Dear OTSS Members,

Greetings and welcome to the Ocular Toxicology Specialty Section (OTSS) Fall newsletter. I am truly honored to serve as your president this year and humble to work with incredibly talented and committed members on the Executive Committee. I look forward to working with everyone. My goal is to continue to grow our membership by reaching out to students, international members, and members of allied specialty sections. We are hoping to increase our engagement in years to come.

I would like to introduce our new Executive Committee: Brenda Smith (Vice President), Chris Somps (Past President), Russell Eyre (Secretary/Treasurer), Marcus Terneus (Communication), Vlad Bantseev (Councilor), Florence Lorget (Councilor), Kaushal Joshi (Postdoctoral Representative), and recently appointed Kathleen Krenzer (Vice President-Elect). I greatly appreciate the enthusiasm of this team and I encourage you to engage with them to advance the OTSS over this year and beyond. I would also like to extend my gratitude to the outgoing officers for their enthusiastic leadership over the past few years of service: Evan Thackaberry (Past President) and Brian Gilger (Councilor). We are truly grateful for the terrific job that all have done!

I would like to extend my thanks to the Communication Committee who has put out a great fall edition to the newsletter. Please take time to read the summaries of our activities over the past year. At the 57th SOT Annual meeting held in Baltimore the OTSS sponsored two activities at the meeting: A scientific symposium entitled “In Vitro and Alternative Methods in Ocular Toxicology: The “Eyes” Have It” and a member reception. At the reception, we presented the Career Achievement Award to Dr. William Boyes, the Student/Postdoctorate Award to Dr. Puneet Vij, and the award for the best published paper in 2016 in Cutaneous and Ocular Toxicology. The OTSS Program Committee is working on new ideas for webinars, seminars and workshops and we would welcome the active participation of our members.

Our success with these initiatives depends on the involvement of our membership. To that end, I would like to encourage OTSS members to be involved by volunteering on our various committees. Our overall strategy for the future is to provide members with as many opportunities as they would like to contribute to building a truly great specialty section.

We have an enthusiastic and vibrant specialty section and new members are always welcome. Consider asking a colleague or friend to join. In addition, we welcome feedback, suggestions, and ideas on ways to make improvements as we work to identify additional initiatives to further strengthen and enhance our mission of promoting the OTSS.

Finally, I would like to remind all OTSS members that it is not too early to start thinking about nominations for OTSS-sponsored awards. This year we are sponsoring four awards: The Annual “Paper of the Year” Award and the Career Achievement Award which have submission deadline of December 31, 2017, and the Covance-OSOD Graduate Student/Postdoctoral Fellow Research Award and the Trainee Travel Award which have submission deadlines on December 15, 2017.

Thank you for giving me the honor to serve as OTSS President! Looking forward to an exciting year ahead!

Mercedes Salvador-Silva, Ph.D. DABT
OTSS President

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OTSS Website

Officers

President
Mercedes Salvador-Silva

Vice President
Brenda Smith

Past President
Chris Somps

Councilors
Vlad Bantseev
Florence Lorget

Postdoctoral Representative
Kaushal Joshi

Student Representative
Vacant
OTSS Reception Highlights

The reception for the Ocular Toxicology Specialty Section was held on Wednesday, March 15, 2017 from 6:00 pm to 7:30 pm at the Hilton Baltimore Key Ballroom 7. It began by acknowledging the supporters of the OTSS which included: Charles River, Covance, Ocular Services On Demand (OSOD), and Regeneron. Attendees of the meeting also got to enjoy a presentation involving the Japanese Society of Comparative and Veterinary Ophthalmology.

Introductions of the current officers of the OTSS and new officers for the 2017-2018 term were announced. New officers include: Mercedes Salvador-Silva (President), Brenda Smith (Vice President) and Florence Lorget (first year Councilor). Officers completing their terms on the OTSS Executive Committee included: Chris Somps (President), Evan Thackaberry (Past-President), and Brian Gilger (councilor). After introductions, the chairpersons of various OTSS committees presented updates.

Mercedes Salvador-Silva (chair) of the Program Planning Committee acknowledged members of the committee including: Vlad Bantseev, Chris Somps, Brian Christian, Ed Chow, Donald Fox, Alan Katz, Ron Newton, Melva Rios-Blanco, Marcus Terneus, and Evan Thackaberry. Mercedes then provided a reminder about the 2017 Symposium, “In Vitro and Alternative Methods in Ocular Toxicology: The “Eyes” Have It” that was scheduled on Thursday, March 16th. The Symposium was endorsed by In Vitro and Alternative Methods and Regulatory and Safety Evaluation Specialty Sections, and Innovation in Toxicological Science (ITS). Additional updates included the 2018 Symposium Proposal: The Use of Advanced Imaging Techniques to Detect, Determine, and Treat Retinotoxicity in Man and Experimental Models.
The chairperson of the Communications Committee, Marcus Terneus, introduced the OTSS members who helped support the committee which included Leandro Teixeira and Chris Somp. Of the various committee activities, the principal activities are focused on the OTSS Newsletter, Websites/Sharepoints, and OTSS Poster, which is always in need of information to share with the members of the OTSS.

Next was an update on the Membership Committee, chaired by Vas Anand. At the time of the meeting, there were 99 members of the OTSS. Of the 99 members, 79% represent Industry, 15% are in Academic/Government, and 6% are Students. This number has gradually increased since 2015, but there is room for many more members, especially students and postdocs!

Next was an update on OTSS financials by Russell Eyre, which was followed by awards. Russell indicated that the OTSS was doing well financially, with a balance ending 31 Dec 2016 of $65,924, representing a net gain of $26,489 year-over-year.

There were three awards presented at the annual OTSS reception. They included the Taylor & Francis “Ocular Paper of the Year” award presented by Dr. A Wallace Hayes, the “Student/Postdoctorate Award” presented by Dr. Brian Gilger and the “Career Achievement Award” presented by Dr. Donald Fox. You can read about the award winners in the sections below.

The reception was concluded by a presentation by Dr. William Boyes, the winner of the “Career Achievement Award”.

Networking activities during the OTSS Reception 2017.

OTSS Membership Distribution 2016

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Career Achievement Award Winner, Dr. William Boyes giving his presentation at the 2017 OTSS Meeting.
Award Announcements

Career Achievement Award

Congratulations to this year’s recipient,  
Dr. William Boyes

Dr. Boyes received a PhD in Environmental Health from the University of Cincinnati, College of Medicine in 1981, and was a National Research Council postdoctoral fellow at the Neurotoxicology Division of the EPA in Research Triangle Park from 1981-1983.

Dr. Boyes has held several offices in toxicology-related associations and journals, including President of the International Neurotoxicology Association (2007-2009), Associate Editor for Neurotoxicology (2009-present), Section Editor for Neurotoxicology and Teratology (1990-1992), and was named as a Fellow of the Academy of Toxicological Sciences.

Dr. Boyes is recognized for his continuous support the field of toxicology. Dr. Boyes has authored/co-authored over 100 peer-reviewed manuscripts and/or book chapters, as well as numerous EPA documents including Neurotoxicity Health Effects Testing Guidelines, Neurotoxicity Risk Assessment Guidelines, nanomaterial research strategy documents, and several EPA reports to Congress.

About the Award:

The award nominees are selected based on the depth and breadth of scientific contributions and significance of contributions for advancing the field of ocular toxicology. Among the factors included are the education/training/mentorship of young scientists, influence on regulatory and risk/safety assessment decisions related to ocular toxicology, and leadership and service to the ocular toxicology field.

2017 Francis & Taylor “Ocular Paper of the Year” Award

The important classification of severe ocular irritation as distinct from corrosion is traditionally determined by assessing reversibility of damage to the corneal epithelium over time in live rabbits (The Draize Test). Currently, there are no regulatory accepted alternative (non-rabbit) ocular irritation assays that are capable of assessing both corneal tissue damage and reversibility (healing). The Bovine Corneal Opacity and Permeability (BCOP) assay predicts a corrosive classification if the In Vitro Irritation Score (IVIS) is $> 55$; however, materials in this category that may cause reversible (non-corrosive) damage in the Draize Rabbit Eye Test are overclassified. This overclassification can lead to inaccurate hazardous shipping labels and increased manufacturing and distribution costs.

MB Research Laboratories demonstrated the feasibility of a dual assay system for distinguishing corrosive materials from those merely moderately to severely irritating. Twenty-one chemicals with known EPA ocular toxicity classifications (based on rabbit data) were evaluated using the BCOP assay. Chemicals with an IVIS $\geq 20$ were to be considered moderately irritating to corrosive and were further assayed in the Porcine Cornea Opacity Reversibility Assay (PorCORA). The PorCORA uses excised porcine corneas that are maintained in culture for up to 21 days. Test chemicals are topically dosed on the corneal epithelium and assessed for damage by fluorescein stain retention, similarly to the Draize method. Test chemicals causing stain retention persisting until Day 21 were deemed corrosive (EPA Cat. 1). If the stain retention cleared before Day 21, the test chemical was classified a severe irritant (EPA Cat. 2). Of the 21 chemicals tested, 6/6 Category 1 chemicals induced irreversible damage in the PorCORA, while ocular damage caused by 15/15 Category 2 and Category 3 (IVIS $\geq 20$ to 55) chemicals completely reversed by Day 21.

The dual ex vivo assay system fulfills an unmet need under current ocular hazard regulatory test guidelines by providing a non-live-animal (ex vivo) approach to resolving the differences between corrosive (EPA Cat. 1) and severely irritating (EPA Cat. 2) chemicals.
**Symposium at the 2016 SOT**

**“In Vitro and Alternative Methods in Ocular Toxicology: The “Eyes” Have It”**

Chairpersons: Mercedes Salvador-Silva and Chris Somps

This Workshop hosted on Thursday, March 16th and was co-sponsored by the Ocular Toxicology, *In Vitro* and Alternative Methods, and Regulatory and Safety Evaluation Specialty Sections. This session started with a broad overview of *in vitro* ocular safety assessment models, including internationally recognized and validated *in vitro* ocular irritant models, and their application for cosmetic, pharmacology, and medical device safety assessments. The second speaker summarized regulatory efforts associated with the development, validation, and international acceptance of alternative *in vitro* methods for prediction of ocular toxicity, and will discuss the current hurdles and challenges regarding validation and acceptance of alternative methods for ocular toxicity prediction. The third and fourth speakers described examples of novel 3D and organ-on-a-chip models, and their application to the physiology and pathophysiology of glaucoma, tear production, and dry eye. The final speaker discussed the current state and challenges of using stem cells to generate 3D retinal organoids, and the potential use of organoids for retinal disease models, drug development, and ocular toxicity assessments. Attendees learned about the 1) the development of complex, physiologically relevant *in vitro* ocular models for assessing ocular toxicity; 2) the challenges and critical decision points that influence the use of alternative methods for *in vitro* toxicology; 3) the strengths/limitations, predictive capacity, reproducibility, and sensitivity of the alternative methods presented and; 4) the challenges associated with *in vitro* model validation and clinical translation.

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**Call for Nominations from the Awards Committee**

**Ocular Toxicology SS Career Achievement Award**

Each year, the OTSS recognizes one of its members for lifetime achievement or for contribution of a particularly influential body of work to the field of ocular toxicology. The nominees are evaluated with respect to the following criteria:

1) Contribution to the field of ocular toxicology—depth and breadth of scientific contributions and significance of contributions for advancing the field.
2) Major influence in the education/training/mentorship of young scientists in the field of ocular toxicology including training in government, industry, or academia.
3) Leadership and service to the ocular toxicology field including involvement in the Specialty Section or other meetings/organizations related to ocular toxicology.
4) Influence on regulatory and risk/safety assessment decisions related to ocular toxicology.

Nominations of candidates not selected will be considered for two additional years unless the nomination is withdrawn by the sponsor.

Nominations: The nominator should provide a discussion of the role that the individual’s work has played in advancing the field of ocular toxicology and the safety assessment of ocular products. A curriculum vitae and bibliography should also be included. A second letter of recommendation from another investigator in the field would be helpful.

Submit nominations to: Vlad Bantineev

**Deadline: December 31, 2017**
Ocular Toxicology SS Ocular Toxicology Specialty Section Covance- OSOD Graduate Student/Postdoctoral Fellow Research Award

Each year, OTSS recognizes outstanding student/postdoctoral candidates for their contribution to advancing the understanding of ocular toxicology and pharmacology. The award recipient will receive a certificate and monetary award of up to $500, funded by generous contributions from Covance and OSOD. The requirements/criteria for the award include that the Applicant:

1) must be graduate student or postdoctoral fellow as of October 1 the year prior to the annual meeting;
2) preferred to be a SOT and OTSS member;
3) must have an accepted abstract at the next upcoming SOT annual meeting;
4) must attend the SOT meeting and attend the OTSS reception;
5) must not have received an OTSS award the previous year;
6) abstract must be related to ocular toxicology and/or pharmacology.

Submission of:

1) Abstract, including SOT Abstract Number.
2) Letter of support from applicant’s Sponsor indicating the role of the applicant and independence conducting the research.
3) Narrative describing their research hypothesis, background and significance (up to 2-pages). The winners will present a 5-minute synopsis of his/her research at the Annual OTSS meeting.

Submit nominations to: Vlad Bantseev

Deadline: December 15, 2017

Ocular Toxicology SS Trainee Travel Award

The Ocular Toxicology Specialty Section (OTSS) of the Society of Toxicology (SOT) is now accepting applications for a Graduate Student and Postdoctoral Fellow Trainee Travel Award. The purpose of these awards is to recognize outstanding contributions of graduate students and postdoctoral fellows to the 2018 SOT Annual Meeting in the area of ocular toxicology. The award is specifically intended to support the travel of graduate students and postdoctoral fellows to the Annual Meeting of the Society of Toxicology. Both need and abstract merit will be considered as criteria for this award.

Eligibility is limited to graduate students and postdoctoral fellows who meet the following criteria:

1) must be graduate student or postdoctoral fellow as of October 1 the year prior to the annual meeting;
2) must have an accepted abstract at the next upcoming SOT annual meeting;
3) must attend the SOT meeting and attend the OTSS reception;
4) must not have received the OTSS award the previous year;
5) abstract must be related to ocular toxicology and/or pharmacology.

The application should include the following items:

1. Cover letter from the trainee indicating his/her intent to apply for this award and interest in attending the Annual Meeting
2. Current CV
3. Copy of abstract for platform or poster presentation at the 2018 SOT
4. Letter from advisor or mentor indicating the trainee’s merit, as well as confirmation of need for funding to enable travel

Awards will be conferred to one (1) graduate student and/or one (1) postdoctoral fellow. The winners will each receive an achievement plaque and a $500 cash award. The awardees will be acknowledged at the 2018 OTSS Reception.

All applications should be submitted to OTSS Awards Committee Chairperson Vlad Bantseev.

Deadline: December 15, 2017
Ocular Toxicology SS Annual “Paper of the Year” Award

The Francis & Taylor Award is presented annually to recognize the best paper in ocular toxicology published in the Journal of Cutaneous and Ocular Toxicology. The winner receives a certificate of recognition and a subscription to the Journal of Cutaneous and Ocular Toxicology. The winner will be selected by Francis & Taylor from articles published between January 1 and December 31 of the year preceding the SOT Annual Meeting. Nominations from the membership will not be solicited. The award will be announced at the Annual Meeting of the Ocular Toxicology Specialty Section at the Society of Toxicology Annual Meeting.

Deadline: December 31, 2017

Call for SOT Student and Postdoctoral Representative

There are two openings for a 2-year position for a Student representative and for a Postdoctoral representative for OTSS student members. Interested individuals should contact Kaushal Joshi.

Renew your membership!

It is that time of the year when people are planning to register for the meeting and to renew their SOT membership so we wanted to remind you to re-register as an OTSS member.

Click here for a direct link

OTSS Officer Nominations

Please consider supporting your Specialty Section by helping out on the OTSS Executive Committee. Each year there is a call for Nominations. Please consider self-nomining or nominating a fellow OTSS member. The following positions will become available in 2017: Communications Officer, Secretary/Treasurer, Councilor, and Vice President-Elect. See link below for a description of these officer positions and send nomination suggestions to Vlad Bantseev.

Officer Position Descriptions
Supporters

We sincerely thank you for your generous support!!

2017 – 2018 Supporters

- Regeneron
- Covance
- Ocular Services On Demand
- Charles River