

-NEWSLETTER-

Reproductive & Developmental Toxicology

A Specialty Section of the Society of Toxicology



Editor: Ronald D. Hood

**Ronald D. Hood & Associates
Toxicology Consultants
Box 870344
Tuscaloosa, AL 35487-0344
TEL: (205) 348-1817
FAX: (205) 348-1786
E-mail: rhod@as.ua.edu**

PRESIDENT'S MESSAGE

Greetings and best wishes to you all. I am very proud to be the current president of the RDTSS and to participate in the 50th Society of Toxicology meeting that will be held in Washington, DC. This year also marked the 50th anniversary for the Teratology Society, and the linkage between RDTSS and the Teratology Society has always been strong. Many of our RDTSS officers have been and are active members of both societies. Since its inception in 1981, the RDTSS has been chaired by nine past presidents of the Teratology Society, with our current Vice President, Dr. Ed Carney, serving as the current VP-Elect of the Teratology Society.

Since this a significant milestone, I wanted to take a little of your time to note some of the historical events that have been pivotal to our work. The first was the recognition by both Lenz and McBride that Thalidomide, when administered to pregnant women at therapeutic doses, caused malformations in developing offspring. Dr. Francis Kelsey, who was married to one of the SOT presidents, is credited with preventing Thalidomide from being marketed in the United States and was later awarded a medal by President John F. Kennedy for her actions. Although Dr. Kelsey readily admits that the reason she did not approve Thalidomide for use in the US market initially had nothing to do with embryotoxicity, but it was her concern about the peripheral neuropathy that had been reported following long term treatment. Clearly, Dr. Kelsey was concerned about toxicity (side effects) of a new drug entity and conducted a thorough safety evaluation of the drug. While the side effect of peripheral neuropathy was being investigated, Lenz and McBride published their findings, alerting the world to the risks of Thalidomide.

The Thalidomide tragedy was the impetus for our predecessors to develop screening techniques that would prevent future tragedies.

These screening techniques evolved from the basic principles of both toxicology and teratology. Through continual advances in biomedical research, we have deepened our understanding of the roles that timing, exposure, and multifactorial events play in producing effects on fertility, embryo-fetal development, parturition, postnatal development, and behavior.

We continue to move forward by relying on the combined efforts of academia, government and industry, resulting in refinement of our methodologies. Today, our students and the visionary leaders in our field are working at the molecular level to help us elucidate how chemicals influence reproduction and development. We are beginning to unravel the specific changes that occur in the genome that affect the outcomes we have seen for many years. We are also realizing how complex these interactions are and how far we have to go to close the gap in order to predict the outcome of intentional or unintentional exposures.

For years, the RDTSS has focused on recognizing the students who will be our future leaders in this field of science. This coming year will be no different, as I hope to impart some of the wisdom of those individuals who paved the way before us. As president, I look forward to presenting this year's Lifetime Achievement award, as well as interacting with the students who will be attending the RDTSS meeting and reception.

In 2011, we expect to be well represented at the annual meeting. I am pleased that RDTSS will sponsor one continuing education course (peri-postnatal assessments) and several symposia. We submitted 16 courses for consideration and co-sponsored several more. I would like to extend my deepest gratitude to the RDTSS officers and to Sally Darney for their input to the Program Committee and their continued dedication to this specialty section. I look forward to seeing you at the RDTSS reception, and I would appreciate your input and suggestions for the 51st meeting.

Alan Hoberman



SOT ANNUAL MEETING 2011

It is time to begin planning to attend the 50th annual meeting of the Society of Toxicology to be held in Washington, March 6-10, 2011. Please note that the **annual RDTSS reception and meeting** will be held on Wednesday, March 9, from 6:00 to 7:30 p.m. Check the final meeting program schedule for the specific location.

Our specialty section was once again having an impact on the SOT program. For 2011 we will *sponsor or co-sponsor* the following:

Continuing Education Course

PM15-Basic: The Biology and Toxicology of the Peri- and Post-Natal Development

Chairperson(s): *Gregg D. Cappon, Pfizer Global Research and Development, Groton, CT, and Gary J. Chellman, Charles River Laboratories, Reno, NV*

Postnatal Maturation of Major Organ Systems, Christopher J. Bowman, Pfizer Inc., Groton, CT

Postnatal and Juvenile Toxicity Studies: Basic Study Designs and Practical Approaches, Donald G. Stump, WIL Research Laboratories LLC, Ashland, OH

Postnatal and Juvenile Toxicity Studies in Non-Human Primates, Gary J. Chellman, Charles River Laboratories, Reno, NV

One and Two-Generation Studies for Assessment of Environmental Chemicals, Sue Marty, The Dow Chemical Company, Midland, MI

Potential Adult Consequences of Toxicity During Development, Courtney Denning-Johnson Lynch, The Ohio State University, Columbus, OH

Symposia

📖 **Autophagy** in Toxicology: Essential process, Adaptive Process, and Disease Process

📖 **Emerging** Issues at the Intersection of Reproductive and Mixtures Toxicology

📖 **Vascular** Developmental Toxicity: Identification, Prioritization, and Application

📖 **Developmental** Exposure to Environmental Toxicants: From Persistent Toxicities to Diseases

📖 **Developmental** Origins of Adult Disease: The Effects of Low-Dose Lead

Informational Session

📖 Toxicological Considerations of Pharmacotherapy during Pregnancy

CALL FOR NOMINATIONS

The RDTSS is calling for nominations for the following positions for the 2011-2012 Executive Committee:

- ☺ Vice President-Elect
- ☺ Secretary-Treasurer
- ☺ Junior Councilor

Questions regarding the duties associated with any of these positions should be addressed to Mark Hurtt, chair of the Nominating Committee. Self nominations are welcomed if you are personally interested in serving the RDTSS. Please send names and contact information for nominees to Mark at mark.e.hurt@pfizer.com by November 1.

PLANNING FOR SOT 2012

Believe it or not, it is time to start planning ideas for the 2012 meeting! I know it seems like a long way off, but having ideas outlined for symposia, workshops, roundtables, and continuing education courses is crucial for ensuring a meeting that includes topics of interest to YOU. We can't complain about the lack of interesting sessions at the meeting if we don't submit good proposals. As you know, proposals are due to the SOT Program Committee soon after the 2011 Annual Meeting in Washington, DC. Proposals should be well-developed, with proposed speakers, titles of presentations, and an abstract of the session. Although not required, sessions that also appeal to members of other specialty sections are attractive to the Program Committee, as they are of interest to larger numbers of people. With that in mind, our goal is to assemble proposals (with rough outlines, etc.) for 2012 well before the 2012 meeting so we can present them at our RDTSS business meeting. With the experience of Paul Foster as a member of the SOT Program Committee, we can help you develop your idea into a winning proposal. As RDTSS VP, Ed Carney will be organizing a committee to work with him to review program ideas. If you would like to be on the planning committee or you have some great ideas, contact Ed at ewcarney@dow.com.

THE EDITOR'S CALL FOR NEWS

During the course of the following year, please send any newsworthy items for inclusion in the 2011 RDTSS Newsletter to the editor, Ron Hood, at the email address listed on the cover page. Email is the preferred way to send news,

either in the body of the message or as an attachment. Also, please be sure to describe the purpose of your message in the subject line of your email, so your editor won't assume it is just more spam and delete it without opening it!

See you in DC!

Ron Hood

RDTSS SCIENTIFIC ACHIEVEMENT AWARD

Recognize Your Distinguished Colleagues With the RDTSS Scientific Achievement Award!

Perhaps while relaxing at the beach this summer you've pondered the impressive achievements of an RDTSS colleague and thought that some recognition of this colleague is due. If so, translate that thought into action by submitting a nomination for the 2011 RDTSS Scientific Achievement award. Although not officially **due** until **January 1**, it's not too early to start thinking about possible nominations. This award, for which all RDTSS members are eligible, is presented to an RDTSS member for lifetime achievement or for contribution of a particularly influential body of work to the field of reproductive and developmental toxicology. Awardees will receive a plaque from the RDTSS, and will be invited to give a short presentation at the RDTSS annual reception. All that is required is a short narrative or list of the accomplishments upon which the nomination is based. Nominations should be sent to the Junior Councilor, Kamin Johnson, at: kajohnso@nemours.org. All nominees will be forwarded to the Executive Committee, who will choose the 2011 awardee.

Past Scientific Achievement Award winners were: 2006, Carole Kimmel; 2007, Jim Schardeln; 2008, Thomas F. X. Collins; 2009, Mildred Christian; 2010, Robert Chapln.



ENCOURAGE YOUR STUDENTS TO JOIN RDTSS!



Mentors of graduate students, please encourage them to

join our specialty section. Our students and postdocs are the future of the RDTSS.

SOME WEBSITES OF INTEREST

Provided by Bob Parker:

BioCarta Observe how genes interact in dynamic graphical models. Online maps depict molecular relationships from areas of active research. In an "open source" approach, this community-fed forum constantly integrates emerging proteomic information from the scientific community. It also catalogs and summarizes important resources providing information for over 120,000 genes from multiple species. Find both classical pathways as well as current suggestions for new pathways.
<http://www.biocarta.com/genes/index.asp>

Comparative Placentation by Kurt Benirschke. This Volume of animal placentas was created to assist with the examination and evaluation of the many different types of mammalian placentas. It is primarily directed to the veterinary pathologist, zoo veterinarians, and others who have an interest in understanding the bewildering variety of placental forms.
<http://placentation.ucsd.edu/index.html>

Cal Techs The μ MRI Atlas of Mouse Development is a web-based 3D digital atlas of normal mouse development, constructed from magnetic resonance image data. An important consideration in the construction of this atlas was the use of MRI for the collection of embryonic images. MRI is a non-destructive imaging modality which derives contrast from the water content and chemical environment, permitting the imaging of internal structures of opaque embryos. Specimens are prepared in aqueous, isotonic solutions, so there is no tissue shrinkage. Limited specimen handling minimizes physical perturbation of the embryos. The results of this approach are perhaps some of the most accurate geometric representations of developing mouse anatomy available.
http://mouseatlas.caltech.edu/index_content.html

Embryo Images on Line by K. Sulik *et al Embryo Images—Normal and Abnormal Mammalian Development* is a tutorial that uses scanning electron micrographs (SEMs) as the primary resource to teach mammalian embryology. The 3-D like quality of the micrographs, coupled with selected line drawings and minimal text, allows relatively easy understanding of the complex morphological changes that occur *in utero*. Because early human embryos are not readily available, and because embryogenesis is very similar across mammalian species, the majority of the micrographs that are utilized in this tutorial are of mouse embryos. The remainder are from human embryos.
http://www.med.unc.edu/embryo_images/unit-welcome/welcome.htm/akgs.htm

UK Industrial Reproductive Toxicology Discussion Group (IRDG) The objectives of the IRDG are:

1. To provide a forum for informal discussion of:

- ✓ The scientific and technical aspects of reproductive toxicology tests required by regulatory authorities.
- ✓ The overall test strategy.
- ✓ New tests and techniques under development and their successful validation.

2. To coordinate collaborative work as needed to support the objectives listed above.

3. Representation by the committee or committee nominees of the general interests of the industrial reproductive toxicology laboratories in discussions with other scientific groups and regulatory authorities.

<http://www.irdg.co.uk/Introduction.htm>

SOT AWARDS AVAILABLE



In recognition of distinguished toxicologists and students, SOT presents several prestigious awards each year. Award recipients receive a plaque and a generous stipend, are listed in the annual Membership Directory, posted on the SOT Web site, and are honored at a special Awards Ceremony at the SOT Annual Meeting. Information regarding the individual awards and mandatory application forms are available at the SOT Web site at

www.toxicology.org/ai/af/awards.aspx.

The deadline for most nominations for the 2011 SOT (not RDTSS) awards is October 9, 2010.

Best Reproductive or Developmental Toxicology Paper Published in Toxicological Sciences

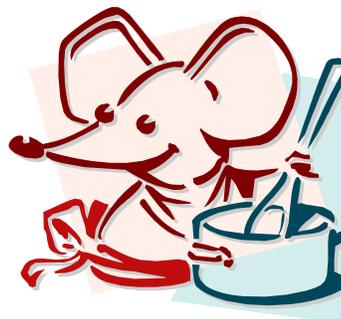
RDTSS gives an award each year for the best paper related to reproductive and developmental toxicology in *Toxicological Sciences*. A committee reviews the previous year's publications and selects the best paper in each journal.

Eligibility: Papers published during the previous calendar year in *Toxicological Sciences*. At least one author must be an SOT member. Papers are judged based on originality, scientific quality, and contribution to the field. The lead author of the winning paper receives an achievement plaque and any co-authors receive certificates. The award deadline is January 31, 2011.

2010 Award for Best Paper in Toxicological Sciences

Congratulations to the winners of the Best Paper award:

Noriega, N. C., Howdeshell, K. L., Furr, J., Lambright, C. R., Wilson, V. S., and L. Earl Gray, Jr. (2009). Pubertal administration of DEHP delays puberty, suppresses testosterone production, and inhibits reproductive tract development in male Sprague-Dawley and Long-Evans rats. *Tox Sci* 111(1): 163-178.



CALL FOR APPLICATIONS FOR RDTSS GRADUATE STUDENT and POSTDOCTORAL RESEARCH AWARDS

Applications for RDTSS Graduate Student/Postdoctoral Awards are now being accepted for the 50th Annual Meeting of the Society of Toxicology in Washington DC on March 7th through 19th, 2011. Two or three cash awards will be given (depending on the number of submissions) along with an SOT certificate/plaque. Budget permitting, travel stipends may also be awarded to other students competing for these best student presentation awards.

The awards will be given for the best presentation of research at the SOT annual meeting in any of the following areas:

- a) **Male or Female Reproductive Toxicology, or**
- b) **Teratology/Developmental Toxicology**



The student presentations will be judged at a special poster session on Monday evening. Alan Hoberman will chair the awards committee and will present the awards at the RDTSS Reception on Wednesday evening.

Details are also posted on the Awards and

Fellowships page of the SOT website:

<http://www.toxicology.org/ISOT/SS/repdevtox/index.asp#awards>.

Applications for the awards must be submitted by January 31, 2011, and should consist of: (a) an abstract of the student's presentation, (b) a letter of support from student/ postdoctoral fellow's sponsor, and (c) a cover letter outlining significance of work to field of reproductive toxicology.

Electronic submissions are strongly encouraged.

Applications should indicate whether the presenter is a student or a postdoctoral candidate and should be submitted to:

Barry McIntyre
NIEHS
PO Box 12233 (MD K2-12)
Research Triangle Park, NC 27709
TEL: (919) 316-4747
E-mail: mcintyrebs@niehs.nih.gov

Winners of the 2010 Student Presentation Awards

In 2010 RDTSS continued the format for the student presentation awards implemented in 2006. Candidates for student awards made their presentations in a special session on Monday evening of the meeting. This allowed for judges Ed Carney, Jeffery Moffit, Craig Harris, and Bob Parker to interact with the students and judge them based on their actual presentations. The students appreciated the opportunity to interact with the judges and meet members of the specialty section. Feedback on this format continues to be positive. There were 14 applicants, and winners of cash awards were as follows:

First Place - \$500

Steven Jones – Institut Armand-Frappier, Laval, QC, Canada:

Sponsor – Barbara Hales

Title: *Characterization of P-glycoprotein (ABCB1) orthologs in the rat epididymis: Unique distribution and up-regulation by xenobiotics*

Steven Jones from the Institut Armand-Frappier was the RDTSS Student Award winner at the 49th Annual Society of Toxicology Meeting in Salt Lake City, Utah. His poster presentation was selected by a panel of four judges from a number of excellent posters and presentations. The following is the abstract from the winning poster presentation:

The epididymis and maturing sperm are susceptible to xenobiotics. The blood-epididymis

barrier is necessary to attenuate the entry, and elimination of harmful substances. In addition to providing an immunological barrier, the epididymis also provides a specialized environment necessary for sperm maturation. The epididymal epithelium contains numerous specialized transporters that selectively regulate compounds present in the epithelium and lumen. *abcb1a* and *abcb1b* are rodent orthologs of human P-glycoprotein (ABCB1), a member of the ATP-binding cassette (ABC) efflux proteins capable of regulating the excretion of xenobiotics in normal tissues. The objective of this study was to characterize the previously unknown expression profile, localization and inducibility of *abcb1a* and *abcb1b* in the rat epididymis. *abcb1a* mRNA levels were significantly higher in the cauda epididymidis when compared to initial segment, caput and corpus. *abcb1b* mRNA levels were similar throughout the epididymis. Immunohistochemistry using antisera against both forms of *abcb1* indicated minimal immunostaining in the epithelial cells or spermatozoa in the caput epididymidis, and progressively increased in the corpus and cauda. Interestingly, the immunoreaction in spermatozoa was detected in the distal caput, corpus and cauda. This was confirmed by western blot analysis. To assess if *abcb1* was inducible by xenobiotics, rat epididymal cells (RCE) were exposed to different concentrations of nonylphenol (NP) or doxorubicin (DOX). RCE cells exposed to 20 μ M NP and 500 ng/ml DOX revealed a significant induction of both *abcb1a* and *abcb1b* mRNA and *abcb1* total protein, suggesting that ABC efflux transporters are inducible in the epididymis. The unique expression profile and induction of *abcb1a* and *abcb1b* in the epididymis suggests an important role for these proteins as a defense mechanism against xenobiotics in the epididymis. Supported by Environment Canada, CIHR and Armand-Frappier Foundation.

Second Place - \$300

Patrick Allard – Genetics, Harvard Medical School, Boston, MA

Sponsor – M. Colaiacovo

Title: C. elegans as a model system to understand environmental influence on germline health.

Third Place - \$200

Kayla Lam – University of Toronto, Toronto, ON, Canada

Sponsor – Peter Wells

Title: Fetal Oxidative DNA Damage and Repair in Methylmercury Neurodevelopmental Deficits.

Congratulations to the winners, and we look forward to more great student/post doctoral posters and presentations in Washington, DC!

2010

Student Travel Awards



A total of \$800 was awarded in 2010 to help support student travel to the annual meeting. The money was divided evenly among all students who participated in the student presentation competition, excepting the 1st, 2nd and 3rd place winners listed above who won larger awards. This year we had 19 applicants in the competition, representing a 36% increase over 2009. Students receiving travel awards were: **Smita Salian, Connie Mark-Kappeler, Natasha Catlin, Jessica LaRocca, Ben Moyer, Tessie Paulose, Sarah Champion, Arjun Basaravajappa, Bethany Karman, Jackye Peretz, Susanna Wegner, Kate MacDonald, Nikki Philbrook, Lutfiya Miller, Michelle Siu, and Nicole Sweeting.**

50th Anniversary Silent Auction



Day, Time, and Location—TBD

**Chairperson:
Anne Loccisano,
Postdoctoral
Assembly
Councilor, The**

**Hamner Institutes for Health Sciences,
Research Triangle Park, NC**

Sponsor: Postdoctoral Assembly

In honor of the 50th Anniversary of SOT, the Postdoctoral Assembly is organizing the 50th Anniversary Silent Auction. The auction will be open on-line and to all meeting attendees. We are soliciting items for donation, including anything of historical significance relative to SOT and toxicology (such as photographs, memorabilia, plaques, laboratory items) as well as dinners, air trips, and other items of general interest. Visit the [SOT 50th Anniversary Web site](#) to obtain the latest information about this activity.

News for Students & Postdocs

**Student/Postdoctoral Fellow Mixer
Sponsored by the Student Advisory
Council:**

Sunday, March 6, Time: 6:30 PM–8:00 PM,

(Ticket & Meeting Badge Required)

The Student Advisory Council and Graduate Committees host this opportunity for students and postdoctoral fellows to gather, to meet new colleagues, and to reestablish relationships in an informal atmosphere at the beginning of the SOT

annual meeting. Tickets can be obtained at no cost by registering for this event on the Annual Meeting Registration Form. Complimentary refreshments and a cash bar will be available.

**In Vitro Toxicology Lecture and Luncheon
for Students, Sponsored by the Colgate-
Palmolive Company**

Monday, March 7, Time: 12:00 NOON–1:20
PM

(Ticket Required)

The purpose of this lecture is to discuss the importance of animal research to biomedical sciences and toxicology and the ethical obligations of the scientific community to follow the "3R's" of animal testing (refine, reduce, replace) whenever it is feasible. Graduate students, undergraduates, postdoctoral scholars, and recipients of Colgate-Palmolive awards are among the guests at the In Vitro Toxicology Lecture and Luncheon. The goal of the In Vitro Toxicology Lecture series is to feature important research using in vitro and alternative techniques to study basic mechanisms and to illustrate how these test methods benefit animal welfare by refining and reducing animal use. Students and postdocs can reserve a ticket for the luncheon with a \$5 deposit when they register for the SOT Annual Meeting. Lunch is served at the beginning of the event, and service concludes before the talk/main program begins. Meal service may not be available to guests who arrive after 12:30 PM.

Lunch with an Expert

***Date and time varies by group (Meet at the
Lunch with an Expert Information Board in
the Registration Area)***

These events are informal gatherings of small groups of students, each with a toxicology expert. Sign up *via* the [Student Services](#) section of the SOT Web site. The groups are matched by research interests, and the Expert for each group identifies a time and place to assemble. Details for the group meeting will be sent in advance of meeting. LWAE is not limited to a lunchtime meeting. The Expert will determine the restaurant and whether the group will meet for breakfast, lunch, dinner, or for a social hour! Students and postdocs will be matched with Experts during February.

NEWS FROM THE POSTDOCTORAL ASSEMBLY (PDA)

Yvonne Hoang, our RDTSS PDA Rep,
sent us the following items:

Check Out The spring Post-y Newsletter:

The Society of Toxicology Postdoctoral Assembly (PDA) has put together the spring newsletter detailing recent activities and initiatives, review of the Annual Meeting, and other items of interest to postdocs. The Spring 2010 *Post-y* is available on this website.

<https://www.toxicology.org/ai/spd/SOTPDA/newsletterspring2010.pdf>

PDA Documents and Resources

PDA has organized a number of career development sessions, including 3 Web-based seminars.

<http://www.toxicology.org/ai/spd/PD-Resources.asp#Documents>

ToXchange

Update your profile on [ToXchange](#), SOT's professional networking site.

PDA on Facebook

The Postdoctoral Assembly now has a group page "Society of Toxicology Postdocs" on [Facebook](#). Postdocs are invited to submit a request to join. This is a closed group for those identified as SOT members who are postdocs.



Apply for the "Best Postdoc Publication Award":

Due Oct 9th!!! The Postdoctoral Assembly (PDA) of the Society of Toxicology is pleased to announce the Best Postdoctoral Publication Awards (BPPA). These awards were created to recognize talented postdoctoral researchers who have recently published exceptional papers in the field of toxicology. Applications are reviewed by the PDA Board and a committee containing appropriate scientific expertise. The review process follows National Institutes of Health (NIH) conflict of interest policy, confidentiality, and nondisclosure policies. Three awards, each consisting of a plaque and \$100 cash, are presented at the PDA Luncheon during the SOT Annual Meeting. For more info: <http://www.toxicology.org/ai/spd/PD-PubAwardAnn.asp>

Upcoming Postdoc Events at the 2011 Annual Meeting

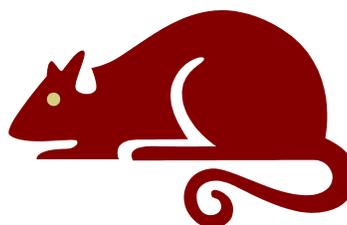
Student/Postdoctoral Fellow Mixer

Sunday, March 6, Time: 6:30 PM–8:00 PM

(Ticket Required)

Sponsor: Student Advisory Council

The Student Advisory Council and Graduate Committees host this opportunity for students and postdoctoral fellows to gather, to meet new colleagues, and to reestablish relationships in an informal atmosphere at the beginning of the meeting. Tickets are obtained at no cost by registering for this event on the [Annual Meeting Registration Form](#). Ticket and meeting badge are required. Complimentary refreshments and a cash bar will be available.



Postdoctoral Assembly Luncheon

Tuesday, March 8, Time: 12:00 NOON–1:15 PM

(Ticket Required)

Chairperson(s): Sarah Campion, PDA Chair, Brown University, Providence, RI

Sponsor: Postdoctoral Assembly

Amidst scrambling to attend all of the events at the meeting, this will be time for postdocs to kick back and relax! All postdoctoral fellows are invited to a casual luncheon organized by the Postdoctoral Assembly (PDA). We will announce the recipients of the Best Postdoctoral Publication Awards and acknowledge the postdocs who received awards this year from Specialty Sections and Regional Chapters. The PDA Board members will present an overview of accomplishments and future directions for the PDA and will introduce the new board members for 2011–2012. There will be a drawing for door prizes. Postdocs can purchase a ticket for \$5 when registering for the Annual Meeting. The ticket charge is not refundable, reserves your place, and defrays some of the expenses for the luncheon. Lunch is served at the beginning of the event and service concludes before the main program begins. Meal service may not be available to guests who arrive after 12:30 PM

THE RDTSS OFFICERS AND EDITOR AND THEIR MAIN DUTIES

President—General oversight and prepares agenda and makes arrangements for Officers meeting at SOT and RDTSS reception at SOT, writes annual report for SOT, oversees agenda for the RDTSS contribution to the SOT annual meeting



Alan Hoberman.

Alan has worked in toxicology for over 38 years, specializing in reproductive and developmental toxicology for over 29 years. A Diplomat of the American Board of

Toxicology and a Fellow of the Academy of Toxicological Society, Alan's current research interests include development of the immune response and assessment of compounds in young animals. Alan was trained in anatomy and embryology at the University of Virginia and in toxicology at the University of Arkansas and the NCTR. He was Head of Reproductive and Genetic Toxicology at Hazleton Laboratories, America for two years prior to joining Argus Research Laboratories. He was also responsible for management of Charles River Laboratories Preclinical Services, Arkansas (formerly CRL-DDS Redfield Laboratories) from 1994 to 2002. Currently, Alan is General Manager and Director of Research, Charles River Laboratories Preclinical Services, Pennsylvania, where he is responsible for designing, supervising and evaluating reproductive and developmental toxicity, neurotoxicity, inhalation, and photobiology studies, while managing budget and personnel projections and strategic plans for the facility.

Vice President—Chairs the Program Committee for the next SOT meeting, develops list of proposals for activities to be sponsored and coordinates cosponsorships, by the RDTSS, acts for the president in his/her absence



Ed Carney. Edward W. Carney received a B.S. in Animal Science from Cornell University (1981), and graduate degrees in reproductive physiology from the University of Wisconsin-Madison (M.S., 1986) and Cornell University (Ph.D.,

1990). His postdoctoral research on molecular control of placental development was conducted at Mount Sinai Hospital Research Institute in Toronto. Dr. Carney joined the Dow Chemical Company in 1992, and currently serves as Science & Technology Leader of Developmental, Reproductive, and Neurotoxicology and also leads Dow's research program on alternatives to animal testing. He has published 70 peer-reviewed papers, is a Past-President of Midwest Teratology Association and a former Councilor of the Teratology Society. He currently serves on the National Toxicology Program's Board of Scientific Counselors, the Board of Toxicology Forum, ILSI-HESI DART Subcommittee, the OECD Expert Group on the

Extended One-Generation Reproductive Toxicity study guideline and the editorial boards of *Reproductive Toxicology* and *Toxicological Sciences*. Ed also is an adjunct professor at The University of Michigan School of Public Health and is a regular lecturer in the University of Surrey Master's Programme in Toxicology.

Vice President elect—Chairs the review committee for student/postdoc awards, advertises the availability of such awards, obtains award plaques, etc., and presents the student awards at the annual meeting



Barry McIntyre. Dr. McIntyre earned his Ph.D. from Washington State University in 1997 in pharmacology/toxicology. He was a National Institute of Environmental Health Sciences National Research Service Award Postdoctoral

Fellow at the Chemical Industry Institute of Toxicology (CIIT) from 1998 till 2001. In 2001, he joined the Reproductive and Developmental Toxicology group at the Schering-Plough Research Institute as a reproductive toxicologist. He was accorded increasing levels of responsibility, ultimately managing the US reproductive and developmental toxicology group. While at Schering-Plough he also represented Drug Safety on drug development teams, where he designed, coordinated, and implemented non-clinical drug safety programs to support the clinical development of novel therapeutics. In January, 2010, he left the pharmaceutical industry and joined the Toxicology Branch of the National Toxicology Program as a staff toxicologist. Dr. McIntyre has served as an ad hoc member for NIEHS Program Project Grants, the NIEHS Special Emphasis Panel of the NTP Reproductive and Developmental Toxicology Board of Scientific Councilors, and the NTP-CERHR Bisphenol A Expert Panel. He has been a member of the SOT since 1992, served as a councilor in the Reproductive and Developmental Toxicology Specialty Section, and has been active in that specialty section. He is also a past Councilor of the Middle Atlantic Reproduction and Teratology Association.

Past President—Chair of Nominating Committee and serves on committee to determine candidates for Scientific Achievement Award, assists SOT office with RDTSS officer election



Mark Hurtt. Mark completed his formal education at the University Of Cincinnati College Of Medicine. He completed a post-doctoral fellowship at the Chemical Industry Institute of Toxicology in Research Triangle Park,

North Carolina. Following a brief stay at Warner-Lambert in Ann Arbor, Michigan, Dr. Hurtt joined the DuPont Company. He held various roles over his 11 years at Haskell Laboratory for Toxicology and Industrial Medicine in Newark, Delaware, prior to joining Pfizer. Currently, Dr. Hurtt is Global Head of Developmental and Reproductive Toxicology at Pfizer, with overall responsibility for developmental and reproductive toxicology testing and consulting offerings as well as an investigative laboratory. He also is serving as Interim Global Head of Immunotoxicology. Mark is a Past President of MARTA and is past chair of the Teratology Society's Publication Committee.

Secretary/Treasurer—Controls finances, reports on them to the SOT and at the RDTSS annual meeting, make arrangements for the officers' meeting and records the meeting minutes, and orders awards



Warren G. Foster.

Warren received his PhD from McMaster University in reproductive biology in 1991, and he joined Health Canada as a reproductive toxicologist from 1990-1999. He subsequently joined the Department of Obstetrics and Gynecology at Cedars Sinai Medical Center in

Los Angeles as the Assistant Director of Women's Health and Director of Research. In 2001, Dr. Foster joined the faculty in the Department of Obstetrics and Gynecology at McMaster University, where he carries out studies of environmental contaminants and cigarette smoke. He teaches in graduate courses at the

Medical School, and he also lectures in undergraduate courses in toxicology and reproductive medicine. Dr. Foster has served on several study section panels, including the NIH Integrative and Clinical Endocrinology and Reproduction Study Section (2009-present), the EPA-Star Program, and the Canadian Institutes of Health Research Clinical Investigation A panel. He is currently on the Peer Review Committee of the Clinical Investigation Panel for CIHR (2006-2010), the NIH/NIEHS-NTP Expert Panel on Reproductive & developmental effects of soy products and genistein (2009-2010), and the Council of Canadian Academies expert panel for the Integrated Testing of Pesticides (2009-present). In addition to the SOT, he is also a member of several professional societies, was President of the Canadian Fertility and Andrology Society, and serves on the editorial boards of *J Appl Toxicol*, *J Toxicol Environ Hlth, Part B*, *Critical Reviews*, and *Immunology, Endocrine & Metabolic Agents in Medicinal Chemistry*.

Senior Councilor—Chairs the committee to determine best paper in *Toxicological Sciences* awards, orders plaque and certificates for the paper's authors, and presents the award at the annual meeting



Robert M. Parker.

Bob has worked in developmental and reproductive toxicology for over 30 years. He earned his M.S. (1975) and his Ph.D. (1980) in Human Anatomy, specializing in Teratology, at UC Davis School of Medicine. Bob

was a Postgraduate Research Morphologist at the California Regional Primate Center in 1981, where he was formally trained as a primate teratologist under Dr. Andy Hendrickx. He has served as study director on over 300 safety evaluation studies; including developmental and reproductive toxicity studies, developmental neurotoxicology studies, delayed neuropathy studies, dominant lethal studies, phototoxicity studies, photocarcinogenicity studies, and acute, subchronic and chronic toxicity studies. Dr. Parker was a project leader for oncology projects and non-clinical drug safety toxicologist on oncology, monoclonal antibody, and metabolic disease projects at Hoffman-LaRoche. Dr. Parker

has served as Councilor and as chair of the Student Affairs and Membership Committees of the Teratology Society, and has served as President and Secretary of the Behavioral Toxicology Society. A Diplomate of the American Board of Toxicology, Dr. Parker is currently the Director of the Developmental and Reproductive Toxicology Division at Huntingdon Life Sciences' Princeton Research Center, New Jersey.

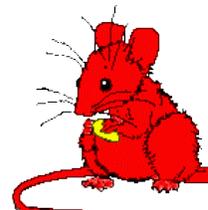
Junior Councilor—Serves on the Program Committee and assist the VP in developing program ideas for next years SOT annual meeting, chairs committee to select the Achievement Award recipient, prepares or obtains the RDTSS poster for the student/postdoc mixer, attends that mixer, and selects/purchases "giveaways" for the mixer



Kamin Johnson

Kamin received his PhD from Brown University in 1994 in Molecular Cell Biology. After postdoctoral fellowships at Duke University and Brown University, he became a Research Assistant Professor

at Brown University before joining the staff at CIIT Centers for Health Research as an Assistant Investigator. Since 2007, he has been a Research Scientist in the Biomedical Research Department at Alfred I. duPont Hospital for Children. Kamin has been an ad hoc member of several NIH study sections reviewing grants related to reproductive development and reproductive toxicity. He was a member of the Biology of Reproduction editorial board from 2003 to 2004 and is currently on the editorial board of the *Journal of Andrology*. He has been a member of the SOT and the Reproductive and Developmental Toxicity Specialty Section since 2006. His research interests are in male reproductive development and toxicity, in particular development of the gubernaculum and mechanisms of action of endocrine disruptors in the fetal testis.



New Career Councilor—Serves on the committee for determining the Trainee Presentation Awards and assists the Vice President-Elect with program applications



Winnie Jeng.

Winnie Jeng began her toxicology career in 1995 as a drug analysis trainee in the Toxicology Department at the Centre of Forensic Sciences (Toronto, Ontario, Canada). In 2004, Dr. Jeng received her Ph.D. from the University of Toronto in Pharmaceutical

Sciences where she investigated the free radical mechanisms of amphetamine-initiated neurotoxicity in both adult and embryonic/fetal exposure, and the roles of oxidative and antioxidative pathways determining risk of neurodegeneration. During her academic career, Dr. Jeng was awarded a Canadian Institutes of Health Research and Canada's Research-Based Pharmaceutical Companies (CIHR/Rx&D) Doctoral Award, a Society of Toxicology Neurotoxicology Specialty Section Graduate Student Poster Presentation Award, an SOT Graduate Fellowship Award, and an SOT Carl C. Smith Mechanisms Specialty Section Graduate Student Award. Dr. Jeng was a study director at Covance Laboratories from 2004 to 2008, where she conducted preclinical mammalian, and developmental and reproductive toxicology studies. Dr. Jeng is now a Senior Research Investigator at Sanofi-Aventis U.S. Dr. Jeng is an active member of the SOT, Society of Toxicology of Canada (STC), and the Mid-Atlantic Regional Teratology Association (MARTA), and is currently serving as a MARTA council member.

Student Representative—RDTSS representative to the SOT Student Activities Committee, serves on the review committee for the Best Paper Award, assists in preparing the RDTSS poster and representing the RDTSS at the student/postdoc mixer



Nick Heger. Nick Heger is a doctoral student in the Pathobiology Graduate Program at Brown University in the Department of Pathology and Laboratory Medicine. He works in the laboratory of Dr. Kim Boekelheide and is studying the effects of phthalate exposure. Previous studies

have demonstrated a species-specific sensitivity to developmental phthalate exposure, with rats exhibiting a suppression of fetal testicular steroidogenesis and mice remaining relatively unaffected. As such, this difference in sensitivity invites speculation as to the human response. Nick is working to develop a bioassay consisting of fetal mouse, rat, and human testicular grafts in a rodent host to explore phthalate-induced alterations of testicular function and development.

Post Doctoral Assembly Representative—RDTSS representative to the SOT Postdoctoral Assembly



Yvonne Hoang.

Yvonne has been a student member of SOT since 2005 and received her PhD in Environmental Toxicology in 2008 from the University of California, Irvine, where she studied the mechanism of gonadotropin hormone regulation of glutathione synthesis in the ovary. She is currently a post-doctoral fellow at the University of California, San Diego, in the Department of Reproductive Medicine.

RDTSS Newsletter Editor—Gathers information for the newsletter, reminds the RDTSS officers to submit material related to their responsibilities (including the president's message), threatens the tardy contributors as needed ☺, distributes a draft for proofing by the officers, and prepares the final version for submission to SOT for distribution to the membership



Ronald D. Hood.

Ron spent 32 years on the faculty of the Department of Biological Sciences of The University of Alabama, and he also served a year as interim department chair. He retired from the faculty in 2000, but as an emeritus professor Ron continues to use his UA office and to collaborate in research and student mentoring. Ron acted as a toxicology consultant part-time for many years while on the UA faculty, and he now consults full-time, together with associates at other locations. In addition to his work as a consultant, a book editor, and an expert witness, Ron organizes and/or lectures in continuing education courses offered to regulatory personnel in the areas of developmental and reproductive toxicology, and he is a fellow of the Academy of Toxicological Sciences.

2009-2011 RDTSS OFFICERS CONTACT INFORMATION

President

Alan Hoberman

General Manager Director of Research
Charles River Laboratories Preclinical Services
905 Sheehy Drive
Building A
Horsham, PA 19044
TEL: (215) 443-8710
FAX: (215) 443-8587
E-mail: alan.hoberman@crl.com

Vice President

Edward W. Carney

Technical Leader
Dow Chemical Company
Toxicology & Environmental Research &
Consulting
Building 1803 Washington Street
Midland, MI 48674
TEL: (989) 636-2580
FAX: (989) 638-9863
E-mail: ecarney@dow.com

Vice President-elect

Barry McIntyre

Toxicologist
NIEHS
PO Box 12233 (MD K2-12)
Research Triangle Park, NC 27709
TEL: (919) 316-4747
FAX: 919 541 4255
E-mail: mcintyrebs@niehs.nih.gov

Secretary/Treasurer

Warren G. Foster

1200 Main St. W.
HSC-3N52
Hamilton, ON L8N 3Z5
CANADA
TEL: (905) 525-9140
FAX: (905) 524-2911
E-mail: fosterw@mcmaster.ca

Past President

Mark E. Hurtt

Senior Director
Pfizer Inc
Drug Safety Research and Development
Building 274
Groton, CT 06340-4947
TEL: (860) 715-3118
E-mail: mark.e.hurtt@pfizer.com

Senior Councilor

Robert M. Parker

Director
Developmental and Reproductive
Toxicology
Huntingdon Life Sciences
P O Box 2360
100 Mettlers Road
East Millstone, NJ 08875-2360
TEL: (732) 873-2550, ext 2389
FAX: (732) 873-8899
E-mail: parkerr@princeton.huntingdon.com

Junior Councilor

Kamin Johnson

Research Scientist
A I duPont Hospital for Children
Biomedical Research
1600 Rockland Road
Wilmington, DE 19803
TEL: (302) 651-6615
FAX: (302) 651- 6539
E-mail: kajohnso@nemours.org

New Career Councilor**Winnie Jeng**

Disposition, Safety & Animal Research
(DSAR)
Preclinical Safety - Toxicology
sanofi-aventis US Inc.
1041 Route 202-206
PO Box 6800
Mail code: JR2-103A
Bridgewater, NJ 08807
TEL: (908) 231-4684
FAX: (908) 231-2629
E-mail: winnie.jeng@sanofi-aventis.com

Student Councilor**Nick Heger**

Doctoral Student
Brown University
Pathobiology Graduate Program
Box GE-510
Providence, RI 02903
TEL: 401-863-2985
FAX: 401-863-9008
email: nick.heger@brown.edu

Postdoctoral Assembly Representative**Yvonne Hoang**

University of California San Diego
9500 Gilman Drive #0633
La Jolla, CA 92093
TEL: (858) 534-8521
FAX: (858) 534-8856
E-mail: yhoang@ucsd.edu

