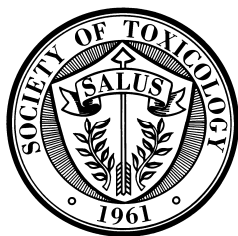


# Immunotoxicology Specialty Section Newsletter



2012 - 2013

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Dr. Teri Alyn Girtsman

### Student Representative

Kinta Serve

The *ImTox SS Newsletter* is published 3 times/year (Summer, Fall, and Winter). If you would like to share a book review, meeting report, interesting web site or any other item of interest with members of the Specialty Section, please send it to us by the middle of the month preceding the planned publication date. All comments on, or suggestions for, the newsletter are welcome.

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## Outgoing President's Message

**Rodney Dietert, PhD**



*Dr. Rodney Dietert,  
PhD  
President, ImTox SS  
(2011-2012)*

In my incoming message as President last spring, I recognized and expressed appreciation for our recent benchmark celebrations: the recent 25th Anniversary of our SS and the 50th Anniversary of SOT. The path we have taken thus far was wonderfully summarized in a review of the history of immunotoxicology by Robert House and MaryJane Selgrade published in *Toxicological Sciences*. That review detailed the accomplishments of immunotoxicologists including so many of our SS members. It placed a marker and a way station in the road that allows us to see our progress to date, even as we must now choose among multiple paths, multiple possibilities for the way ahead.

Rather than identifying goals with a strickly 12-month view for the SS and Executive Committee for 2011-2012, I laid out longer-term priorities that I believed would help to place us in the forefront of toxicology organizations and prepare our future generations of immunotoxicologists. The key was asking the question: what do we want to accomplish by (or even before) our 50th SS anniversary?

The four priority goals were: Feeding the Leadership Pipeline, Reaching New Audiences, Global Interconnectivity, and Training Future Immunotoxicologists.

I want to emphasize that while our SS committees were in place and functioning to support progress on these priorities (e.g., the Regional Meeting Committee which is now the Extending Immunotoxicology -Regional Meeting Committee) much of what actually happened would not have occurred but for the grassroots activities of our members. This past year in particular, our members seized openings in many different areas of programming that are

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increasing the visibility and impact of immunotoxicology. This programming will pay dividends for our area in future years. It is so important for our SS members to continue to watch for these opportunities to arise even as they move their individual careers forward.

Here are just a few examples of how our immunotoxicology landscape is shifting.

### **Feeding the Leadership Pipeline:**

The present year our SS had Judy Zelikoff as Secretary of the SOT and Dori Germolec as a Councilor.

The new election brought Norb Kaminski in as the SOT Vice President Elect. On the heels of Michael Holsapple's Presidency, we will soon have another SS member as SOT President. Congratulations Norb.

Outside of SOT, several of our members have moved up in corporate and/or institutional positions and responsibilities further emphasizing the need for earlier career immunotoxicologists to take their place. Examples are Leigh Ann Burns-Naas' appointment as Vice President at Gilead Science and Scott Burchiel assuming the role as Editor of TAAP. Immunotoxicologists are taking on higher levels of responsibility and overall impact

**Reaching New Audiences** - Spearheaded largely through SS members at the NIEHS and/or via the efforts of our members involved with the EPA, the WHO, HESI, other national institutes, and academic partners, several events have or will soon occur that are shifting scientific and public perceptions regarding immunotoxicology.

- The NIH elevated the priority of inflammation as the root of chronic diseases via a recent educational program delivered throughout the institutes to all grant panel managers and internal scientists.
- The WHO published its monograph titled "Guidance for Immunotoxicity Risk Assessment for Chemicals" that lays out a broader view of immunotoxicology when it comes to risk assessment. These results were summarized in a CEC at the most recent SOT meeting and will be presented at an upcoming EUTOX meeting.
- HESI established a new initiative around the science of adjuvants and potential risk of autoimmunity.
- The EPA found that safety limits can be driven by developmental immunotoxicity for trichloroethylene in a newly released IRIS of TCE document that was just published.
- The NIEHS paved the way for a special immunotoxicology program involving our SS members at the annual meeting of the American Association of Immunologists.
- The Teratology Society is including a special session on risks for the developing immune system at its upcoming meeting.
- The NIEHS presented a program on environment, inflammatory dysfunction and chronic diseases for it research and educational partners in the PEHP program.
- The publisher, Springer, is set to publish a similarly-themed book along the lines of the NIEHS programming.
- The European Teratology Society presented a session on early-life immunotoxicity and risk of asthma.

### **Global Interconnectivity:**

The heart and soul of our global connectivity effort is our programming partnership with the Japanese Society of Immunotoxicology(JSIT). The past year we were successful in SOT's Global Initiatives Program and, with those funds in conjunction with support from the Journal of Immunotoxicology and InformaHealthcare, we were able to exchange representatives with JSIT for programming in Japan and the U.S. Greg Ladics presented two lectures at the annual conference of the JSIT and Dr. Reiko Teshima of the Division of Novel Foods and Immunochemistry, the National Institute of Health Sciences of Japan co-chaired an immunotoxicology session at our most recent SOT meeting in San Francisco. Continuation, if not expansion, of these types of international joint programming in immunotoxicology will be important for our future global perspective and impact.

### **Training Future Immunotoxicologists:**

Training future immunotoxicologists is linked with the health of our research and educational programs. This in turn relies on funding from both public and private sources. Recent programming at the NIH and other federal agencies has increased the visibility of the linkage between immunotoxicology and human health. It is this increased appreciation of the impact of immunotoxicology among our peers, particularly those on grant and other evaluation panels, that affects our training capabilities. I suspect this will be an area requiring ongoing attention to ensure we are bringing forward the next generation of immunotoxicologists.

I want to thank the Executive Committee, our Committee Chairs, our volunteer committee members and additional specialty section members for your support and for the outstanding progress that was made this past year. It has been a wonderful opportunity and tremendous honor to serve as the 2011-2012 Immunotoxicology Specialty Section President. Thank you so much for this privilege. I look forward to continued service in the role of Past President on the Executive Committee and to the upcoming year with Greg Ladics as our SS President. Let's all work to make SOT in San Antonio the best yet.

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## Incoming President's Message

*Submitted by: Greg Ladics, Ph.D., President ImTox SS 2012-2013*

I bid greetings to all my fellow members of the Immunotoxicology Specialty Section (ImToxSS). Thinking back, it has been over 23 years since I attended my first SOT Meeting and ImToxSS reception in Atlanta, GA. Wow- I guess this means I am 'slowly' becoming one of those "silverbacks" as affectionately referred to by Robert House. It has been quite the fun ride through graduate school at Virginia Commonwealth University/Medical College of Virginia and an ongoing 21 year career at DuPont. So many members of our Specialty Section have helped shape my career, in particular Al Munson, Kimber White, Tom Kawabata, and Scott Loveless. Looking forward, I was pleased to see such a large number of students and postdocs at our ImToxSS reception in San Francisco this year. They represent the future of Immunotoxicology and our specialty section.



*Dr. Greg Ladics, PhD  
President, ImTox SS  
(2012-2013)*

I would like to express thanks to Dr. Rod Dietert for his leadership as ImToxSS President this past year. Rod, sorry you were unable to attend the specialty section meeting in San Francisco. You were dearly missed! I would also like to thank the executive committee officers, committee chairs and committee members for their time and effort in helping our specialty section. Congratulations to our incoming ImToxSS officers Danuta

Herzyk (VP-Elect) and Peyton Meyers (Junior Councilor). Additionally, Norb Kaminski Vice-President Elect of SOT; Judy Zelikoff, the 2012 Vos Award recipient; Barbara Kaplan the 2012 Young Investigator Award winner and all of the student and post doctoral presentation award recipients deserve our congratulations. I would also like to recognize our specialty section members and Gary Burleson and the Program Committee for coming up with no less than 20 proposals (5 symposia, 6 workshops, 5 roundtables, 2 informational sessions, and 2 CE courses) for consideration for the 2013 meeting. This should again provide maximum exposure for the ImToxSS at next years' meeting in San Antonio. Gary, what's your secret? Please pass it on to Danuta!

As you may recall, one of the previous goals of our specialty section involved continuing to follow up on the toxicology study section and immunotoxicology grant review issues. This entailed the formation of an ad hoc IRG subcommittee of our specialty section. Earlier this year, an expert Working Group met at NIH in Bethesda to advise the Center for Scientific Review on how to proceed with the review of grant applications in the fields of Environmental Health and Toxicology. The Working Group agreed on a recommendation to reconstitute the Special Emphasis Panel called Systemic Injury from Environmental Exposure as a chartered Study Section in the DKUS IRG and to meet for 1 to 3 review cycles, before moving on to request permanent chartered status. This is indeed good news and may not have come to fruition were it not for members of our specialty section pushing this issue to the forefront.

In thinking about goals for our specialty section in the coming year, two priorities come to mind. The first (Goal 1) is around improving the financial status of our specialty section. Goal 2 is to continue to explore ways of getting more visibility for immunotoxicology scientists. One idea is to put a proposal forward for an SOT Contemporary Concepts in Toxicology (CCT) meeting around immunotoxicology. CCT meetings are one- to two-day focused, open registration, scientific meetings in contemporary and rapidly progressing areas of toxicological sciences. As you may be aware, SOT will underwrite all the liabilities of the CCT meeting with the expectation that the meeting will at least break even financially. SOT will provide \$25,000 in seed funds. Once the meeting breaks even, there is the opportunity for profit sharing of the additional revenue with our specialty section which could help with Goal 1. CCT proposal details are available at [www.toxicology.org/ai/meet](http://www.toxicology.org/ai/meet). I will be forming small but diverse ad hoc committees to work on both of these goals in 2012. If you are interested in working on one or both, please send me a note at [Gregory.s.ladics@usa.dupont.com](mailto:Gregory.s.ladics@usa.dupont.com).

I look forward to working with our executive and other committees this coming year and to seeing everyone in San Antonio!

*Gregory S. Ladics, Ph.D., DABT, ATS*  
*President, Immunotoxicology Specialty Section*  
*2012-2013*

## Student & Postdoctoral Report



*Submitted by:*

*Teri Girtsman, Postdoctoral Representative*

Hello to all student and postdoctoral members of the ImTox SS! I hope you are having a great spring and are generating brilliant data!

I would like to welcome Kinta Serve from Idaho State University to the ImTox SS executive committee. Kinta has agreed to serve as the graduate student representative for the upcoming term. Please feel free to contact Kinta [servkint@isu.edu](mailto:servkint@isu.edu) or myself

[teri.girtsman@mso.umt.edu](mailto:teri.girtsman@mso.umt.edu) if you would like to participate in organizing ImTox SS events or for any questions relating to the ImTox SS.

A plug for postdocs and students to check out the SOT web site for award opportunities for students and postdocs at <http://www.toxicology.org/ISOT/SS/imtox/deadlines.asp> for all of the latest information related to ImTox SS.

I would like to thank the students who toughed out the rain to attend the ImTox SS Postdoc/Student mixer at Thirsty Bear Brewing Company during the 51st Annual Meeting in March at San Francisco. We had a great time relaxing and enjoying a cold

beverage or two- although attendance was limited due to the soggy weather (got to love San Francisco!).

As always, I would like to thank you for this opportunity to serve you. Please let me know about any concerns or suggestions you may have on how the ImTox SS can best assist you as immunotoxicology students and postdoctoral fellows! I look forward to hearing from you! Have a great summer!!

*Postdoctoral Representative,  
Teri Alyn Girtsman Ph.D.*

See you in  
San Antonio 2013!

IMMUNOTOXICOLOGY  
SPECIALTY SECTION



# Immunotoxicology Specialty Section

## Committee Lists: 2012-2013

### Communications Committee

Haley Neff-LaFord (Co-chair)  
[hnlaford@seagen.com](mailto:hnlaford@seagen.com)  
Ashwini Phadnis (Co-chair)  
[phadnisa@msu.edu](mailto:phadnisa@msu.edu)  
Jamie Dewitt  
Thitirat Ngaotepprutaram  
Cheryl Rockwell  
Tom Simones

### ImTox Regional Meeting Committee

Leigh Ann Burns Naas (Chair)  
[leighann.burns@pfizer.com](mailto:leighann.burns@pfizer.com)  
Rodney Dietert  
Susan McKarns  
Kathy Rodgers  
Lorraine Twerdok  
Judy Zelikoff

### Education Committee

Judy Zelikoff (Chair)  
[judith.zelikoff@nyumc.org](mailto:judith.zelikoff@nyumc.org)  
Thitirat Ngaotepprutaram

### Awards Committee

Jean Pfau (Chair)  
[pfaujean@isu.edu](mailto:pfaujean@isu.edu)  
Xiaomia Deng  
Teri Girtsman  
Vic Johnson  
M. Firoze Khan  
Jean Regal  
Cheryl Rockwell  
Narendra Singh  
Berran Yucesoy

### Regulatory Committee

Peter Thomas (Chair)  
[peter.thomas@covance.com](mailto:peter.thomas@covance.com)  
Joshua Arrington  
Tony Arulanadam  
Lorraine Twerdok

### Membership Committee

George DeGeorge (Chair)  
[degeorge@mbresearch.com](mailto:degeorge@mbresearch.com)  
Mitch Cohen

### Program Committee

Danuta Herzyk (Chair)  
[danuta\\_herzyk@merck.com](mailto:danuta_herzyk@merck.com)  
Joshua Arrington  
Tony Arulanandam  
Weimin Chen  
Vic Johnson  
Peer Karmaus  
M. Firoze Khan  
Peyton Myers  
Thitirat Ngaotepprutaram  
Narendra Singh  
Jim Weaver  
Berran Yucesoy

If you would like to join a committee, there are still places on the Regulatory, Communications, Education and Awards Committees. Please contact the ImTox SS Secretary-Treasurer or the Chairperson of the committee(s) if you are interested in joining.

Immunotoxicology Specialty Section Awards  
Presented at SOT Annual Meeting, March 2012  
San Francisco, CA



*Submitted by: Kazuchi Nakamura*

It was a really exciting but difficult job to select the award winners because all of submitted papers were excellent. This year's winners are as follows.

**Vos Award Career Achievement in Immunotoxicology**

Judith T. Zelikoff, PhD

**Best Paper 2011** Narendra P. Singh, Udai P. Singh, Balwan Singh, Robert L. Price, Mitzi Nagarkatti, Prakash S. Nagarkatti. Activation of Aryl Hydrocarbon Receptor (AhR) Leads to Reciprocal Epigenetic Regulation of FoxP3 and IL-17 Expression and Amelioration of Experimental Colitis. PLoS ONE, 2011, 6(8):1-13

**Outstanding Young Investigator Award**

Barbara L.F. Kaplan, PhD

**HESI Travel Award**

David J. Blake, PhD

**Best Presentation by a Postdoctoral Fellow**

David Adenuga, PhD

'Immunological Aspects of an Animal Model of Amodiaquine-Induced Liver Toxicity'

**Best Presentation by a Student – 1st Place**

Ana-Cristina Dragomir

"Regulation of Classical and Alternative Macrophage Activation by Galectin-3 Following Acetaminophen Intoxication"

**Best Presentation by a Student – 2nd Place**

Ashwini S. Phadnis

"Suppression of activation and altered BCL-6 regulation by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) in human primary B cells"

*CONGRATULATIONS* to all the winners! I thankfully learned many new aspects and trends of immunotoxicology studies during the selection. This year most of nominees are from academia. I would like to encourage submissions from people working for companies next year as well.

Reviewing all of the submissions was done by dedicated works of Berran Yucesoy, Michelle J. Horner, Haitian Lu, Narendra P. Singh (not participating in selecting the Best Paper of the Year Award), Jean C. Pfau (Junior Councilor.). Please extend your warm gratitude for their contribution.

I have served as a Junior and Senior Councilor of the Immunotoxicology Specialty Section for two years in total. I appreciate your generous acceptance and tolerance. Especially, I would like to thank Dr. Leigh Ann Burns-Naas and Dr. Rodney Dietert for their support and patience.

Finally, please let me take this opportunity to wish you all of the very best.

# Immunotoxicology Specialty Section Awards Winners - 2012



Vos Award - Career Achievement in Immunotoxicology Winner: Judith T. Zelikoff, PhD



Best Paper of the Year Award Winner: Narendra P. Singh, Udai P. Singh, Balwan Singh, Robert L. Price, Mitzi Nagarkatti, Prakash S. Nagarkatti. Activation of Aryl Hydrocarbon Receptor (AhR) Leads to Reciprocal Epigenetic Regulation of FoxP3 and IL-17 Expression and Amelioration of Experimental Colitis. PLoS ONE, 2011, 6(8):1-13

HESI Immunotoxicology Young Investigator Travel Award Winner: David J. Blake, PhD



# Immunotoxicology Specialty Section Awards Winners - 2012



1st Place Student Presentation  
Award Winner: Ana-Cristina  
Dragomir



2nd Place Student Presentation  
Award Winner: Ashwini S.  
Phadnis

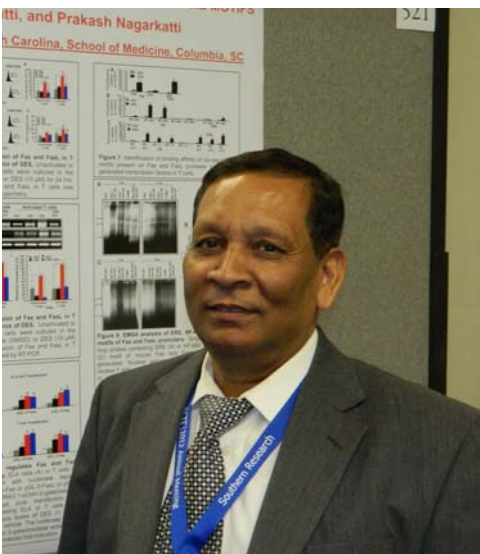
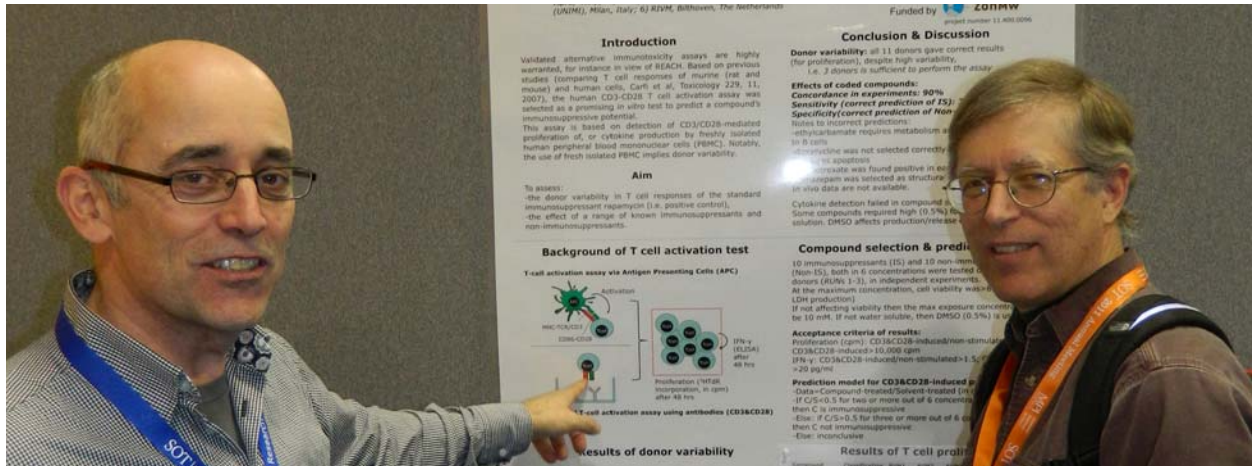
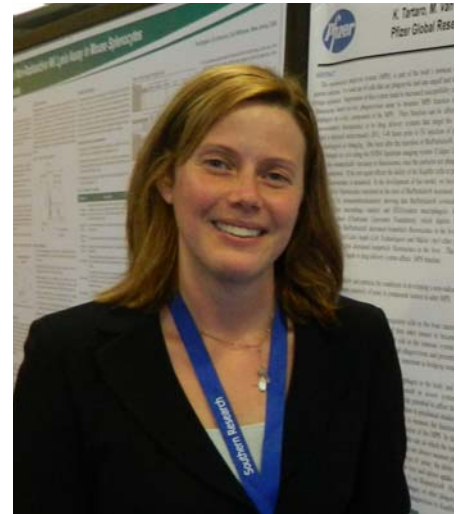


Outstanding Young  
Investigator Award Winner:  
Barbara L.F. Kaplan, PhD



Best Presentation by a  
Postdoctoral Trainee Winner:  
David Adenua, PhD

# Immunotoxicology Specialty Section - 2012



## ImTox Business Meeting - 2012



## ImTox Business Meeting - 2012



Compiled by Haley Neff-LaFord.

Anytime you have a new fully published or electronically-available article to report, please send it to the coordinator, Haley Neff-LaFord: [hnlaford@seagen.com](mailto:hnlaford@seagen.com)

### Asthma, Allergy, Autoimmunity & Hypersensitivity

Adenuga D, Woolhiser MR, Gollapudi BB and Boverhof DR. Differential gene expression responses distinguish contact and respiratory sensitizers and nonsensitizing irritants in the local lymph node assay. *Toxicol Sci* 126, 413-425, 2012.

Anderson SE, Tapp L, Durgam S, Meade BJ, Jackson LG and Cohen DE. The identification of a sensitizing component used in the manufacturing of an ink ribbon. *J Immunotoxicol* 9:193-200, 2012.

Kimber I, Maxwell G, Gilmour N, Dearman RJ, Friedmann PS and Martin SF. Allergic contact dermatitis: a commentary on the relationship between T lymphocytes and skin sensitising potency. *Toxicology* 291:18-24, 2012.

Patil SD, Patel MR, Patel SR and Surana SJ. *Amaranthus spinosus* Linn. inhibits mast cell-mediated anaphylactic reactions. *J Immunotoxicology* 9:77-84, 2012.

Peiser M, Tralau T, Heidler J, Api AM, Arts JHE, Basketter DA, English J, Diepgen TL, Fuhlbrigge RC, Gaspari AA, Johansen JD, Karlberg AT, Kimber I, Lepoittevin JP, Liebsch M, Maibach HI, Martin SF, Merk HF, Platzek T, Rustemeyer T, Schnuch A, Vandebriel RJ, White IR and Luch A. Allergic contact dermatitis: epidemiology, molecular mechanisms, in vitro methods and regulatory aspects. *Cell Mol Life Sci* 69:763-781, 2012.

Roberts DW, Basketter D, Kimber I, White J, McFadden J and White IR. Sodium metabisulfite as a contact allergen – an example of a rare chemical mechanism for protein modification. *Contact Derm* 66:123-127, 2012.

### Developmental Immunotoxicology

Hanson ML, Holaskova I, Elliott M, Brundage KM, Schafer R and Barnett JB. Prenatal cadmium exposure alters postnatal immune cell development and function. *Toxicol Appl Pharmacol* 261:196-203, 2012.

Holladay SD, Mustafa A and Gogal RM Jr. Prenatal TCDD in mice increases adult autoimmunity. *Reprod Toxicol* 92:82-94, 2011.

Mustafa A, Holladay SD, Witonsky S, Kerr R, Reilly C, Zimmerman K, Manari A, Countermarsh S and Gogal RM Jr. Prenatal TCDD causes persistent modulation of the postnatal immune response, and exacerbates inflammatory disease, in 36-week-old lupus-like autoimmune SNF1 mice. *Birth Defects Res B Dev Reprod Toxicol* 92:82-94, 2011.

Mustafa A, Holladay SD, Witonsky S, Reilly C, Sponenberg DP and Gogal RM Jr. A single mid-gestation exposure of C57BL/6 mice to TCDD causes permanent postnatal shifts toward an autoreactive immune phenotype. *Toxicology* 290:157-169, 2011.

Schaalan MF, Abdelraouf SM, Mohamed WA and Hassanein FS. Correlation between maternal milk and infant serum levels of chlorinated pesticides (CP) and the impact of elevated CP on bleeding tendency and immune status in some infants in Egypt. *J Immunotoxicol* 9:15-24, 2012.

Tonk ECM, Verhoef A, De La Fonteyne LJJ, Waalkens-Berendsen IDH, Wolterbeek APM, Van Loveren H and Piersma AH. Developmental immunotoxicity in male rats after juvenile exposure to di-n-octyltin dichloride (DOTC). *Reprod Toxicol* 32:341-348, 2011.

Ul Hassan Z, Khan MZ, Khan A, Javed I and Noreen M. In vivo and ex vivo phagocytic potential of macrophages from progeny of breeder hens kept on ochratoxin A (OTA)-contaminated diet. *J Immunotoxicol* 9:64-71, 2012.

### Effects: Compounds

Antonini JM, Zeidler-Erdely PC, Young SH, Roberts JR and Erdely A. Systemic immune cell response in rats after pulmonary exposure to manganese-containing particles collected from welding aerosols. *J Immunotoxicol* 9:184-192, 2012.

Dar SA, Das S, Ramachandran VG, Bhattacharya SN, Mustafa MD, Banerjee BD and Verma P. Alterations in T-lymphocyte sub-set profiles and cytokine secretion by PBMC of systemic lupus erythematosus patients upon *in vitro* exposure to organochlorine pesticides. *J Immunotoxicol* 9:85-95, 2012.

Dhir V, Fort M, Mahmood A, Higbee R, Warren W, Narayanan P and Wittman V. A predictive biomimetic model of cytokine release induced by TGN1412 and other therapeutic monoclonal antibodies. *J Immunotoxicol* 9:34-42, 2012.

Fair PA, Stavros HC, Mollenhauer MAM, DeWitt JC, Henry N, Kannan K, Yun SH, Bossart GD, Keil DE and Peden-Adams MM. Immune function in female B<sub>6</sub>C<sub>3</sub>F<sub>1</sub> mice is modulated by DE-71, a commercial polybrominated diphenyl ether mixture. *J Immunotoxicol* 9:96-107, 2012.

Khan S, Vala JA, Nabi SU, Gupta G, Kumar D, Telang AG and Malik JK. Protective effect of curcumin against arsenic-induced apoptosis in murine splenocytes *in vitro*. *J Immunotoxicol* 9:148-159, 2012.

Li B, Niu Y, Liu S, Yu W, Chen J, Wu L, Liu W, Chen S, Yang L and Li Y. A change in CD3 $\gamma$ , CD3 $\delta$ , CD3 $\epsilon$ , and CD3 $\zeta$  gene expression in T-lymphocytes from benzene-exposed and benzene-poisoned workers. *J Immunotoxicol* 9:160-167, 2012.

Nakamura R, Inoue K, Fujitani Y, Kiyono M, Hirano S and Takano H. Effects of nanoparticle-rich diesel exhaust particles on IL-17 production *in vitro*. *J Immunotoxicol* 9:72-76, 2012.

Osman A and Van Loveren H. Phosphoproteomic analysis of mouse thymoma cells treated with tributyltin oxide: TBTO affects proliferation and energy sensing pathways. *Toxicol Sci* 126:84-100, 2012.

Rafferty P, Egenolf D, Brosnan K, Makropoulos D, Jordan J, Meshaw K, Walker M, Volk A and Bugelski P. Immunotoxicologic effects of cyclosporine on tumor progression in models of squamous cell carcinoma and B-cell lymphoma in C3H mice. *J Immunotoxicol* 9:43-55, 2012.

Rasmussen DL and Pfau JC. Asbestos activates CH12.LX B-lymphocytes via macrophage signaling. *J Immunotoxicol* 9:129-140, 2012.

Salazar KD, Copeland CB and Luebke RW. Effects of Libby amphibole asbestos exposure on two models of arthritis in the Lewis rat. *J Toxicol Environ Health A* 75:351-365, 2012.

Schaalan MF. Effects of pioglitazone and/or simvastatin on circulating TNF $\alpha$  and adiponectin levels in insulin resistance. *J Immunotoxicol* 9:201-209, 2012.

Ul Hassan Z, Khan MZ, Saleemi MK, Khan A, Javed I and Noreen M. Immunological responses of male White Leghorn chicks kept on ochratoxin A (OTA)-contaminated feed. *J Immunotoxicol* 9:56-63, 2012.

### General Immunotoxicology

Ali SK, Ali HYM and Jubrael JMS. Concentration levels of IL-10 and TNF $\alpha$  cytokines in patients with human papilloma virus (HPV) DNA+ and DNA- cervical lesions. *J Immunotoxicol* 9:168-172, 2012.

Lebrec H, O'Lone R, Freebern W, Komocsar W and Moore P. Survey: Immune function and immunotoxicity assessment in dogs. *J Immunotoxicol* 9:1-14, 2012.

Pucca MB, Zoccal KF, Roncolato EC, Bertolini TB, Campos LB, Cologna CT, Faccioli LH, Arantes EC and Barbosa JE. Serrumab: A human monoclonal antibody that counters the biochemical and immunological effects of *Tityus serrulatus* venom. *J Immunotoxicol* 9:173-183, 2012.

Shaw FL, Kimber I, Begum R, Cumberbatch M, Dearman RJ and Griffiths CEM. No impairment of monocyte-derived Langerhans cell phenotype or function in early-onset psoriasis. *Clin Exp Dermatol* 37:40-47, 2011.

Siveen KS and Kuttan G. Effect of *Aerva lanata* on cell-mediated immune responses and cytotoxic T-lymphocyte generation in normal and tumor-bearing mice. *J Immunotoxicol* 9:25-33, 2012.

Van Loveren H, Sanz Y and Salminen S. Health Claims in Europe: Probiotics and Prebiotics as Case Examples. *Ann Rev Food Sci Technol* 23:1-15, 2012.

### Methods

White KL Jr., McLoughlin CE, Auttachoat W and Smith MJ. Validation of the *Candida albicans* delayed-type hypersensitivity (DTH) model in the female B6C3F1 mouse for use in immunotoxicological investigations. *J Immunotoxicol* 9:141-147, 2012.

### Reviews/Workshops/Editorials

Basketter DA, Clewell H, Kimber I, Rossi A, Blaauboer B, Burrier R, Daneshian M, Eskes C, Goldberg A, Hasiwa N, Hoffmann S, Jaworska J, Knudsen TB, Landsiedel R, Leist M, Locke P, Maxwell G, McKim J, McVey EA, Ouedraogo G, Patelwicz G, Pelkonen O, Roggen E, Rovida C, Ruhdel I, Schwarz M, Schepky A, Schoeters G, Skinner N, Trentz K, Turner M, Vanparys P, Yager J, Zurlo J and Hartung T. A roadmap for the development of alternative (non-animal) methods for systemic toxicity testing. *ALTEX* 29:3-91, 2012.

Collinge M, Burns-Naas LA, Chellman GJ, Kawabata TT, Komocsar WJ, Piccotti JR, Shenton J and Wierda D. Developmental immunotoxicity (DIT) testing of pharmaceuticals: Current practices, state of the science, knowledge gaps, and recommendations. *J Immunotoxicol* 9:210-230.

Hrubec TC, Prater MR, Mallela MK, Gogal RM Jr, Guo TL and Holladay SD. Diverse ability of maternal immune stimulation to reduce birth defects in mice exposed to teratogens: A review. *Journal for Developmental Origins of Health and Disease*. Epub Nov. 2011.

## Recent Immunotoxicology Publications

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