

In Vitro and Alternative Methods (IVAM) Specialty Section Fall Newsletter – 2009

2009-2010 Officers

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Josh Harrill

IN VITRO SPECIALTY SECTION



A Message from the President

As evidenced by the outcomes from the 7th World Congress on Alternatives and Animal Use in Life Sciences recently convened in Rome, Italy, now is an exciting time to be involved in the search for better, faster, and more mechanistically based test methods that reduce, refine, or replace the use of animals. The Congress was kicked off by a plenary presentation by IVAM's own, Dr. Ray Tice, on "The U.S. Tox21 Community and the Future of Toxicology Testing", where he described a partnership between the National Toxicology Program, the NIH Chemical Genomics Center, and the U.S. Environmental Protection Agency. During the sessions that followed, over 900 scientists discussed current research, development, translation, and validation efforts on a wide range of topics, from reproductive and developmental toxicity testing, to specific issues associated with nanomaterials testing. Standing-room-only crowds were also on hand to hear updates from national validation organizations such as ECVAM, ICCVAM-NICEATM, and JaCVAM, as well as recent commitments to harmonize international validation and peer review activities (see focus article below). Montreal, Canada will host the 8th World Congress in 2011, and it will certainly be interesting to see how the many advances reported in 2009 have impacted toxicology in 2011.

Not surprisingly, increasing interest in exploring alternatives has allowed the IVAM Specialty Section to continue to attract new SOT members; we now have over 220 scientists and students. As we do each year, IVAM will continue to focus on: 1. growing its membership, particularly through increasing student awareness and participation; 2. recruiting active participation from its membership; 3. soliciting contributions from members for committee work; and, 4. establishing an effective communication network within the *in vitro* community. Increasing funding and sponsorship for IVAM activities and awards is also important in order to advance the goals of IVAM and build on its achievements.

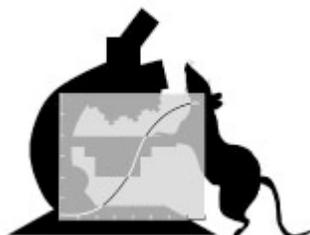
The IVAM SS Executive Committee needs input regarding programs for future Society of Toxicology meetings. Sponsorship of workshops, continuing education programs, and symposia are all important for the advancement and understanding alternative test methods. Sponsorship also allows IVAM SS members to actively participate in and help in the conduct of the programs of interest to the Specialty Section, particularly at the annual SOT meeting. Remember that deadlines for symposia and workshop proposals will be due shortly after the 2010 Annual Meeting, so it is a good idea to bring thoughts and ideas to that meeting to take advantage of opportunities to discuss them with your colleagues.

Finally, it's now been 50 years since William Russell and Rex Burch published "The Principles of Humane Experimental Technique." I'd like to think that they would be pleased to see the progress towards reducing, refining, and replacing the use of animals in toxicology testing and research that has resulted from efforts of the IVAM membership.

I hope to see you all in Salt Lake City in March!

Sincerely,
Dave Allen, Ph.D.
IVAM President

IN VITRO SPECIALTY SECTION



Founded in 1994, the IVAM SS has since effectively promoted its role and fulfilled its goals through the efforts of concerned members with expertise in the application of *in vitro* techniques that address problems of cellular toxicity.

IVAM areas of interest include: understanding basic cellular processes involved in the induction of adverse outcomes of specific mammalian organs; the development of simple to complex cellular and subcellular systems to predict toxicity *in vivo*; and, evaluation of *in vitro* tests as applications for risk assessment.

Other significant topics of interest include *in vitro* test validation, especially for evaluating all aspects of test development and test method acceptance for experimental or regulatory purposes. The IVAM SS conducts regular meetings throughout the year and also at the annual SOT meetings to discuss these topics.

In addition, the IVAM SS sponsors three student awards for Best Poster/Presentation/Abstract on subjects related to *in vitro* toxicology, as well as continuing education courses and symposia at annual meetings.

Currently elected officials consist of the President, Vice-President, Vice President-Elect, Secretary/Treasurer, Councilors, Past-President, Student Representative, Vice-Student Representative, and Post-doc/Fellow representative.

Colgate Palmolive Grants for Alternative Research



The IVAM SS is proud to announce its participation with the Colgate-Palmolive Grants for Alternative Research. This research award program identifies and supports efforts that promote, develop, refine, or validate scientifically acceptable animal alternative methods to facilitate the safety assessment of new chemicals and formulations. Scientists at any stage of their career may submit a proposal. High priority will be given to projects that use *in vitro* or non-animal models and focus on:

- * Reproductive and Developmental toxicology
- * Neurotoxicology
- * Systemic toxicology
- * Sensitization
- * Acute toxicity

The maximum award in any one year will be \$40,000.

Award applications are due at SOT Headquarters by **October 9th deadline**. For more information, go to www.toxicology.org (select "Awards and Fellowships")

Other grants sponsored by Colgate-Palmolive through SOT, and are endorsed by other specialty sections include:

- * the Colgate-Palmolive Lectureship in Alternative Methods in Toxicology Award
- * the Colgate-Palmolive Awards for Student Research Training in Alternative Methods
- * the Colgate-Palmolive Fellowship Award in *In Vitro* Toxicology

A Message from the Past President

It has been an honor and a pleasure serving as President of the In Vitro and Alternative Methods (IVAM) Specialty Section for the 2008-2009 term. I am proud to have been at the helm of an important organization working with an industrious and dedicated group of individuals. The important accomplishments during the year were possible because of the diligence of the Executive Committee (EC) of the Specialty Section, particularly David Allen (VP), Sue Ford (VP-elect), Sharon Meyer (Secretary Treasurer), Renee Gardner and Brian Cummings (Councilors), Kristina Wolf (Post-doc representative), Ann Marie Matei (student representative), and Haitian Lu (vice-student rep). Some of the accomplishments that were realized include the successful business luncheon, which attracted a record number of attendees, the largest number of submissions for workshop, symposia, and roundtable proposals, and the updating of the Specialty Section by-laws. In addition, the EC inputted a significant number of hours evaluating the Colgate-Palmolive grant proposals, the Student awards for best abstracts, and the MB Research award for best poster. The quality of the research performed and presented as abstracts is testimony to the high level of research recognized by IVAM. All students who participated in the award programs should be commended. In addition, it is our hope that these programs have stimulated young toxicologists to participate in the continued success of the Specialty Section in particular and in the Society in general, as seasoned researchers and educators.

Also, the work of the EC also ensures that the house-keeping duties of the Specialty Section are maintained, including monitoring of the budget, creation of annual reports, working through meetings and teleconferences, composing the newsletters, and coordinating our efforts with the National SOT headquarters.

The immediate challenge relies on streamlining the proposals submitted to IVAM for the National meeting, in order to coordinate the process from review by the Specialty Section to acceptance by the National headquarters. Hopefully, IVAM will be able to re-work some of the terrific contributions submitted with the sponsorship of IVAM so that the Specialty Section can increase the acceptance rate.

I look forward to working with President David Allen and the rest of the EC and newly elected officers in ensuring that the IVAM Specialty Section progresses to greater achievements and advancements in the field and promotes the understanding of its goals to the rest of the toxicological community. As I wrote in the President's message in the Fall newsletter, 2008, it is just as important now that I ask that you contribute your talents and volunteer your services as future officers of the Specialty Section. While popular and supported programs sponsored by the Specialty Section stimulate active participation and involvement, the true strength of an organization lies in its membership and its leadership.

Regards,

Frank A. Barile, Ph.D., R.Ph.
IVAM Past President 2008-2009

Call for Nominations of Executive Committee Officers

VICE-PRESIDENT ELECT
COUNCILOR
VICE STUDENT REPRESENTATIVE
POST-DOC/FELLOW REPRESENTATIVE

Nominations for new Executive Committee Officers are now being accepted. Support your IVAM by nominating an individual whom you think may be able to serve our needs and goals as an officer of the In Vitro Specialty Section. Self-nominations may also be sent. Nominations will be collected and a ballot will be sent to IVAM members. New officers will be sworn in and take office next May. Please send your nominations to **Sue Ford, VP** at fords@stjohns.edu, who will serve as Nomination Committee Chairperson.

Serving as an elected officer helps shape the IVAM and through your leadership help advance the application of *in vitro* techniques.

The Vice-President Elect is a very important leadership position for the Specialty Section. The elected individual will serve for one year as Vice President after one year of serving as VP Elect and then become President of the In Vitro Specialty Section.

Councilors serve two years and aid in the development of IVAM and often lead key committees.

ANNOUNCEMENT – IVAM EXECUTIVE OFFICER ELECTION DATE

An Election Ballot will be sent by mail to all IVAM members at the beginning of the new year. The new election date has been set for **Feb 15th** to facilitate a smoother transition between incoming and outgoing Executive Committee Officers.

Developing Tomorrow's *In Vitro* Toxicology Leaders

Students are a critical component of IVAM. Many student members of SOT do not realize that their membership entitles them to a specialty section membership at no additional cost. Student members are needed to expand exposure of the IVAM and develop the leaders of tomorrow's toxicology laboratories.

Inviting students to join the IVAM and encouraging them to participate in poster sessions, educational programs and the IVAM Student/Post-Doc Awards may help form a lasting bond between the students and the IVAM.

Student/Post-Doc Awards

Every year the IVAM recognizes outstanding student scientists for their work in the field of *In Vitro* Toxicology.

REQUIREMENTS:

Provide a letter of support from an advisor.

Poster must be presented at the annual SOT meeting.

The winners receive awards up to \$500 and are for either graduate students or post-doctoral fellows. Award recipients will be announced at the IVAM Lunch reception at the Annual Meeting in Salt Lake City.

The deadline for the upcoming 2010 IVAM awards to be presented at the SOT 49th Annual Meeting & ToxExpo in Salt Lake City is **January 23, 2010**.

For information and application, go <http://www.toxicology.org/ISOT/SS/ivss/awards.asp>



2009 IVAM Specialty Section Student and Service Awards

At the National Meeting in Baltimore 2009, the IVAM Specialty Section honored its own during a luncheon at the Convention Center. This well attended meeting was highlighted by announcement of the **IVAM SS Student Awards**. These awards highlight the interest of the specialty section, which include studies of the basic mechanism of cellular injury for target organ systems and development of in vitro tests as alternatives to animal research. Each award winner received a plaque and a check for \$500, \$300 or \$200.

The first place winner was Haitian Lu from Michigan State University. The title of her abstract was: "Establishment of an IgM Antibody Forming Cell Response Model for Assessing Immunotoxicity in Human Primary B Lymphocytes."

The second place winner was Ming-Wei Chao from Rutgers University. Title: "Diesel Exhaust Particles Increase Permeability, Induce Reactive Oxygen Species and Are Cytotoxic to In Vitro Capillary Endothelial Tubes."

The third place winner was Jong Sung Kim from the University of Iowa. Title: "In vitro Study of the Air Delivery of Particle-bound PBDEs to Lung Cells."

The IVAM had over 25 student submissions this year. We would like to thank the students that participated as well as the IVAM executive committee (EC) members who reviewed the abstracts.

The MB Research award for Distinction in Practical In Vitro and Alternative Toxicology Methods is open to Postdoctoral/Fellow students. The award is meant to focus on the practical aspects of in vitro or alternative methods as opposed to basic research or mechanism-based research. The 2009 winner was Jong Sung Kim for his poster entitled, "In vitro Study of the Air Delivery of Particle-bound PBDEs to Lung Cells." The award was announced at the IVAM luncheon by the George DeGeorge, Chief Scientific Officer of MB Research Laboratories.

The IVAM Specialty Section also awarded plaques of recognition commemorating the service of several outgoing officers. These included Dr. Frank Barile, who completed his term as President; Dr. Renee Gardner for her service as a Councilor, Haitian Lu who served as the Student Representative and Dr. Kristina Wolf who served as the Postdoctoral Fellow Representative. The IVAM thanks these individuals for their hard work and service.



Where Are They Now? Profiling a Former IVAM Student Award Winner



Daniel C. Kemp, Ph.D.

At the 42nd annual SOT meeting (2004-2005) Daniel C. Kemp was awarded first place in the IVAM student research competition for his work entitled *Effect of Troglitazone on Basolateral and Canalicular Transport of Model Organic Anions*. This work was performed under the guidance of Dr. Kim Brouwer at the University of North Carolina at Chapel Hill. Dr. Kemp completed his Ph.D. in Toxicology later in 2004. Portions of his dissertation research entitled *Evaluation of the Hepatotoxic Potential of Xenobiotics: Troglitazone and Bosentan Inhibit the Hepatobiliary Transport of Taurochlorate* have been published in *Toxicological Sciences* (2005, 83(2):207) and *Toxicology In Vitro* (2004, 18(6):869). Following the award, Dr. Kemp remained very active with the IVAM specialty section, by being selected as the Vice-President elect in June 2005 and serving throughout the specialty section presidential leadership tract through June of 2009. Dr. Kemp has also served on the American College of Toxicology Education Committee and is currently serving as councilor for the national SOT Drug Discovery Specialty Section.

Currently, Dr. Kemp serves as a Toxicology External Study Manager in the Safety Assessment Group of GlaxoSmithKline in Research Triangle Park, NC. At this position Dr. Kemp is accountable for all aspects of the conduct of general toxicology studies associated with compounds at contract research organizations (CRO) to meet drug development timelines. The group Dr. Kemp works with was created to globally optimize the GSK/contract research organization interface and to act as a reference point for CRO management for the resolution of scientific items. Dr. Kemp also serves as a safety assessment project representative for the Nucleoside Reverse Transcriptase inhibitor team and is responsible for composing updates, designing experiments, responding to questions and interacting with the FDA for safety evaluation of these compounds. During this time Dr. Kemp has authored more than 50 proprietary GLP and non-GLP reports for GlaxoSmithKline.

In Vitro Specialty Section Membership Stats

Recent membership statistics (as of September 2009):

	Full	Assoc	Student	Total
2009	149	38	32(+6)*	225
2008	125	30	21(+2)*	180
2007	107	26	24	157
2006	90	22	16	128
2005	100	25	21	146
2004	74	20	14	108
2003	66	20	0	86

*Post-docs # in parentheses

As of September 2009, IVAM has a total of 225 members, which is up from 180 members at this time last year. More toxicologists are discovering the uses of *in vitro* methods to quickly and cost-effectively evaluate the potential benefits of the newly developed technologies. Each member can actively participate in the growth of the IVAM by increasing awareness of the functions and goals of the IVAM to colleagues and students. In particular, jointly we can concentrate our efforts toward recruiting student and post-doctoral representation, both of which represent the future of *in vitro* methods.

IMPORTANT DATES TO REMEMBER

The following are important deadlines:

Event	Deadline
Colgate-Palmolive Grants for Alternative Research	Oct 9, 2009
MB Research Best Poster: Distinction in Practical In Vitro and Alternative Methods Toxicology:	Jan 1, 2010
IVAM Student Award Application Deadline:	Jan 23, 2010
IVAM Nomination Committee Announces Candidates for Executive Committee:	Feb 15, 2010
SOT 2010 Annual Meeting – Salt Lake City, UT	Mar 7-11, 2010
IVAM Luncheon and Business Meeting	Mar 9, 2010

Countries Unite to Reduce Animal Use in Product Toxicity Testing Worldwide

Earlier this year, representatives from four international agencies signed a memorandum of cooperation that could reduce the number of animals required for consumer product safety testing worldwide. The agreement between the United States, Canada, Japan and the European Union will yield globally coordinated scientific recommendations on alternative toxicity testing methods that should speed their adoption in each of these countries, thus reducing the number of animals needed for product safety testing. The memorandum is available at http://iccvam.niehs.nih.gov/docs/about_docs/ICATM-MOC.pdf.

Linda Birnbaum, director of the National Toxicology Program (NTP) and National Institute of Environmental Health Sciences, part of the National Institutes of Health signed as the U.S. representative on behalf of the NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM), one of the national validation organizations participating in the agreement. Others who signed include Elke Anklam, Ph.D., for the European Centre for the Validation of Alternative Methods (ECVAM), David Blakey, D.Phil., for the Environmental Health Science and Research Bureau within Health Canada, and Mashiro Nishijama, Ph.D. for the Japanese Centre for the Validation of Alternative Methods (JaCVAM).

The agreement promotes enhanced international cooperation and coordination on the scientific validation of non- and reduced-animal toxicity testing methods. If the toxicity testing methods are shown to be reproducible based on strong scientific information, and able to accurately identify product related health hazards, the tests are more readily accepted by regulatory agencies. The memorandum covers three critical areas of test method evaluation: validation studies, independent scientific peer review meetings and reports, and development of test method recommendations for regulatory consideration.

The European Centre for the Validation of Alternative Methods coordinates validation studies on proposed alternative methods, evaluates the results by peer review, and provides recommendations to the European Union National Coordinators for regulatory acceptance of the methods validated. For more information on ECVAM, visit <http://ecvam.jrc.it/>.

The Japanese Centre for the Validation of Alternative Methods is a component of Japan's National Institute of Health Sciences and was established in 2005 to coordinate validation studies on proposed alternative methods, conduct peer reviews of test methods, and provide recommendations to regulatory authorities.

The Environmental Health Science and Research Bureau within Health Canada coordinates activities relevant to health-related test method validation and acceptance issues. For additional information, visit <http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hecs-dgsesc/sep-psm/ehsrb-bsser-eng.php>.

The NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM) administers and provides scientific support for ICCVAM and is a part of the NTP at the NIEHS. For additional information, visit NICEATM at http://iccvam.niehs.nih.gov/about/about_NICEATM.htm.

ECVAM Open Call for Tender

ECVAM has launched an open call to invite laboratories to participate in the initial phase (phase III prevalidation) of the evaluation of three test methods designed for the assessment of the skin sensitization potential of substances. The three methods are: 1) the direct peptide reactivity assay, 2) the myeloid U937 skin sensitization test (MUSST) and 3) the human cell line activation test (h-CLAT). Within this project the selected laboratories will work in close contact with multinational companies as well as the European Commission Joint Research Centre. The deadline for submitting an offer is October 10, 2009.

View information about the Open Call for Tender, including technical specifications, on ECVAM website (<http://web.jrc.ec.europa.eu/callsfortender/index.cfm?action=app.tender&id=453&institute=6>).

E-mail letters of support for SIEE to NIH CSR

The Society needs our assistance on an urgent matter – support for the Systemic Injury from Environmental Exposures (SIEE) study section. We need to send at least twenty letters from IVAM to CSR to have a substantial voice in this important decision. Please consider writing a letter **no later than October 6th**.

The SOT Council has been working with the NIH Center for Scientific Review (CSR) to address how toxicology grant applications have been reviewed. As a result, in 2008, a new SEP (SIEE) was formed specifically to focus on grant proposals related to toxicology and environmental health.

This SEP was a pilot program and is now under review for continuation. Continuation, much less the formation of a standing Study Section, is not assured. It is critical that SOT membership shows support for the continuation of this SEP and that is what we are asking of you today. The SEP is important for fair and consistent review of academic grant proposals. In addition, continuation of the SIEE SEP is important to those in government and industry because well funded toxicology research programs provide training for future toxicologists for all employment sectors, academic, government and industry.

Please consider the following guidance:

1. The content of the letters may be organized as illustrated below. However, each letter should be personalized and not resemble a form letter.

- State support for SIEE study section
- Briefly describe relevant NIH review experience and why your perspective (as reviewer or grantee) is relevant
- Personal or anecdotal references are good, including comments on the fate of orphan applications if relevant.
- Describe why a Study Section with toxicology focus is important for the research emphasis of your Specialty Section. Issues may include the importance of review panels to have appropriate expertise related to agents, multidisciplinary issues, and/or multiple scales of biological organization.
- Remember the goal of the SIEE is to insure that the best science is identified for the NIH.

2. Please send your letters directly to

- Dr. Sy Garte (gartes@csr.nih.gov), the new Director of the Division of Physiology and Pathological Sciences at CSR. As Dr. Garte is a toxicologist, he will appreciate hearing directly from our membership.
- Please include Shawn Lamb (shawnl@toxicology.org), SOT Executive Director, and IVAM President (Dave Allen – allen7@niehs.nih.gov) on the cc list.

The toxicology community has been without a standing study section for six years. We believe that continuation of the SIEE is a critically important decision and that, if not continued, the opportunity will be lost for many years. Thanks for your support.