. - 11 p.m. shift.

We offer an excellent salary and benefits package including on site child care and fitness facilities, tuition reimbursement! Please apply online at [www.legacyhealth.org](http://www.legacyhealth.org).

**Legacy Health System  
Employment Services**

1120 NW 20th Avenue, Suite 111

Portland, OR 97209

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**PLACEMENT SERVICE**

**Dermal Research Scientist**

The Toxicology Research Program at ManTech Environmental Technology, Inc., located on Wright Patterson Air Force Base, OH, is recruiting an established scientist in the area of dermal research. **Minimum requirements include:** (1) Ph.D. in biological sciences or equivalent plus 5 years experience in dermal research; (2) 4 first author peer-reviewed publications in dermal research; (3) demonstrated good oral and written communication skills; and (4) applicant must be a U.S. citizen or have resident alien status. **Preferred candidates will possess:** Experience in (1) dermal absorption of chemicals; (2) molecular biology of the skin; (3) mathematical modeling; and (4) working in a multi-disciplinary research team environment. **Essential duties:** (1) Develop and implement laboratory methods related to understanding the distribution and toxicity of chemicals in the skin; (2) Participate in *in vivo* and *in vitro* dermal absorption experiments designed to assess systemic toxicity; (3) Provide guidance to laboratory personnel relating to the design of dermal experiments and collection of appropriate data; (4) Interact with other laboratory scientists in a team approach to solving problems related to dermal exposures; (5) Analyze and publish research findings in scientific literature. See complete job description for this position on our web page at [www.man-env.com](http://www.man-env.com). Send resume and salary history to: ManTech Environmental Technology, Inc., P.O. Box 31009, Dayton, OH, 45437-0009, or FAX: (937) 258-2197, or E-mail to: [angelm@fatcon.al.wpafb.af.mil](mailto:angelm@fatcon.al.wpafb.af.mil). Specify PVA 4242-02 in all correspondence. Closing date: 2/26/99. EOE

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The SOT *Communique* is published five times a year. The costs for placing positions available ads are \$250 for 100 words and \$1 for each additional word. The cost for placing positions wanted ads is \$25.00 for 50 words and \$.50 for each additional word. Please send the ad copy to **Ann Kerstetter, SOT** Headquarters, by E-mail: [annk@toxichology.org](mailto:annk@toxichology.org) or Fax: 703-438-3113.

**Inhalation Toxicologist**

**Vaccinologist**

**Microbiologist**

**Positions available in the Department of Aerobiology and Product Evaluation, USAMRIID:**

**Inhalation Toxicologist:** The successful applicant will be involved in studies to investigate the aerosol toxicity of infectious agents and biological toxins. Principal objectives of investigation are to develop knowledge of basic properties and physical interactions that occur between aerosol particles and the respiratory system, and subsequent biological, physiological and immunological responses between the inhaled organisms/toxins and the host.

**Vaccinologist:** Evaluate efficacy of candidate vaccines against inhaled microorganisms and biological toxins using appropriate animal models.

**Microbiologist:** Identify new antigens by understanding the mechanism of pathogenesis and host defense against inhaled microbial agents. Study the immune response to inhaled microorganisms and biological toxins.

Interested applicants should send their curriculum vitae, statement of research interests, and names of three references to: **Dr. M. Louise Pitt** U.S. Army Medical Research Institute of Infectious Diseases, Frederick, MD 21702. FAX: (301) 619-2348; E-mail: [Dr.\\_M.\\_Louise\\_Pitt@detrick.army.mil](mailto:Dr._M._Louise_Pitt@detrick.army.mil).

**UCLA Medical School Faculty Position**

The Department of Pathology and Laboratory Medicine invites applications for a tenure-track position at the Assistant professor level in the field of molecular mechanisms of chemical carcinogenesis. Areas of focus for prospective candidates may include mechanisms of action of genotoxic or non-genotoxic carcinogens, receptor-mediated carcinogenesis, metabolism of carcinogens, genetic susceptibility to carcinogenesis, and anti-carcinogenesis.

This recruitment builds on the outstanding scientific environment and attractive Westwood campus of UCLA. A comprehensive set-up package of state-based salary and operational resources will be available to the successful candidate. Qualified applicants possessing the M.D., Ph.D., or equivalent degree should send curriculum vitae, statement of research interests, and the addresses, telephone numbers and E-mail addresses of three references to **Oliver Hankinson, Ph.D.** Search Committee Chair, Department of Pathology and Laboratory Medicine, University of California, 10833 Le Conte Avenue, Los Angeles, CA 90095-1732.

# New Career Development Award Programs

endeavors on patient-oriented research in the environmental health sciences. For the purposes of this award, patient-oriented research is defined as research conducted with human subjects (or on material of human origin, such as tissues, specimens, and cognitive phenomena) for which an investigator directly interacts with human subjects.

Application Guidelines and additional information on Career Development Programs of the NIEHS are available at: <http://www.niehs.nih.gov/detr/programs/career.htm> or contact: Carol Shreffler, Ph.D. E-mail: [Shreffl1@niehs.nih.gov](mailto:Shreffl1@niehs.nih.gov) or Tel: (919) 541-1445.

the genetic basis for differing susceptibilities to environmentally-associated diseases.

The Mentored Clinical Scientist Development Award (K08) is directed to clinically trained professionals who are committed to a career in laboratory or field based research in environmental health and have the potential to develop into independent investigators. The candidate will undertake a supervised research experience that may integrate didactic studies with laboratory or clinically based research.

The Mentored Patient-oriented Research Career Development Award (K23) supports the career development of clinically trained investigators who have made a commitment to focus their research

The NIEHS is announcing the availability of support for Mentored Research Scientist Development Awards to increase the cadre of scientists working in three areas of particular importance to the NIEHS.

The Mentored Research Scientist Development Award in Molecular Epidemiology (K01) is designed to allow individuals with degrees in a basic science that is relevant to the study of the effects of environmental exposures to gain research and training experience in epidemiology; or to allow individuals with degrees in epidemiology to gain research and training in a basic science that could be applied to the development of biomarkers of exposure or of effect in humans, or studies aimed at understanding

# Enhance Your Knowledge of Risk Assessment

Sabbaticals in academia are frequently used to promote scientific exchange and collaboration and to stimulate intellectual growth. However, sabbaticals are less common in practice, and exchange of personnel between these two sectors is rare. Sabbatical opportunities would encourage collaboration in risk assessment for chemical hazards, especially for these two sectors. There are a number of mechanisms by which these can be accomplished:

**Intergovernmental Personnel Agreement (IPA):** This mechanism allows university employees to work at government institutions for several months up to several years, either part-time or full-time. All parties, of course, must agree and payment of the cost is negotiated between the government and the university. The scientist must have a full appointment with the university. Potentially, an alternate funding source could be a scientific society, grant, or some other neutral benefactor. Although this mechanism works well for university faculty who wish to work in government laboratories, the mechanism cannot be used to exchange personnel with industry.

**Guest Worker:** Any individual scientist may collaborate at a government laboratory to conduct research if his/her employer is in agreement. Although no salary

**Cooperative Research and Development Agreement (CRADA):** Collaborative research protocols or studies may be conducted by industry and government personnel with combined support from both parties. After government and industry agreement, supplies, equipment and personnel approved in the agreement can be mobilized to solve broad scientific problems with wide health care and technical application. Approaches and techniques can be shared under the specification of the agreement. Both parties likewise share any inventions and information produced from the cooperation. Although sign-off authority within the government is usually at a high level, the CRADA allows for the greatest amount of exchange between government and industry.

For further information contact: Clarissa Wilson, SOT Headquarters ([clarissa@toxycology.org](mailto:clarissa@toxycology.org)).

# Diet and Obesity Summary

Continued from page 18

effects were only observed during the period of controlled food intake in the biosphere (Dr. Walford, University of California).

4. Clinical and epidemiological studies showed that even a moderate loss in body weight (5 to 10%) was associated with improvement in blood pressure, lipids, glucose tolerance and insulin sensitivity and risk factors for coronary artery disease and ischemic stroke (Dr. Manson, Harvard University).

Dr. Rosenbaum of the Columbia University discussed mechanisms of genetic regulation of obesity and body weight in humans. His research showed that the body fatness and factors affecting fat storage are strongly inherited and neuro-endocrine pathways regulate body weight "set points." The ability to store excess calories as fat was apparently associated with evolutionary, survival and reproductive (enhanced fertility and reduced maternal/fetal morbidity/mortality) advantage.

5. Energy balance rather than total fat intake during the childhood and adulthood was the major risk factor affecting the etiology of breast cancer. More rapid weight gain (rapid onset of menarche), alcohol consumption and greater height were positively correlated with the incidence of breast cancer. Certain micronutrients such as folic acid seemed to be protective against breast cancer (Dr. Willett, Harvard University).

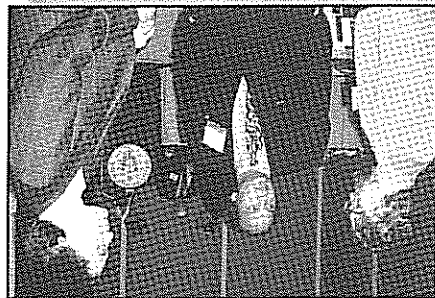
6. The type and source of fat were the most important factors in prostate cancer. Animal-derived excess fat

Continued from page 7

# EPA Backs Away From Science Based-Risk Assessment

facilitate, and make the case for, the use of mechanistic data to enhance the quality of risk assessments. If we do not rise to the challenge then we run a very real risk, the risk of having the discipline of toxicology become marginalized. In particular, I hope my academic colleagues will understand this and get more involved. We need to point out how risk assessments may be improved as well as indicate what is wrong with some current approaches. In this context, I look forward to working with the membership, including our reconstituted Task Force to Improve the Scientific Basis of Risk Assessment as it transitions to a think tank mode, in order to better position SOT to continue to play a constructive role by being part of the solution.

Submitted by Jay I. Goodman, Michigan State University



Following the panel discussion, meeting chairperson, Dr. Rakesh Dixit, of Merck Research Laboratories (middle), talks with colleagues Dr. Richard Weindruch also of Merck (left) and Dr. Michael Rosenbaum of Columbia University (right).

7. Consumption of diets with adequate fibers (derived from wheat bran) was associated with reduced risk of colon cancer and breast cancer (Dr. Williams, American Health Foundation, Valhalla, NY). In rural China, consumption of high caloric vegetable-based foods (vs. animal-based proteins/fats) was associated with a low incidence of chronic degenerative diseases (Dr. Campbell, Cornell University, NY).

8. Polyphenolic compounds present in berries (strawberries and black raspberry) inhibited chemically-induced esophageal cancer in rats (Dr. Stoner, Ohio State University); Green and black tea polyphenols prevented UV B radiation-induced carcinogenic responses in murine skin and inflammatory responses in murine and human skin (Dr. Mukhtar, Case Western Reserve University, OH).

9. Conjugated linoleic acid (sold in health food stores) derived from grilled beef reduced body fat, enhanced lean body mass and prevented mammary and colon cancer in experimental models (Dr. Pariza, University of Wisconsin).

Continued to page 28

# SOT Welcomes A New Corporate Member

Philip Morris U.S.A., the leading cigarette company in the U.S., is an operating company of Philip Morris Companies Inc. Philip Morris U.S.A. manufactures Marlboro, the best selling cigarette in the U.S. and the world, as well as Ment, Benson & Hedges, Virginia Slims and Parliament. Other brands include Basic, Cambridge and Alpine. The modern history of Philip Morris dates from 1919, when a new firm, owned by American stockholders, acquired the U.S. Philip Morris company and incorporated in Virginia under the name Philip Morris & Co. Ltd., Inc.

Salaries are in thousands of U.S. dollars: mean (range for  $\pm 1$  SD).

Employer	Sex	Number of respondents	0-1	1-3	3-5	5-10	10-20	20+
Consumer product	M	5	-	-	45	75	78 (75-85)	-
	F	7	35	40 (35-45)	55	-	70 (65-75)	-
Pharmaceutical industry	M	20	45	60 (55-65)	63	55	80 (65-105)	87.5 (75-105)
	F	7	35	40 (35-45)	55	-	70 (65-75)	-
Consultants	M	8	-	45	45	65 (55-75)	75	-
	F	17	35	45 (35-55)	45	58.3 (35-75)	55	-
Chemical industry	M	24	55	70	65	55	96.2 (75-105)	108.2 (85-154)
	F	11	-	-	65	-	73 (65-93)	80 (55-105)
Contract research	M	16	45	45 (35-65)	-	55	79 (55-105)	95 (55-115)
	F	14	47	47 (35-65)	35	55 (45-65)	52 (35-65)	65
Academic	M	5	-	-	25	25	30 (25-35)	-
	F	1	55	-	-	-	-	65
State/local government	M	4	4	-	-	-	55 (45-65)	-
	F	4	4	-	-	-	55 (45-65)	-
Federal government	M	5	5	-	55	55	50 (45-55)	-
	F	6	7	-	58 (45-75)	55	55	105
Others	M	7	65	65	45	45	85	-
	F	7	35	35	45	72 (45-95)	72 (45-95)	-

TABLE 2. 1998 Master's-level salaries

Salaries are in thousands of U.S. dollars: mean (range for  $\pm 1$  SD). In 37/49 cases, male salaries were higher. \*47 earned more than \$100K. \*\*10 earned more than \$100K. \*\*\* Insufficient entries to allow separate analysis. Data pooled with chemical industry group.

Employer	Sex	Number of respondents	0-1	1-3	3-5	5-10	10-20	20+
Consumer product	M	58	65	85	68 (55-75)	83 (75-105)	109.9 (85-123)	133.3 (98-135)
	F	25	55	65	62 (55-65)	80 (70-80)	106.6 (70-200)	121.9 (115-135)
Pharmaceutical industry	M	214	61.6 (35-105)	72.5 (63-92)	79.3 (65-95)	86.9 (78-116)	111.6 (89-135)	144.3 (115-185)
	F	96	70.7 (65-75)	71.3 (65-75)	85.8 (65-105)	101.3 (85-115)	103.9 (75-135)	105 (75-135)
Consultants	M	44	-	63 (45-85)	-	85 (68-105)	101.4 (75-124)	103.9 (85-125)
	F	32	35	55 (45-65)	-	75 (65-95)	100.9 (85-105)	160
Consultants (Self Employed)	M	64*	45	-	75	180	139.5 (85-200)	144 (85-195)
	F	15**	-	-	65	92.5 (50-110)	148.3 (100-150)	144.3 (98-135)
Chemical industry	M	130	60	70	83.6 (75-95)	99.5 (85-115)	119.1 (95-145)	111 (92-130)
	F	37	60 (57-63)	65	77.5 (70-90)	88.9 (70-100)	116 (80-160)	116 (80-160)
Contract research	M	128	58.3 (35-85)	63.6 (44-86)	62.6 (55-75)	74.5 (55-95)	98.4 (75-125)	111 (92-130)
	F	36	-	52 (45-55)	65	75 (50-100)	82.7 (50-100)	83.9 (60-110)
Academic	M	308	25	43 (35-65)	50.3 (35-65)	77.2 (55-105)	99.8 (83-115)	99.8 (83-115)
	F	85	45	53 (45-65)	48.6 (45-55)	62 (45-75)	91.6 (65-115)	91.6 (65-115)
State/local government	M	47	40 (35-45)	40 (35-45)	50 (45-55)	57.5 (55-65)	76.9 (68-84)	95.6 (75-118)
	F	25	25	48.3 (45-55)	65 (55-75)	70 (65-75)	79.3 (65-85)	79.3 (65-85)
Federal government	M	154	50	55 (45-65)	58 (48-68)	74.6 (62-86)	89.8 (66-116)	89.8 (66-116)
	F	58	-	58.3 (45-75)	53.6 (45-55)	62.3 (55-65)	72.9 (65-85)	93 (85-105)
Petrochemical	M	9	-	-	-	85	98.3 (85-115)	105 (95-115)
	F	31	45	52 (45-55)	60 (55-65)	85 (75-95)	100.4 (75-115)	135.9 (115-148)
Others	M	7	-	50	-	-	101 (80-110)	110 (105-115)
	F	31	45	52 (45-55)	60 (55-65)	85 (75-95)	100.4 (75-115)	135.9 (115-148)

TABLE 1. 1998 Doctoral-level salaries

As of November 30, 2,102 responses had been received, for a response rate of 33.8%. This is comparable to the response rates for 1988, 1991 and 1995. The survey instrument was a modification of that used in the previous three surveys, with the major change being an expansion of response categories for the upper end of the salary and bonus ranges. It should be noted that there continues to be a significant increase in the number of individuals reporting six-figure incomes and in those receiving significant sums as bonuses, as is reflected particularly in Tables 1 and 4. Survey methodology employed conformed to standard procedures, though the response rate for this survey remains high for such endeavors.

Continued from page 1

## Fourth Triennial Toxicology Salary Survey

A total of 1,604 of the respondents (1186 men and 418 women) were full-time employed holders of doctoral degrees in the U.S. and Canada. Table 1 presents the mean salaries ( $\pm$  one standard deviation) for these individuals, sorted by years of experience after receipt of their degrees, sex, and field of employment. Salaries are in thousands of U.S. dollars per year.

The mean salaries ( $\pm$  1 SD) for the 153 master's-level respondents are presented in Table 2. Likewise, the results from the 128 bachelor's-level respondents are presented in Table 3. Table 4 presents a summary of bonuses received by doctoral level full-time employees.

The full survey results will be published in the *International Journal of Toxicology* in the spring.

By Shayne C. Gad

Gad Consulting Services,

Raleigh, NC

**TABLE 3. 1998 Bachelor's-level salaries**

Employer	Sex	Number of respondents	Years experience post-terminal degree					
			0-1	1-3	3-5	5-10	10-20	20+
Consumer product	M	2	-	-	-	75	-	75
	F	4	20	-	-	75	-	-
Pharmaceutical industry	M	14	-	40 (35-45)	45	57.5 (55-65)	68.3 (65-75)	87.5 (65-105)
	F	31	-	-	45	53.9 (45-57)	57 (48-67)	62.5 (55-82)
Consultants	M	1	-	-	-	-	-	-
	F	1	-	-	-	-	-	-
Chemical industry	M	10	25	35	85	75	-	60 (55-65)
	F	4	-	-	-	-	-	-
Contract research	M	17	27 (19-35)	-	38	49 (45-55)	63 (45-85)	89 (75-130)
	F	14	25	-	-	-	-	55
Academic	M	1	-	20	-	-	-	56.6 (37-75)
	F	1	-	-	-	-	-	-
State/local government	M	2	-	-	25	40 (35-45)	59 (45-75)	-
	F	1	-	-	-	-	-	-
Federal government	M	4	-	-	-	45	92 (85-105)	-
	F	2	-	-	-	-	-	-
Others	M	6	30 (25-35)	35	-	55	35	85
	F	2	-	-	35	-	-	75

Salaries are in thousands of U.S. dollars: mean (range for  $\pm$  1 SD).

**TABLE 4. 1998 Doctoral-level bonuses**

Employer	Sex	Number of recipients/ respondents*	Years experience post-terminal degree					
			0-1	1-3	3-5	5-10	10-20	20+
Consumer product	M	35/58	-	12	3.5	8.4	31.1	31.2
	F	20/25	-	2	2.5	12.5	27.6	27
Pharmaceutical industry	M	196/214	2	6.1	10.3	12.7	20.1	26.7
	F	78/96	-	11.7	5.0	9.1	19.5	15.2
Consultants (Employees)	M	16/44	-	-	10	6.7	9.8	8.4
	F	23/32	-	4	1.5	4.7	8.9	40
Chemical industry	M	100/130	5	5	-	10.1	15.2	31.2
	F	30/37	1.5	1	10	6.1	12.5	12.5
Contract research	M	66/128	1	0.9	3.2	10	11.4	25.3
	F	12/36	-	-	-	5.8	8.2	2
Academic	M	8/308	0.5	-	3.0	6.5	4.3	-
	F	1/85	-	-	-	-	5.0	-
State/local government	M	3/47	-	0.4	-	-	1.5	10
	F	0/25	-	-	-	-	-	-
Federal government	M	37/154	-	0.7	1.1	1.1	1.1	3.1
	F	11/58	-	-	2.3	10.9	1	1
Others	M	17/31	-	-	8	-	37.5	25.7
	F	2/7	-	-	-	-	-	-

\* Bonuses are in thousands of U.S. dollars: mean (range for  $\pm$  1 SD).  
 \* Receiving bonuses/total (%).

# Membership Dues Increase

Prior to this year, annual membership fees included dues (\$45) and required subscriptions to *Toxicology and Applied Pharmacology* (\$50) and *Toxicological Sciences* (\$50) for a total of \$145. Recognizing the added expense to members of the mandatory subscriptions, SOT Council resisted increasing the membership dues to more fully cover the actual costs of membership services. Instead, funding for these services has been drawn from the proceeds of the Annual Meeting and reserve funds.

In line with SOT's Long-Range Plan, Horizons 2000, many committee activities have increased significantly, with a consequent increase in the budget. The

majority of these expenses are attributable to critical programs, which will assure the future success of the Society and the profession and science of toxicology. SOT's current financial projections indicate that revenues will not continue to exceed expenses; thus, Council will be seeking additional sources of revenue and adjusting expenditures to maintain sound fiscal policies. The modest increase in dues integrated into your present statement reflects, in part, the increased costs of member services since the last dues increase in 1994. This increase will permit SOT to continue to use other revenues in support of our critical initiatives as adopted in our Long-Range Plan.

Although my term continues through April, this is my last opportunity to communicate with you through this column. I am very grateful for the honor and privilege to serve as President of SOT, and I am confident that Council will continue the initiatives of *Horizons 2000*. This will advance the frontiers of the toxicological sciences and in the best interest of our members and profession. In closing, I wish to acknowledge the very collegial and supportive efforts of all members of Council, the outstanding efforts of our many committees, subcommittees and other SOT volunteers, and of course, the exceptional professional assistance provided to me by Shawn Lamb, Clarissa Wilson, Deborah Hyman and their colleagues at SOTHQ. My job would have been impossible without them. I look forward to seeing you in New Orleans.

*Steve Cohen*

Steven D. Cohen  
1998-99 President

Every chapter to submit a proposal. To better portray the importance of regional chapters, we shall try something new at the Annual Meeting in New Orleans. Each chapter has been requested to post announcements, brochures or other materials in a special display area at the Annual Meeting. This will be a unique opportunity to proudly highlight recent and planned chapter activities and to gain new ideas for your own programs. All chapters should participate. With your support, this can become a regular activity of our Annual Meeting. If you have questions or comments about any of the above, please contact SOTHQ or me (cohens@uncommv.unconn.edu).

fact the RALA Committee is organizing such an effort called the SOT Regional Advocacy Network. Regional Chapter Presidents are being asked to accept alert action messages from SOT Headquarters and distribute to members in their region. As another excellent example, the theme of the December meeting of the Lake Ontario SOT was *Toxicologists as Communicators*. Area toxicologists presented their views and shared experiences. There was a frank and open discussion about approaches to, and the possible costs and benefits of, toxicology outreach. While the symposium addressed this topic very effectively, the meeting also provided ample opportunity for presentation of the latest research findings during integral poster and platform sessions. Thus, the meeting fulfilled the traditional role as a medium for scientific exchange while at the same time providing a forum for encouraging members to work for *Better Public Understanding of Toxicology*. In a similar fashion, the Allegheny-Erie SOT held a successful K-12 teachers program last spring and the South Central SOT is presently exploring the possibility of developing a K-12 program for its next meeting. SOT Council is excited about these activities and would like to see increased efforts among all the Regional Chapters. In addition to the many resources which SOT provides to the chapters (see Box 2), Council is offering a grant of up to \$2,000 annually to each chapter for innovative proposals aimed at advancing the LRP initiatives in the region. I encourage every chapter to submit a proposal.

- 1. Regional Chapter Initiatives**
- Conceptual
  - Local Activities
  - Consistent with SOT's LRP initiatives
  - Innovative Ideas
  - Examples
    - Parables to the People
    - Public Forum
    - K-12 Teachers Program
    - Web Site for Local Issues
    - Media (spots, columns, letters)
    - Educate Legislators
    - Contact on Issues
    - Speak out on Issues
    - Other Innovative Ideas

- 2. SOT Supports Regional Chapters**
- Headquarters Provides
    - Consultation re: meetings, media, public relations, educational programming
    - WWW: links to Chapter sites
    - Liability: umbrella insurance policy - officers' liability
    - Tax Status: SOT Federal Tax ID and filing.
  - Speakers
    - Speakers for Chapter Meeting
    - CE Speakers from Annual Meeting
    - Members of SOT Council
    - SOT will cover the cost
  - Funding
    - Up to \$200 annually per Chapter
    - All Regional Chapters eligible
    - Requires SOT Council approval
    - Proposal must advance *Horizons 2000*



• 7th International Course on the Safety Assessment of Medicines, Specific Toxicology. May 16-21, 1999, San Francisco. For a brochure and registration information, contact Nancy Rivera, American Health Foundation, 1 Dana Road, Valhalla, NY 10595-1599, Tel: (914) 789-7144; Fax: (914) 592-6317; E-mail: Nrivera2@ix.netcom.com.

• Society of Toxicology Pathologists 18th Annual Symposium, Toxicologic Pathology of the Nervous System. June 13-17, 1999, J.W. Marriott Hotel, Washington, D.C. Contact: (609) 423-7222, ext. 350. Web site: <http://www.toxpath.org>.

• British Toxicology Society Autumn Meeting. 12-14 September 1999, Keeble College, Oxford, UK. Dr. TJB Gray, Meetings Secretary, Willowburn Avenue, Alnwick, Northumberland NE66 2JH, England; Tel: +44 (0) 1665 607370; Fax: +44 (0) 1665 607510.

• 17th International Neurotoxicology Conference. October 17-20, 1999, Double Tree Hotel, Little Rock, Arkansas. Contact: Professor Joan Cranmer, Department of Pediatrics, University of Arkansas for Medical Sciences, 1120 Marshall, Rm. 302, Little Rock, AR 72202; Tel: (501) 320-2986; Fax: (501) 320-4978; E-mail: Cranmer-joanM@exchange.uams.edu.

Abstract deadline: September 1, 1999.

• 9th North American ISSX Meeting. October 24-28, 1999, Opryland Hotel, Nashville, TN. Contact: ISSX/ACT-DCT Meeting, P.O. Box 3, Cabin John, MD 20818; Fax: 301-983-5357; E-mail: nholahan@exec.issx.org; Web site: <http://www.louisville.edu/medschool/biochemistry/ISSX-ACS>.

• EUROTOX 2000. September 17-20, 2000, Imperial College, South Kensington, London. Contact: Prof. Alan Boobis; Fax: +44(0)181 383 2066; E-mail: a.boobis@fpm.ac.uk.

• 9th International Congress of Toxicology. July 8-13, 2001, Brisbane Convention and Exhibition Centre, Queensland, Australia. Hosted by Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists. Contact: Intermedia Convention and Event Management, P.O. Box 1280, Milton, QLD 4064, Australia; Tel: +61 (0) 7 3369 0477; Fax: +61 (0) 7 3369 1512; E-mail: tchx2001@tm.com.au; Web site: <http://www.unq.edu.au/ICT9>.

MEDIA OF INTEREST

• Reproductive Toxicology: In Vitro Germ Cell Developmental Toxicology, from Science to Social and Industrial Demand. Edited by Jesus del Mazo. Contact: Plenum Press, New York, (800) 221-9369 or check the Web site at <http://www.plenum.com>.

• Clinical Chemistry and Hematology Control Values for Cytotoxicity. Available at the 1999 SOT Annual Meeting or by calling Charles River Laboratories at (978) 658-6000. Past issues regarding various toxicology topics are also available upon request.

• Course "Medical and Toxicology" of the Netherlands Postgraduate Education in Toxicology. February 8-19, 1999, Amsterdam, The Netherlands. For more information contact Postgraduate Education in Toxicology, Department of Toxicology, Wageningen Agricultural University, P.O. Box 8000, NL-6700-EA WAGENINGEN, The Netherlands; Tel: +31-317-482656; Fax: +31-317-484931; E-mail: hans.femink@algemeen.tox.wau.nl.

• Building the Road to Success with GLP Fundamentals. A two-day workshop offered by the Mid-Atlantic Region Society of Quality Assurance (MARSA). February 10-11, 1999 in Lahaska, Pennsylvania. For registration information please contact Joanne Jackson at (732) 873-6309; Fax: (732) 873-6009. For further information contact Debra Patterson at (609) 716-2013; Fax: (609) 275-5273.

• Relationships between Acute and Chronic Effects of Air Pollution. February 22-25, 1999 Hannover Medical School, Germany. For more information please contact Sharon Weiss at (202) 659-0074; Fax: (202) 659-8654; E-mail: sweiss@hhsi.org.

• Society of Toxicology 38th Annual Meeting. March 14-18, 1999, Ernest N. Morial Convention Center, New Orleans, LA. Contact: SOT Headquarters, 1767 Business Center Drive, Suite 302, Reston, VA 20190-5332; Tel: (703) 438-3115; Fax: (703) 438-3113; E-mail: amette@toxology.org; Web site: <http://www.toxicology.org>.

• Safety Evaluation of Drugs for Central Nervous System Delivery. March 19-20, 1999, New Orleans, LA. Meeting organizers: Carl P. Lebel, Ph.D., Product Development, Amgen, Inc., Thousand Oaks, CA; (805) 447-8281; Fax: (805) 498-1425; Tony L. Yaks, Ph.D., Department of Anesthesiology, University of California, San Diego; Tel: (619) 543-5243; Fax: (619) 543-6070.

• Analytical Chemistry for QA Professionals. March 24-25, 1999 in Lahaska, Pennsylvania. Sponsored by the Mid-Atlantic Region Society of Quality Assurance (MARSA). Contact: Rita Brillingier at (215) 641-7916; Fax: (215) 619-1657 or Cindy Murphy at (215) 652-1978; Fax: (215) 652-1075.

• Workshop on Stability Practices in the Pharmaceutical Industry - Current Issues. March 29-30, 1999, Crystal Gateway Marriott, Arlington, VA. Contact: Amy Miller, American Association of Pharmaceutical Scientists; Tel: (703) 518-8417; E-mail: miller@aaps.org.

• Conference on Topics in Toxicology and Risk Assessment. April 12-15, 1999, Hope Hotel and Conference Center, Wright-Patterson, AFB, OH. Contact: Lois Doncaster, Conference Coordinator; Tel: (937) 235-5293; E-mail: doncastel@alcon.a.l.wpa.af.mil; Web site: <http://www.voyager.wpa.af.mil>.

• British Toxicology Society Annual Congress Biomarkers, Environment and Health, Risk Assessment, Computer Prediction of Toxicity and Metabolism, Molecular Pathology. April 18-21, 1999, Keeble College, Oxford, UK. Contact: Dr. TJB Gray, Meetings Secretary, Willowburn Avenue, Alnwick, Northumberland NE66 2JH, England; Tel: +44 (0) 1665 607370; Fax: +44 (0) 1665 607510.

• Mid-America Toxicology Course. April 25-30, 1999, Kansas City, MO. Contact: Curtis D. Klaassen, Ph.D., Professor of Pharmacology and Toxicology, University of Kansas Medical Center, Kansas City, KS 66160-7417; Tel: (913) 588-7714; Fax: (913) 588-7501; E-mail: klaasse@kumc.edu.

• First NSF International Conference on Indoor Air Health. May 3-5, 1999 Marriott Tech Center, Denver, Colorado. For more information please contact Wendy Raeder at NSF International; Tel: (1) 734-769-8010, ext. 205; Fax: (1) 734-769-0109; E-mail: raeder@nsf.org; Web site: <http://www.nsf.org>.

• 15th Health Effects Institute Annual Conference. May 9-11, 1999, Hyatt Regency La Jolla, La Jolla, CA. Contact: Gail Allosso; Tel: (617) 876-6700; Fax: (617) 876-6709; E-mail: gailosso@healtheffects.org.

## COUNCIL HIGHLIGHTS

The following are the highlights of the November 1998 Council Meeting:

- 1 Council voted to endorse the Harmonization of Cancer and Non-Cancer Risk Assessment meeting.
- 2 Council approved the Education Committee's recommendation to provide the SOT Slide Sets free-of-charge to educational institutions upon request.
- 3 Council reviewed and approved the Education Committee's recommendations and proposed revisions for the *Resource Guide to Careers in Toxicology*, which included reducing the size of the hard copy and making the full text available on the SOT Web site.
- 4 Council approved the Finance Committee's recommendation to increase the full and associate membership dues from \$45 to \$55 per year.
- 5 Council voted to make a TAP subscription an option to SOT members for 1999.

## In Memoriam

Cipriano Cueto, PhD  
Donald R. Saunders, PhD  
Edmund E. Staley, DVM

Cipriano Cueto, a toxicologist and chemist who retired as Chief of the Toxicology Branch of the National Cancer Institute's Carcinogenesis Testing Program, died November 7, 1998. Dr. Cueto retired from federal service in 1979 after 30 years. For 10 years, he had been at the National Cancer Institute where he was responsible for the design and interpretation of studies of more than 200 chemicals for possible cancer-causing effects. Before moving to the Washington area in 1969, he was Chief of Chronic Studies at the Food and Drug Administration's National Center for Toxicological Research in Jefferson, Arkansas. Earlier in his career, Dr. Cueto worked for the Communicable Disease Centers of the Public Health Service and for the Department of Agriculture in Atlanta and Savannah, Georgia. He received a master's degree in biochemistry and a doctorate in pharmacology from Emory University. During World War II, he served in the Navy. On his federal retirement, Dr. Cueto was a toxicologist with Litton Bionetics and Tracor Jitco in Rockville, Maryland.

## MEMBER NEWS

Dr. Bruce Ames, director of the National Institute of Environmental Health Sciences Center at the University of California-Berkeley, was among eight scientists awarded the nation's top scientific honor—the National Medal of Science. Dr. Ames is known for the "Ames Test," a laboratory technique for identifying toxic and carcinogenic substances. He has also made major contributions to understanding the biology of aging. In recent years, Dr. Ames has argued that the public overrates health hazards from certain substances, such as pesticides.

The Council of the Society of Toxicology congratulates Dr. Ames on his receipt of the National Medal of Science, our nation's top scientific honor. Dr. Ames' contributions to the understanding of toxicology, the biology of aging, nutrition, and public perceptions have been a tremendous asset to the science of toxicology. On behalf of the members of the Society, we thank him.

## Diet and Obesity Meeting

### Summary

*Continued from page 23*

Overall, the symposium provided strong evidence and recommendations derived from experimental animal studies, epidemiological and clinical studies in humans that a chronic maintenance of energy balance (low caloric intake coupled with energy-burning physical activity) and inclusion of essential micronutrients (vitamins and minerals) in human diet will promote good health and retard or delay aging and the major debilitating diseases of advanced age in humans.

## New Edition of Resource Guide

*Continued from page 3*

The form may also be printed from the SOT Web site at <http://www.toxicology.org/guide3.pdf>. The completed form should be returned to SOT with payment of \$500 by March 1, 1999.

*Submitted by R. Dixit, J. Coleman and K. Keenan*