



Immunotoxicology Specialty Section Newsletter

Incoming President's Message

Submitted by Rafael A. Ponce, PhD.

As I gather my thoughts after the celebration of the 30th birthday of the ITSS at the SOT Annual Meeting, I am incredibly proud of how our members and the discipline of immunotoxicology are so prominently impacting public health, the development of new treatments for serious disease, and in contributing to basic science. These vital contributions, and the growing prominence of our discipline in many areas of public health, research, and clinical practice, are placing increasing demands on us as we consider how to stay current with recent research and evolving methods, and the novel technologies that press against the bounds of our understanding. This pace of change and the access to information challenge us to remain current, and the ITSS Executive Committee is committed to ensuring that we are evolving new ways for our members to stay informed and to recognize our members for outstanding achievements and contributions as immunotoxicologists.

Last year, under the leadership of Danuta Herzyk, the ITSS streamlined its structure under four Committees (Awards, Communication & Membership, Education, and Program) and generated Best Practice Guides for activities and responsibilities of Awards Committee and Program Committee. In addition, the ITSS initiated a new "Mentor – Student/Postdoc Event" with a pilot meeting organized prior to the Annual Reception.



Dr. Rafael Ponce
President, ITSS
2015-2016

2015-2016 Executive Committee

President
Rafael A. Ponce

Vice President
L. Peyton Myers

Vice President-Elect
Victor J. Johnson

Secretary-Treasurer
Kristen A. Mitchell

Past President
Danuta J. Herzyk

Senior Councilor
Cheryl E. Rockwell

Junior Councilor
Haley Neff-LaFord

Postdoc Representative
Ashwini S. Phadnis-Moghe

Student Representative
Aimee E. Hillegas

The ImTox SS Newsletter is published 3 times/year (Summer, Fall, and Winter). If you would like to share an item of interest with members of the ImTox SS, please send it to the Communications Committee Co-Chairs. All comments on, or suggestions to the newsletter are welcome.

Ashwini S. Phadnis-Moghe
phadnisa@msu.edu
Kristen A. Mitchell
kristenmitchell@boisestate.edu

Incoming President's Message.....	1
Outgoing President's Message.....	2
Student Postdoctoral Report	3
ImTox SS Committee Lists.....	4
Job Opportunities.....	5
Awards Committee Report.....	7
News and Noteworthy.....	11
Recent Immunotoxicology Publications.....	12

This event provided an informal discussion between young career scientists (students and post-docs) and established scientists practicing immunotoxicology in academia, government, contract research, and industry (thanks Ashwini!). In addition to these achievements, the ITSS was prominent as a contributor to the scientific program at the Annual Meeting with three symposia, two CE courses and workshops (each), and a roundtable. The contributions from our membership to the Annual Meeting were truly outstanding

The ITSS Executive Committee is composed of both returning members, who provide continuity, and new members, who bring fresh ideas to the table. We congratulate and welcome Victor Johnson (as VP Elect), Kristen Mitchell (Secretary-Treasurer, Communications & Membership Committee Co-Chair) and Haley Neff-LaFord (Junior Councilor) as newly elected members of the Executive Committee. Thank you for your engagement and involvement with our Specialty Section. We also recognize the achievements and contributions made by Danuta Herzyk (who is now Past President, Councilor) and Jamie DeWitt (who retired from the ITSS as Senior Councilor). It is inspiring to me to have been able to work closely with both of you. Thank you for your efforts to shepherd our Specialty Section into its fourth decade!

Turning to the year ahead, the ITSS leadership and Committees are considering new opportunities for member engagement, education, and interaction. Of particular interest are new opportunities for basic and advanced education opportunities in immunotoxicology, outreach to new members, and collaboration (both externally and with other SOT committees and specialty sections). The primary mission of our specialty section is to ensure that our members have the means to interact and thrive, tap into our collective expertise, and share new research insights. While we have an active and engaged Executive Committee, we encourage and welcome your input and involvement. Please feel free to contact any of us on the Executive Committee if you have thoughts or concerns.

In addition, if you have news, including article submissions or publications, that you would like to share with our community, please send to Ashwini Phadnis (phadnisa@msu.edu) or Kristen Mitchell (kristenmitchell@boisestate.edu), as Co-Chairs of the Communications and Membership Committee. On behalf of the ITSS Executive Committee, we look forward to another productive and inspiring year for our specialty section. Many thanks for all you do to make our group so very special.

Rafael Ponce, PhD
President, ITSS (2015-2016)

Outgoing President's Message

Submitted by Danuta Herzyk, Ph.D

It was a great honor to serve as President of the Immunotoxicology Specialty Section over the 2014-2015 term, and to work with a wonderful group of officers and members of our section. I have truly enjoyed this experience and want to thank the Executive Committee members for their support and great collaboration.



**Dr. Danuta Herzyk
President ImTox SS
2014-2015**

At the same time, the continuation and expansion of many activities undertaken by the new ITSS Executive Committee led by the current President, Rafael Ponce, is already evident and I look forward to further participation in the work and life of the ITSS.

Wishing the ITSS a growing success!

Danuta Herzyk

Student & Postdoctoral Report



Submitted by Aimee Hillegas

Hello to all student and postdoctoral members of the ITSS! I hope you are having a great and productive summer!

I would also like to thank everyone who made it to the big Student/Postdoc mixer during the 54th SOT meeting in San Diego. For the first time, the Immunotox Specialty Section hosted a mentoring session for grad student and postdoctoral members prior to the annual reception. We had a great turnout with ~ 20 students/postdocs who were able to speak with members of the ITSS Executive Committee with a wide range of backgrounds (Academia, Industry, and Government) and learn how these Executive Committee members got started in their career and what led them to their current positions. If you were able to attend, keep an eye out for information regarding the 2nd Annual ITSS Specialty Section Mentoring Session to be held next year at the 55th Annual SOT Meeting in New Orleans!

Also, Congratulations to our Student/Postdoc Award Winners!

Best Presentation by a Postdoctoral Trainee Award

Dr. Imir Metushi for “The Use of Animal Models in Investigating the Mechanism of Idiosyncratic Drug-Induced Hepatotoxicity”

Best Presentation by a Student Award

First Place: Carrie Long, West Virginia University, for “Increased Expression and Immunoregulatory Potential of MicroRNA 210 in a Murine Model of TDI Sensitization”

Second Place: Alexandra Turley, Michigan State University, for “The Food Additive tBHQ Inhibits Activation of Primary Human CD4T Cells”

Third Place: Sarah Attreed, New York University, for “Exposure to Produced Water from “Fracking” Induces Immunotoxicity in Male Mice”

We would also like encourage new students and postdocs to engage actively in the ITSS. You can do so by volunteering for a committee of your interest. These activities can help you connect with fellow immunotoxicologists and give you experience to state on your CV!

SOT and the Continuing Education Committee invite the Immunotox Specialty Section to register for online continuing education courses offered by **CEd-Tox**. Currently there are approximately 40 online courses available for viewing:

<http://www.toxicology.org/education/ce/onlineCourses.asp>. A few of these courses may be of special interest to Immunotoxicology Specialty Section members.

New World of Cancer Immunotherapy: Challenges in Bench to Bedside Translation (2015)
Overview and Application of the WHO-IPCS Harmonized Guidance for Immunotoxicity Risk Assessment for Chemicals (2012)
Drug Hypersensitivity Reactions: Risk Assessment and Management (2011)
Comparative Biology of the Lung (2010)

Immunotoxicology Specialty Section Committee Lists – 2015/2016

Awards Committee

Cheryl Rockwell

Haley Neff-LaFord	Berran Yucesoy
Aimee Hillegas	Gary Burleson
M. Firoze Khan	Rafael Ponce
Jessica Lynch	Peyton Myers

Program Committee

L. Peyton Myers

M. Firoze Khan	Marc Pallardy
Saurabh Chatterjee	Rochelle Mikkelsen
Berran Yucesoy	Susan McKarns

Education Committee

Cheryl Rockwell

Ratanesh Seth	Ashwini Phadnis
Susan McKarns	Yu Feng
Joe Zagorski	Bassam Kashgari
Aimee Hillegas	Alex Turley

Communications & Membership Committee

Ashwini Phadnis

Kristen Mitchell

Jiajun Zhou	Haley Neff-LaFord
Susan McKarns	Kaulini Burra

If you would like to join a committee, there are still openings on the Communications & Membership and Education Committees.

Please contact the ITSS Secretary/Treasurer or the Chairperson of the committee(s) if you are interested in joining.



JOB OPPORTUNITIES

MPI Research located in Mattawan, MI is currently seeking an enthusiastic immunotoxicologist to join our Biomarker and Investigative Pathology team. Successful candidate should be familiar with the design, conduct, analyses, and interpretation of mechanistic studies for understanding alterations in innate and adaptive immunity. In addition, the candidate should be familiar with a broad base of immunotoxicology methods in various laboratory animal species, including but not limited to flow cytometry, cell proliferation and ligand binding assays. Candidate will join a team of veterinary pathologists, biomedical scientists, and toxicologists in support of preclinical drug development studies. Requirements: PhD in Immunology, 1-2 years' experience in Immunology, Immunotoxicology, or related field. Previous experience in toxicology, biopharmaceutical development or CRO environment is desirable.

If you are interested in this position please visit our website: www.mpiresearch.com/careers
MPI Research is proud to be an Equal Opportunity Employer. Thank you for your interest in joining the team at MPI Research.

MPI Research is an EO employer – M/F/Veteran/Disability.

Principal Scientist, Immunotoxicologist OR Senior Principal Scientist, Immunotoxicologist - Non-Clinical Drug Safety - Boehringer Ingelheim, Ridgefield CT USA

Qualified candidate will be hired at the appropriate level commensurate with education/experience.

Description:

This senior laboratory position supports R&D projects to improve safety assessments during discovery, development and clinical development phases with a specific focus on immunology and immunotoxicology. The incumbent develops and communicates immunotoxicology strategy and applies accepted approaches and/or develops novel immunology approaches to achieve project goals. This includes prioritization of projects and supervision of research scientists assigned to projects.

Duties & Responsibilities:

Assumes leadership role as primary immunotoxicology subject matter expert to cross-functional and cross-therapeutic area R&D projects and contributes to overall program goals. Directs and supervises junior scientific staff in the conduct of established immunology or immunotoxicology experiments (in vitro/in vivo) in support of small molecules and biologics. Lead in proposing and implementing new experimental designs and methodologies to understand immunotoxicity mechanisms and risks (i.e. immune stimulation/suppression).

Principal Scientist, Immunotoxicologist Requirements

PhD, DVM degree or equivalent with 5+ years of relevant experience in immunology or immunotoxicology

Senior Principal Scientist, Immunotoxicologist Requirements:

PhD, DVM degree or equivalent with 7+ years of relevant experience in immunology or immunotoxicology in addition to experience in lab management

Scientist IV, Cellular Immunologist – Boehringer Ingelheim, Ridgefield CT USA

Job Description

Description:

Boehringer Ingelheim's nonclinical drug safety is seeking a talented and motivated senior level Cellular Immunologist who will provide comprehensive scientific and technical expertise in cellular immunology. This position requires strong expertise in flow cytometry applications with experience in cell imaging techniques a desired plus. The successful candidate will be responsible for the development, qualification and execution of high value, fit-for-purpose cell-based immunoassays to support Boehringer-Ingelheim's biologic and small molecule candidates in development. The candidate will have a critical role in the development and implementation of established and novel flow cytometry assays, data analysis and generation of technical reports. Candidate will also interface with contract labs for outsourced method transfer and data oversight and review. Candidate must have proven experience in the delivery of flow cytometry-based assays for use in preclinical studies, and possess knowledge and understanding of cellular imaging techniques, to enable achieving project timelines and milestones.

Requirements:

Bachelor's degree with 10+ years experience or Master's degree with 6+ years experience in a relevant scientific discipline such as Immunology, Cell Biology or Biochemistry with pharmaceutical or biotech experience.

Demonstrates experience in flow cytometry operation, maintenance, assay development and optimization, data analysis and interpretation.

Knowledge in the development, characterization, and implementation of cellular immunoassays strongly desired.

Contact:

Haley Jaroski

Talent Acquisition Recruiter for Science

Cielo Partner on behalf of Boehringer Ingelheim

215-630-9746

haley.jaroski.ext@boehringer-ingelheim.com

If you are aware of a job opening in the specific area of Immunotoxicology that you would like to see posted here, please email the details to Ashwini Phadnis-Moghe at phadnisa@msu.edu.

2015 Awards Committee Report



**Submitted by Dr. Jamie DeWitt
Chair, Awards Committee**

2015 Awards Cycle (current chair of Awards Committee: Dr. Cheryl Rockwell)

Each awards cycle, the Awards Committee receives a high number of excellent nominations. A high number of nominations indicates that not only do we have members who are doing amazing work, but that we have members who are willing to nominate their students, post-docs, and colleagues. However, it can be challenging for the members of the awards committee to rank the various nominees and determine the award recipients. Although scoring criteria are clear for all of the awards so that each member of the awards committee evaluates the strengths and weaknesses appropriately, they may each value strengths and weaknesses slightly differently. Most of the time, these small differences in valuation are minimized by averages, but occasionally, final ranks must be confirmed by additional scoring techniques. The sum total of points given by each awards committee member as well as the average relative ranking of each nominee by awards committee members can help the chair of the awards committee determine if the average is fair and equitable to all nominees, especially for scores that have large standard deviations or that are separated by very few points. The update to the Awards Committee Best Practices document drafted by Peyton Myers and the 2014-2015 Awards Committee includes a scoring template with these suggested scoring approaches. In cases where scores are extremely close, tied, or highly disparate, members of the Awards Committee schedule a conference call to reach consensus. In the years that I have served on the Awards Committee, scores are usually in agreement for the highest and lowest scoring nominations and discussion is needed to reach agreement for third place awardees. All members of the Awards Committee understand how precious these awards are for nominees and do their absolute best to ensure fairness and equity in the process. So please, keep the Awards Committee busy and send in those nominations when you see the call for awards this winter!

Recognizing the scientific contributions of students, postdoctoral trainees, and colleagues is one of the highlights of the ITSS reception at the Annual Meeting. At this year's meeting we presented ten awards. The following two pages list the different award winners and our colleagues who have made significant contributions to the field of immunotoxicology

Vos Award for Lifetime Career Achievement in Immunotoxicology

The first award presented at the ITSS reception is the *Vos Award for Lifetime Career Achievement in Immunotoxicology*. This award is presented to an individual in recognition of career achievements in advancing the field of immunotoxicology through service, leadership, and scientific contributions. This year's honoree was **Dr. David Lawrence** from New York State Department of Health's Wadsworth Center.



Dr. David Lawrence, New York State Department of Health Wadsworth Center

Outstanding Senior Immunotoxicologist Award



Dr. Kenneth Hastings, Hastings Toxicology Consulting

Nominated by Dr. Jack Dean



***HESI Immunotoxicology
Young Investigator Travel Award***

Dr. Fenna Sillé, University of California
Berkeley



Outstanding Young Investigator Award

Dr. Saurabh Chatterjee
University of South Carolina



***Best Presentation by a Postdoctoral
Trainee Award***

Dr. Imir Metushi
The Use of Animal Models in
Investigating the Mechanism of
Idiosyncratic Drug-Induced
Hepatotoxicity





Immunotoxicology Awards continued

Best Presentation by a Student Awards

First Place

Carrie Long

West Virginia University

Increased Expression and Immunoregulatory Potential of MicroRNA 210 in a Murine Model of TDI Sensitization



Second Place

Alexandra Turley

Michigan State University

The Food Additive tBHQ Inhibits Activation of Primary Human CD4T Cells



Third Place

Sarah Attreed

New York University

Exposure to Produced Water from “Fracking” Induces Immunotoxicity in Male Mice



Immunotoxicology Awards Continued

Best Paper of the Year Award

Genetic Variants in the Major Histocompatibility Complex Class I and Class II Genes are Associated with Diisocyanate-Induced Asthma.

Journal of Occupational and Environmental Medicine, 2014, **56**:382-387.

Authors: Berran Yucesoy, Victor J. Johnson, Zana L. Lummus, Michael L. Kashon, Marepalli Rao, Hansen Bannerman-Thompson, Bonnie Frye, Wei Wang, Denyse Gautrin, André Cartier, Louis-Philippe Boulet, Joaquin Sastre, Santiago Quirce, Susan Tarlo, Dori Germolec, Michael I. Luster, and David I. Bernstein



News and Noteworthy

- Dr. Michael Pollard received the ViCTER (Virtual Consortium for Translational/Transdisciplinary Environmental Research) award from NIEHS that will help establish a virtual consortium of investigators from Scripps, University of Montana Center for Environmental Health Sciences and University of Florida. For more about this award please see the link- <https://www.scripps.edu/news/press/2015/20150709pollard.html>
- Dr. Rathanesh Seth, a postdoctoral researcher in Dr. Saurabh Chatterjee's laboratory at the University of South Carolina received the Association of Scientists of Indian Origin (ASIO)-SIG best postdoctoral presentation abstract Award at the SOT Annual Meeting
- Dr. Saurabh Chatterjee was elected Councilor of ASIO-SIG (Term May 2015-April 2016).

Compiled by Haley Neff-LaFord. Anytime you have a new fully-published or electronically-available article to report, please send the citation to Haley Neff-LaFord at hnlaford@seagen.com

Asthma, Allergy, Autoimmunity & Hypersensitivity

Basketter D, White IR, McFadden JP, and Kimber I. Hexyl cinnamal: consideration of skin-sensitizing properties and suitability as a positive control. *Cutan Ocul Toxicol* 34:227-231, 2015.

Eaton LH, Roberts RA, Kimber I, Dearman RJ, and Metryka A. Skin sensitization induced Langerhans' cell mobilization: variable requirements for tumour necrosis factor- α . *Immunology* 144:139-148, 2015.

Nygaard, UC, Vinje NE, Samuelsen M, Andreassen M, Groeng, EC, Bølling AK, Becher R, Lovik M and Bodin J. Early life exposure to bisphenol A has modest effects in mouse models of airway allergy, food allergy and oral tolerance. *Food Chem Toxicol* 83:17-25, 2015.

Pollard KM. Environment, autoantibodies, and autoimmunity. *Front Immunol* 6:60, 2015.

Popple A, Williams J, Maxwell G, Gellatly N, Dearman RJ, and Kimber I. The lymphocyte transformation test in allergic contact dermatitis: New opportunities. *J Immunotoxicol* 6:1-8, 2015.

Yucesoy B, Kaufman KM, Lummus ZL, Weirauch MT, Zhang G, Cartier A, Boulet LP, Sastre J, Quirce S, Tarlo SM, Cruz MJ, Munoz X, Harley JB, and Bernstein DI. Genome-wide association study identifies novel loci associated with diisocyanate-induced occupational asthma. *Toxicol Sci* 146:192-201, 2015.

Yucesoy B, Kashon ML, Johnson VJ, Lummus ZL, Fluharty K, Gautrin D, Cartier A, Boulet LP, Sastre J, Quirce S, Tarlo SM, Cruz MJ, Munoz X, Luster MI, Bernstein DI: Genetic variants in TNF α , TGFB1, PTGS1 and PTGS2 genes are associated with diisocyanate-induced asthma. *J Immunotoxicol* 27:1-8, 2015.

Developmental Immunotoxicology

Abdollahi E, Tavasolian F, Ghasemi N, Mirghanizadeh SA, Azizi M, Ghoryani M and Samadi M. Association between lower frequency of R381Q variant (rs11209026) in IL-23 receptor gene and increased risk of recurrent spontaneous abortion (RSA). *J Immunotoxicol* 12:317-321, 2015.

McFadden JP, Thyssen JP, Basketter DA, Puangpet P, and Kimber I. T helper cell 2 immune skewing in pregnancy/early life: chemical exposure and the development of atopic disease and allergy. *Br J Dermatol* 172:584-591, 2015.

Pennings, JLA, Jennen DGJ, Nygaard UC, Namork E, Haug LS, van Loveren H and Granum B. Cord blood gene expression supports that prenatal exposure to perfluoroalkyl substances causes depressed immune functionality in early childhood. *J Immunotoxicol* 12:1-8, 2015.

General Immunotoxicology

Aligo J, Brosnan K, Walker M, Emmell E, Mikkelsen SR, Burleson GR, Burleson FG, Volk A and Weinstock D. Murine gammaherpesvirus-68 (MHV-68) is not horizontally transmitted among laboratory mice by cage contact. *J Immunotoxicol* 12:330-341, 2015.

Andreassen M, Bøhn T, Wikmark OG, Van den Berg J, Løvik M, Traavik T, and Nygaard UC. Cry1Ab protein from *Bacillus thuringiensis* and MON810 cry1ab-transgenic maize exerts no adjuvant effect after airway exposure. *Scand J Immunol* 81:192-200, 2015

Bodin J, Bølling, AK, Wendt A, Eliasson L, Becher R, Kuper F, Løvik M, and Nygaard UC. Exposure to bisphenol A, but not phthalates, increases spontaneous diabetes type 1 development in NOD mice. *Tox Report* 2:99-110, 2015.

Bodin J, Stene LC and Nygaard UC. Can exposure to environmental chemicals increase the risk of diabetes type 1 development? *Biomed Res Int* 2015 doi:10.1155/2015/208947.

Bonifas J, and Blömeke B. N-acetylation of aromatic amines: implication for skin and immune cells. *Front Biosci (Elite Ed)* 7:267-81, 2015.

Chatterjee S and Das S. P2X7 receptor as a key player in oxidative stress-driven cell fate in nonalcoholic steatohepatitis. *Oxid Med Cell Longev* doi: 10.1155/2015/172493, 2015.

Corsini E, Galbiati V, Pinto A, Davin A, Polito L, Guaita A, and Racchi M. Immunostimulatory effects of RACK1 pseudosubstrate in human leukocytes obtained from young and old donors. *Oncotarget* 6:6524-34, 2015.

DeBord DG, Burgoon L, Edwards S, Haber LT, Kanitz H, Kuempel E, Thomas RS, and Yucesoy B. Systems Biology and Biomarkers of Early Effects for Occupational Exposure Limit Setting, *J Occup Environ Hyg* PMID: 6132979, epub ahead of print, 2015.

Englezou PC, Rothwell SW, Ainscough JS, Brough D, Landsiedel R, Verkhatsky A, Kimber I, and Dearman RJ. P2X7R activation drives distinct IL-1 responses in dendritic cells compared to macrophages. *Cytokine* 74:293-304, 2015.

El-Sisi A, Sokar SS, Salem TA and Abu Risha SE. PPAR γ -dependent anti-tumor and immunomodulatory actions of pioglitazone. *J Immunotoxicol* 12:308-316, 2015.

Kaplan BL, Li J, LaPres JJ, Pruett SB, and Karmaus PW. Contributions of nonhematopoietic cells and mediators to immune responses: implications for immunotoxicology. *Toxicol Sci* 145:214-32, 2015.

Krutz NL, Hennen J, Korb C, Schellenberger MT, Gerberick GF, and Blömeke B. Activation of the endoperoxide ascaridole modulates its sensitizing capacity. *Toxicol Sci* doi: 10.1093/toxsci/kfv148, 2015.

General Immunotoxicology Continued:

Lim JH, Won JH, Ahn KH, Back MJ, Fu Z, Jang JM, Ha HC, Jang YJ and Kim DK. Paraquat reduces natural killer cell activity via metallothionein induction. *J Immunotoxicol* 12:342-349, 2015.

Maatoft-Udsen K, Greineisen WE, Aldan JT, Magaoay H, Ligohr C, Shimoda LMN, Sung C and Turner H. Comparative analysis of lipotoxicity induced by endocrine, pharmacological, and innate immune stimuli in rat basophilic leukemia cells. *J Immunotoxicol* 12:385-394, 2015.

Mak A and Uetrecht. Immunization with amodiaquine-modified hepatic proteins prevents amodiaquine-induced liver injury. *J Immunotoxicol* 12:361-367, 2015.

Winans B, Nagari A, Chae M, Post CM, Ko CI, Puga A, Kraus WL, and Lawrence BP. Linking the aryl hydrocarbon receptor with altered DNA methylation patterns and developmentally induced aberrant antiviral CD8⁺ T cell responses. *J Immunol* 194:4446-4457, 2015.

Methods/Models

Ahmed SS, Wang XN, Fielding M, Kerry A, Dickinson I, Munuswamy R, Kimber I, and Dickinson AM. An in vitro human skin test for assessing sensitization potential. *J Appl Toxicol* doi: 10.1002/jat.3197, 2015.

Corti D, Galbiati V, Gatti N, Marinovich M, Galli CL, and Corsini E. Optimization of the THP-1 activation assay to detect pharmaceuticals with potential to cause immune mediated drug reactions. *Toxicol In Vitro* 29:1339-1349, 2015.

Parker GA, Picut CA, Swanson C, and Toot JD. Histologic features of postnatal development of immune system organs in the Sprague-Dawley rat. *Toxicol Pathol* 43:794-815, 2015.

Thorn M, Hudson AW, Kreeger J, Kawabe TT, Bowman CJ and Collinge M. Evaluation of a novel delayed-type hypersensitivity assay to *Candida albicans* in adult and neonatal rats. *J Immunotoxicol* 12:350-360, 2015.

Zhu X, Cole SH, Kawabata TT, and Whritenour J. Characterization of the draining lymph node response in the mouse drug allergy model: A model for drug hypersensitivity reactions. *J Immunotoxicol* 12:376-384, 2015.

Zimecki M, Artym J, Kocieba M, Obminska-Mrukowicz B, Maczynski M, and Ryng S. Immune function in cyclophosphamide-treated mice is restored by the T-cell-tropic isoxazole derivative R-13. *J Immunotoxicol* 12: 322-329, 2015.

Reviews/Books/Commentaries

Burden N, Mahony C, Müller BP, Terry C, Westmoreland C, and Kimber I. Aligning the 3Rs with new paradigms in the safety assessment of chemicals. *Toxicology* 330:62-66, 2015.

Reviews/Books/Commentaries Continued

Burden N, Sewell F, Andersen ME, Boobis A, Chipman JK, Cronin MT, Hutchinson TH, Kimber I, and Whelan M. Adverse Outcome Pathways can drive non-animal approaches for safety assessment. *J Appl Toxicol* 35:971-975, 2015.

Cochrane SA, Arts JH, Ehnes C, Hindle S, Hollnagel HM, Poole A, Suto H, and Kimber I. Thresholds in chemical respiratory sensitisation. *Toxicology* 333:179-94, 2015.

Coico R and Sunshine G. *Immunology: A short course*. 7th Ed. Wiley Blackwell, 2015.

Goodson WH 3rd, et al.. Assessing the carcinogenic potential of low-dose exposures to chemical mixtures in the environment: the challenge ahead. *Carcinogenesis* 36 Suppl 1:S254-96, 2015.

Kaplan BLF, Li J, LaPres JJ, Pruett SB and Karmaus PWF. Contributions of nonhematopoietic cells and mediators to immune responses: Implications for immunotoxicology. *Toxicol Sci* 145:214-232, 2015.

Kravchenko J, Corsini E, Williams MA, Decker W, Manjili MH, Otsuki T, Singh N, Al-Mulla F, Al-Temaimi R, Amedei A, Colacci AM, Vaccari M, Mondello C, Scovassi AI, Raju J, Hamid RA, Memeo L, Forte S, Roy R, Woodrick J, Salem HK, Ryan EP, Brown DG, Bisson WH, Lowe L, and Lyerly HK. Chemical compounds from anthropogenic environment and immune evasion mechanisms: potential interactions. *Carcinogenesis* 36 Suppl 1:S111-27, 2015.

Sanchez Rodriguez LH, Florez-Vargas O, Rodriguez-Villamizar LA, Vargas Fiallo Y, Stashenko EE and Ramirez G. Lack of autoantibody induction by mercury exposure in artisanal gold mine settings in Colombia: Findings and a review of the epidemiology literature. *J Immunotoxicol* 12:368-375, 2015.

Verhoeckx KC, Vissers YM, Baumert JL, Faludi R, Feys M, Flanagan S, Herouet-Guicheney C, Holzhauser T, Shimojo R, van der Bolt N, Wichers H, and Kimber I. Food processing and allergenicity. *Food Chem Toxicol* 80:223-40, 2015.

SAVE THE DATE!

SAVE THE DATE!



Abstract Submission: October 7, 2015
Award Nominations: October 9, 2015