Immunotoxicology Specialty Section Newsletter

President's Message

Dr. Rodney R. Dietert
President, ImTox SS
2011-2012

I hope that everyone has had a restful summer with plenty of opportunity to recharge the batteries and set sail toward a useful and productive fall, winter and spring. During the next few months of 2011, it is a time for us to focus on several upcoming activities and opportunities: 1) to make final modifications to the program for the upcoming San Francisco SOT meeting and to submit abstracts, 2) to nominate our worthy colleagues, postdoctoral fellows and students for awards and leadership posts both at the level of the ImTox Specialty Section as well as for national SOT recognition, 3) to begin the initial planning of symposia, workshops, roundtables, informational sessions and continuing education courses for the 2013 SOT meeting in my hometown of San Antonio, and 4) to be prepared to renew your SS membership in early December 2011. I would emphasize that timely membership renewal helps the SS plan potential upcoming activities within the budget.

For the upcoming programs, it is important for 2012 presenters to continue working with your chairpersons and Greg Ladics as the San Francisco sponsored events take final form. Additionally, it is not too soon to begin to put together potential program proposals for San Antonio. Gary Burleson is the program committee chair and each program committee member is expected to either directly submit or to shepherd forward a suggested 2013 program proposal. Given the fact that program submissions from across the specialty sections have increased in number and have gotten quite competitive in recent years, there are three suggestions I can offer: 1) programs should support the annual SOT-specified themes whenever possible *[the 2013 themes should be available by October 1]*, 2) they should reflect programming that, while centered in immunotoxicology, is far reaching in impact and would be likely to attract interest beyond our own specialty section, and 3) for nomination they should be sufficiently justified and detailed in all aspects as to provide a competitive advantage.

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2011-2012 Executive Committee

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The ImTox SS Newsletter is published three times/year (May, September and January). If you would like to share a book review, meeting report, interesting website or any other item of interest, 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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In my incoming message found in the May newsletter, I had outlined several long term goals for the SS that I thought would propel us off of the benchmark of the recent memorable 25th anniversary of ImTox SS and on a path toward a most satisfying 50th anniversary. Of course at the time I defined those goals, I had suspected that tangible progress on such long-term goals could well be a postmortem calculation. Any reporting of progress during my term would consist mainly of blank pages and cold sweat. But for several of these long-term goals there are current examples of the type of opportunities that I believe we can seize to position immunotoxicity (and those who practice it) in general and our SS specifically in an ideal future scientific position. Below are examples that have come to my recent attention. I hope that you will send me additional examples in the coming months to be shared in our next newsletter.

Reaching New Audiences and Training Future Immunotoxicologists – In May, I stressed the importance of informing new audiences to the real impact of effective immunotoxicology research, education and application. With an expanded appreciation among a broader audience for the role of immunotoxicology in the protection of human and animal health would come increased support for the immunotoxicology research community and the training of our future immunotoxicologists. I stressed the linkage between environmental insult, immune dysfunction and shifting prevalences of human diseases as a cornerstone for achieving this broader appreciation of the efforts of our SS members. This foundation stone would need to be translated to better opportunities for grant funding for our researchers along with stronger institutional positioning for our members in academia, industry and government. In fact, through the effort of our members there are mini-breakthroughs on the horizon that represent steps in right direction. These listed below can serve as prototypes:

NIH - In one example, several of our members and their colleagues have helped to put forward a timely 2011 program for the Staff Training in Extramural Programs (STEP) of NIH. A tentative title for an upcoming program is: "Inflammation: The Root and Route of Chronic Diseases?" Because STEP programs are designed as internal training programs for all NIH program officers and their staff, this is an opportunity to bring the latest immunotoxicology-related information to a cross-section of NIH program officers. These types of openings can be helpful.

FDA – This past May the FDA offered an internal seminar program on juvenile toxicity for their evaluators that included a segment on immunotoxicology. As in the case with the upcoming NIH STEP program, these internal agency forums provide a useful opportunity to provide a context regarding the significance and utility of immunotoxicology in the protection of human health.

WHO - Additionally, the World Health Organization is nearing completion of its report titled "*Guidance for Immunotoxicity Risk Assessment for Chemicals*." While the report is not yet finalized, it is already clear that the landscape considered under immunotoxicology and, in particular, the health impacts of immunotoxicity will be significantly broader than was emphasized in the earliest days of our scientific area. This major treatise will certainly help to define how immunotoxicology is viewed outside our SS and beyond SOT as we move forward in the future.

EPA - In other examples, immunotoxicology has been a critical determining factor in the recent IRIS evaluations such as with trichloroethylene. The increasing importance of collection and evaluation of immunotoxicity data are resulting in a larger representation of our SS members on various agency panels. In fact, it is relatively rare that a panel is constituted without significant immunotoxicological expertise.

HESI – The Health and Environmental Sciences Institute has been very active on topics of importance to immunotoxicology of late. These efforts help to demonstrate the relative importance of immunotoxicology for human and environmental health protection and also facilitate the resolution of pivotal scientific issues that are dependent upon immunotoxicology. Among the issues under current and/or recent consideration by subcommittees are: 1) developmental immunotoxicity testing and 2) adjuvant optimization and safety.

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Other Scientific Organizations - SOT continues to represent the largest conglomeration of immunotoxicologists and the largest programmatic home for immunotoxicology in the U.S. if not the world. This has been a critical factor in the increased recognition and growth of immunotoxicology over recent decades. But it is also refreshing to see topical immunotoxicology-related programming being extended to other scientific societies and their annual meetings. This enables new audiences to become familiar with and to begin to utilize our work. Recent examples of such programming can be found within various pathology and teratology societies. A continued expansion of programming that pertains to other human health related societies and their audiences can be useful for further extending the recognition and impact of our effort. This can directly support our own research funding and training base.

Academia and Fundamental Research – Finally, in the fundamental science research community we appear to be witnessing a broadened appreciation for environmental impact and immune insult as critical pieces of a human health puzzle. At least from my own ivory tower academic perspective, it is the newest generation of immunology and infectious disease researchers who are the most appreciative of immunotoxicology and are finding ways to encompass aspects of this in their research. This broadened inclusion of immunotoxicology across fundamental research is also reflected by the inclusion of immunotoxicology lectures in some of the upcoming Gordon Research Conferences for 2012. Additionally, there is a trend toward less compartmentalization across disciplines that intersect environmental risk factors for health. For example, we are seeing a greater emphasis for nutritional sciences graduate students to obtain a significant exposure to immunotoxicology.

Global Initiatives - The ImTox SS has a commitment to building international partnerships that promote global progress on shared immunotoxicology issues. Our longest standing relationship is with the Japanese Society of Immunotoxicology (JSIT), which has been fostered largely though the efforts of our International Exchange Committee chaired by Mitchell Cohen. This committee deserves mega kudos. I am pleased to announce that our proposal to SOT for joint programming with JSIT for the 2011-12 annual year has been approved by the Global Initiatives Committee of SOT. We have been awarded matching funds in support of our two continent program initiatives with JSIT. Many thanks to SOT for enabling our global efforts to continue particularly in light of the ongoing challenges faced in Japan. We will want to use the present planned events to examine future opportunities to build additional capacity into our global programming.

I look forward to working with our committees this fall as we finalize details for SOT in San Francisco and begin our preliminary plans for bringing immunotoxicology to the Alamo in 2013.

Rodney R. Dietert, Ph.D.
President, Immunotoxicology Specialty Section

Call for Nominations from the Awards Committee

Submitted by: Kazuichi Nakamura

Nothing comes from nothing. No one qualified for an award can be a winner without first being nominated. The Awards Committee encourages you to nominate your colleague(s), including self-nominations, for the various awards presented by the Immunotoxicology Specialty Section. Every year the committee members are challenged to select winners from among the excellent nominees. The members, however, believe 'The keener the competition, the greater the level of immunotoxicology.' Please thrill us with your quality nominations once again!

Vos Award - Career Achievement in Immunotoxicology

An award named for the late Prof. Jeff Vos shall be presented to a Senior Investigator with an outstanding achievement in immunotoxicology. Nominations should be submitted to Rod Dietert by December 30, 2011.

Best paper of the Year Award

This honored award shall go to the authors of the best paper in immunotoxicology published between July 1, 2010 and December 31, 2011. Nominations should be submitted to Kazuichi Nakamura by January 6, 2012.

Outstanding Young Immunotoxicology Award

Fresh and promising young investigator(s) who have had an impact on academic, regulatory or industrial areas of immunotoxicology shall be awarded. Nominations should be submitted to Greg Ladics by January 6, 2012.

Best Presentation by a Postdoctoral Trainee Award

Nominees are asked to submit a complete written version of an immunotoxicology presentation that is to be made at the 2012 SOT Annual Meeting, along with a letter of nomination from the Postdoctoral Trainee's advisor. Nominations should be submitted to Kazuichi Nakamura by January 6, 2012.

Best Presentation by a Student Award

Nominees are asked to submit a complete written version of an immunotoxicology presentation to be made at the 2012 SOT Annual Meeting, along with a letter of nomination from the student's advisor. Nominations should be submitted to Kazuichi Nakamura by January 6, 2012.

HESI Immunotoxicology Young Investigator Travel Award

This award is offered by ILSI HESI to encourage young investigators within 5 years of receiving a Ph.D. to present their research at the 2012 SOT Annual Meeting. Nominations should be submitted to Rod Dietert by December 30, 2012.

Please note the submission deadline for some awards has been set earlier than the previous years.
Detailed descriptions of all the awards are on the website:
http://www.toxicology.org/ISOT/SS/imtox/deadlines.asp.

Rod Dietert (rrd1@cornell.edu), Greg Ladics (Gregory.S.Ladics@cgr.dupont.com) and Kazuichi Nakamura (kazuichi.nakamura@shionogi.co.jp) will accept nominations from November 1, 2011.

International Exchange Committee Update

Submitted by: Mitchell Cohen

The International Exchange Committee (IEC) is pleased to report that the Workshop on "Identification of Chemical Respiratory Allergens: Principles and Practice", jointly chaired by Drs. Takahiko Yoshida (Asahikawa Medical College, Japan) and Dr. Ian Kimber (University of Manchester, UK) was a great success at the recent Washington DC SOT Meeting. Dr. Yoshida was the third official representative of the Japanese Society of Immunotoxicology (JSIT) to co-chair a session at out National Meeting, thereby fulfilling a major goal of the Exchange Program that has been developed between our SS and the JSIT.

The IEC is pleased to announce that the invited JSIT representative for San Francisco, 2012 – Dr. Reiko Teshima (Head, Division of Novel Foods and Immunochemistry, National Institute of Health Sciences, Tokyo, Japan) – and Dr. Greg Ladics (DuPont Ag Biotechnology, Wilmington, DE) have put together a Symposium on "Allergenicity and Immunomodulatory Effect of Food Substances" that is just awaiting final approval by the SOT National Program Committee. We look forward to this and future jointly chaired sessions generated by members of both of our societies.

At the DC meeting, it was also announced that one IMTOX SS member would speak at the upcoming JSIT 2011 meeting to be held at Chiba University, Chiba, Japan in September. Based on the meeting's theme of "Crosstalk Between Clinical and Experimental Immunotoxicology", Dr. Ladics was asked to speak to the JSIT membership on two topics, one in a Symposium ("Food Allergy – From In Vitro Prediction Test to Clinical Test") and another in a Workshop ("Methods of Assessment for Developmental Immunotoxicity") central to this important theme.

To see all of the presentations at the upcoming meeting, please go to: http://jsit18.umin.ne.jp/english.html.

Though not specifically related to receptions but definitely related to our fiscal soundness, the IMTOX SS applied for and was awarded another $2000 in SOT Global Initiatives Matching Funds for our International Exchange program. Congratulations to Drs. Burns and Dietert on getting those funds for the continuing efforts at enhancing collaboration between the IMTOX SS and the JSIT!!

Lastly, the members of the IEC as well as of the IMTOX SS were quite relieved to hear that our colleagues from Japan were all doing fine after the horrible events of this past March. To a person, each of them expressed their thanks for all the warm thoughts for them and their fellow countrymen that suffered from the twin disasters, and for the willingness of the many IMTOX members to provide what-ever help they thought might be needed.

Student and Postdoctoral Report

Submitted by: Jenna Benson (Student Representative) and Teri Girtsman (Postdoctoral Representative)

Hello to all student and postdoctoral members of the ImTox SS! We hope that you all are having a productive summer in the lab. Both of us are new reps and are very excited about this opportunity to serve you. Please let us know about any concerns or suggestions you may have on how the ImTox SS can best assist you as immunotoxicology students and postdoctoral fellows! Feel free to contact Jenna Benson at jenna.benson@umontana.edu or Teri Girtsman at teri.girtsman@umontana.edu.

For those of you graduate students unaware of this very recent change, the Student Advisory Council (SAC) has been restructured as the Graduate Student Leadership Committee (GSLC).

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Student and Postdoctoral Report - continued

The GSLC is comprised of an executive board and three subcommittees (communications, professional development, and programming) that consist of the graduate student reps for specialty sections, special interest groups, and regional chapters. If you have any ideas that would be beneficial for your career development or activities for the annual meeting, Jenna Benson (jenna.benson@umontana.edu) can relay your thoughts to the executive board!

As we are presently just beginning our tenure as your SS representatives, we welcome any and all suggestions to better serve your needs and visibility in the ImTox SS and in the SOT at large. Postdoctoral fellows are encouraged to contact Teri Girtsman for your specific requests (teri.girtsman@umontana.edu).

Finally, remember to check out the SOT website for students and postdocs at http://www.toxicology.org/ISOT/SS/imtox/stu_info.asp for all of the most recent information related to SOT. Also, keep in mind that the deadline for submitting the Best Presentation by a Graduate Student/Postdoctoral Fellow Award is *January 6, 2012*. The award requirements include submission of a complete written version (including all graphs and tables) of an immunotoxicology presentation to be made at the 2012 SOT Annual Meeting. This presentation is to be accompanied by a letter of nomination from the student/postdoc's advisor. Please utilize electronic submissions. No manuscripts will be accepted. Winners will receive a plaque and cash award. We encourage you to take a minute to nominate your students so they can be recognized for their work. Please submit nominations for Best Presentation by a Student/Postdoctoral Award to Kazuichi Nakamura at kazuichi.nakamura@shionogi.co.jp.

SOT 2012 Meeting Update

Submitted by: Greg Ladics

The Immunotoxicology Specialty Section will be well represented at the 2012 meeting in San Francisco with a total of 7 sessions (2 CE courses, 3 symposia and 2 workshops) that were granted 'tentative' acceptance. These sessions include the following:

CE Courses:

- "Overview and Application of the WHO/IPCS Harmonized Guidance for Immunotoxicity Risk Assessment for Chemicals"; Chairs- Andrew Rooney and Henk van Loveren
- Innate immunity; Chairs - Jacintha Shenton and Wendy Freeburn

Symposia:

- "The Allergenicity and Immunomodulatory Effect of Food Substances"; Chairs- Greg Ladics and Reiko Teshima
- "The Role of Danger Signals in the Development of Chemical Sensitization by Environmental and Occupational Agents"; Chairs- Marc Pallardy and Raymond Pieters
- "Nanoparticles for Drug Delivery: Interactions with the Immune System"; Chairs- Sandra Casinghino and Marina Dobrovolskaia

Dr. Ian Kimber Receives Major Honor

Details to come in our next newsletter!

Newsletter Changes

Submitted by: Communications Committee

This issue of the Immunotoxicology Specialty Section newsletter has a bit of a new feel. SOT released a new template to help streamline formatting so we have given it a try, but we want to know what you think. Do you like the new template? Is there different/additional content you would like to see? We want the newsletter to be a vehicle for information sharing between members and are happy to consider any changes/requests you have. Please contact the Communication Committee Co-Chairs with any suggestions.

Haley Neff-LaFord: hnlaford@seagen.com
Ashwini Phadnis: phadnisa@msu.edu

Postdoc Opportunity

Walter Brendel Zentrum München

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

Collaborative Research Center (CRC) 914 'Trafficking of Immune Cells in Inflammation, Development and Disease' and associated Integrated Research Training Group (IRTG) 'Leukocyte Trafficking'

The **Ludwig-Maximilians-Universität München** (LMU), Germany, is one of the most renowned Universities in Europe. Recently, the Collaborative Research Center 914 entitled 'Trafficking of Immune Cells in Inflammation, Development and Disease' and its associated Integrated Research Training Group (IRTG) 'Leukocyte Trafficking' received approval / funding from the German Research Foundation (DFG). Within this initiative **the laboratory of Prof. Markus Sperandio** is now offering

1 Postdoc Position
on
Leukocyte Trafficking in the Fetus *In Vivo*

Successful candidates should hold a PhD in natural sciences and ideally have experience in bio-imaging techniques, animal experiments, and molecular and cell biology techniques. The project will focus on the development of the innate immune system in the living mouse fetus. The position will initially be available for four years (first funding period).

The Walter Brendel Centre is located at the biomedical campus Großhadern in Munich and also offers an excellent scientific environment with many other research institutes of the LMU Munich and the Max-Planck Institute for Biochemistry.

Applications (CV, copies of degree certificates, list of publications) should be sent not later than August 15, 2011 by email to Prof. Dr. Markus Sperandio, Walter Brendel Centre of Experimental Medicine, Ludwig-Maximilians-Universität München, Marchioninistr. 15, 81377 Munich, Germany. Phone +49 89 2180 76505.
Email: markus.sperandio@med.uni-muenchen.de

Recent Immunotoxicology Publications

Note to authors:

Just a reminder that it is our policy to only list fully published articles. Epubs or the like will not be included in the newsletter until they are fully released. If you send your publication list to me including epubs, I will do my best to save these citations for the next newsletter. Thus, if you have sent in some references that you don't see listed here, please keep an eye out for them in the next issue. If you have any questions or concerns, please contact me at hnlaford@seagen.com
Thanks!
Haley Neff-LaFord

Asthma, Allergy, Autoimmunity & Hypersensitivity

Alberg T, Nilsen A, Hansen JS, Nygaard UC and Løvik M. Nitrogen dioxide: no influence on allergic sensitization in an intranasal mouse model with ovalbumin and diesel exhaust particles. Inhal Toxicol 23:268-76, 2011.

Bernstein DI, Kissling GE, Khurana Hershey G, Yucesoy B, Johnson VJ, Cartier A, Gautrin D, Sastre J, Boulet LP, Malo JL, Quirce S, Tarlo SM, Langmeyer S, Luster MI and Lummus ZL. Hexamethylene diisocyanate asthma is associated with genetic polymorphisms of CD14, IL-13, and IL-4 receptor α. J Allergy Clin Immunol. 128:418-20, 2011.

Fecek RJ, Marcondes Rezende M, Busch R, Hassing I, Pieters R and Cuff CF. Enteric reovirus infection stimulates peanut-specific IgG2a responses in a mouse food allergy model. Immunobiol 215:941-948, 2010.

Hansen JS, Alberg T, Rasmussen H, Lovik M and Nygaard UC. Determinants of experimental allergic responses: interactions between allergen dose, sex and age. Scand J Immunol 73:554-67, 2011.

James LK, Shamji MH, Walker SM, Wilson DR, Wachholz PA, Francis JN, Jacobson MR, Kimber I, Till SJ and Durham SR. Long-term tolerance after allergen immunotherapy is accompanied by selective persistence of blocking antibodies. J Allergy Clin Immunol 127:509-516, 2011.

Kimber I, Basketter DA, Gerberick GF, Ryan CA and Dearman RJ. Chemical allergy: translating biology into hazard characterization. Toxicol Sci 120(Suppl. 1):S238-S268, 2011.

Kwast LM, Fiechter D, Hassing I, Bleumink R, Boon L, Ludwig IS and Pieters RHH. Oral Exposure to Drugs with Immune-Adjuvant Potential Induces Hypersensitivity Responses to the Reporter Antigen TNP-OVA. Toxicol Sci 121:312-319, 2011.

Lalko JF, Kimber I, Dearman RJ, Gerberick GF, Sarlo K and Api AM. Chemical reactivity measurements: potential for characterization of respiratory chemical allergens. Toxicol in Vitro 25:433-445, 2011.

McFadden JP, Dearman RJ, White JML, Basketter DA and Kimber I. The hapten-atopy hypothesis II: the 'cutaneous hapten paradox.' Clin Exp Allergy 41:327-337, 2011.

Pfau JC, Li S, Holland S and Sentissi JJ. Alteration of fibroblast phenotype by asbestos-induced autoantibodies. J Immunotoxicol 8:159-169, 2011.

Pollard KM, Hultman P, Toomey CB, Cauvi DM and Kono DH. β2-microglobulin is required for the full expression of xenobiotic-induced systemic autoimmunity. J Immunotoxicol 8:228-237, 2011.

Ulker OC, Atak A, Ates I and Karakaya A. Evaluation of auricular lymph node cell lymphocyte proliferation and cytokine production as non-radioactive endpoints during murine contact allergy. J Immunotoxicol 8:131-139, 2011.

Recent Immunotoxicology Publications - Continued

Developmental Immunotoxicology

de Jong E, Barenys M, Hermsen SAB, Verhoef A, Ossendorp BC, Bessems JGM and Piersma AH. Comparison of the mouse Embryonic Stem cell Test, the rat Whole Embryo Culture and the Zebrafish Embryotoxicity Test as alternative methods for developmental toxicity testing of six 1,2,4-triazoles. Toxicol Appl Pharmacol 253:103-111, 2011.

Leifer CA and Dietert RR. Early life environment and developmental immunotoxicity in inflammatory dysfunction and disease. Toxicol Environ Chem 93:1463-1485, 2011.

Sharkhuu T, Doerfler DL, Copeland C, Luebke RW and Gilmour MI. Effect of maternal exposure to ozone on reproductive outcome and immune, inflammatory, and allergic responses in the offspring. J Immunotoxicol 8:183-194, 2011.

Stolevik SB, Nygaard UC, Namork E, Haugen M, Kvalem HE, Meltzer HM, Alexander J, van Delft JHM, van Loveren H, Lovik M and Granum B. Prenatal exposure to polychlorinated biphenyls and dioxins is associated with increased risk of wheeze and infections in infants. Food Chem Toxicol 49:1843-1848, 2011.

Tonk ECM, deGroot DMG, Penninks AH, Waalkens-Berendsen IDH, Wolterbeek APM, Piersma AH and van Loveren H. Developmental immunotoxicity of di-*n*-octyltin dichloride (DOTC) in an extended one-generation reproductive toxicity study. Toxicol Lett 204:156-163, 2011.

ul-Hassan Z, Khan MZ, Khan A, Javed I and Saleemi MK. Immunological status of the progeny of breeder hens kept on ochratoxin A (OTA)-contaminated feed. J Immunotoxicol 8:122-130, 2011.

ul-Hassan Z, Khan MZ, Saleemi MK, Khan A, Javed I and Hussain A. Immunological status of White Leghorn chicks hatched from eggs inoculated with ochratoxin A (OTA). J Immunotoxicol 8:204-209, 2011.

Effects: Compounds

Akbar M, Brewer JM and Grant MH. Effect of chromium and cobalt ions on primary human lymphocytes *in vitro.* J Immunotoxicol 8:140-149, 2011.

Chen Q, Ouyang D, Geng M, Xu L, Zhang Y, Wang F and He X. Valproic acid exhibits biphasic effects on apoptotic cell death of activated lymphocytes through differential modulation of multiple signaling pathways. J Immunotoxicol 8:210-218, 2011.

Conrad D, Wang A, Pieters R, Nicoletti F, Mangano K, van Heeckeren AM, White SK, Frinke JM, Reading CL, Stickney D and Auci DL. HE3286, an oral synthetic steroid, treats lung inflammation in mice without immune suppression. J Inflamm 7:52, 2010.

Fukuyama T, Tajima Y, Ueda H, Hayashi K and Kosaka T. Prior exposure to immunosuppressive organophosphorus or organochlorine compounds aggravates the T_H1- and T_H2-type allergy caused by topical sensitization to 2,4-dinitrochlorobenzene and trimellitic anhydride. J Immunotoxicol 8:170-182, 2011.

Gustafsson A, Lindstedt E, Svensson Elfsmark L and Bucht A. Lung exposure of titanium dioxide nanoparticles induces innate immune activation and long-lasting lymphocyte response in the Dark Agouti rat. J Immunotoxicol 8:111-121, 2011.

Hurd T and Whalen MM. Tetrabromobisphenol A decreases cell-surface proteins involved in human natural killer (NK) cell–dependent target cell lysis. J Immunotoxicol 8:219-227, 2011.

Lu H, Crawford RB, Kaplan BLF and Kaminski NE. 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin-mediated disruption of the CD40 ligand-induced activation of primary human B cells. Toxicol Appl Pharmacol 255:251-260, 2011.

Scuri M, Chen BT, Castranova V, Reynolds JS, Johnson VJ, Samsell L, Walton C and Piedimonte G. Effects of titanium dioxide nanoparticle exposure on neuroimmune responses in rat airways. J Toxicol Environ Health A. 73:1353-69, 2010.

Recent Immunotoxicology Publications - Continued

Effects: Compounds - continued

Starrett W and Blake DJ. Sulforaphane inhibits *de novo* synthesis of IL-8 and MCP-1 in human epithelial cells generated by cigarette smoke extract. J Immunotoxicol 8:150-158, 2011.

Wang S, Prophete C, Soukup JM, Chen L, Costa M, Ghio A, Qu Q, Cohen MD and Chen H. Roles of MAPK pathway activation during cytokine induction in BEAS-2B cells exposed to fine World Trade Center (WTC) dust. J Immunotoxicol 7:298-307, 2010.

Xu A, Prophete C, Chen LC, Emala CW and Cohen MD. Interactive effect of cigarette smoke extract and World Trade Center dust particles on airway cell cytotoxicity. J Toxicol Environ Health 74:887-902, 2011.

General Immunotoxicology

Bol-Schoenmakers M, Fiechter D, Raaben W, Hassing I, Bleumink R, Kruijswijk D, Maijoor K, Tersteeg-Zijderveld M, Brands R and Pieters R. Intestinal alkaline phosphatase contributes to the reduction of severe intestinal epithelial damage. Eur J Pharmacol 633:71-77, 2010.

Casado FL, Singh KP and Gasiewicz TA. Aryl hydrocarbon receptor activation in hematopoietic stem/progenitor cells alters cell function and pathway-specific gene modulation reflecting changes in cellular trafficking and migration. Mol Pharmacol 80:673-682, 2011.

Kennedy JS and Lawrence DA. Coincidental associations do not provide proof for the etiology of autism. J Immunotoxicol 8:198-203, 2011.

Dragomir AC, Laskin JD and Laskin DL. Macrophage activation by factors released from acetaminophen-injured hepatocytes: Potential role of HMGB1. Toxicol Appl Pharmacol 253:170-177, 2011.

Lebrec H, Cowan L, Lagrou M, Krejsa C, Neradilek MB, Polissar NL, Black L and Bussiere J. An inter-laboratory retrospective analysis of immunotoxicological endpoints in non-human primates: T-cell-dependent antibody responses. J Immunotoxicol 8:238-250, 2011.

Lin X, Sime PJ, Xu H, Williams MA, Larussa L, Georas SN and Guo J. Yin yang 1 is a novel regulator of pulmonary fibrosis. Am J Respir Crit Care Med 83:1689-1697, 2011.

McFadden JP, Basketter DA, Dearman RJ and Kimber I. Extra domain A-positive fibronectin-positive feedback loops and their association with cutaneous inflammatory disease. Clin Dermatol 29:257-265, 2011.

Ogden S, Dearman RJ, Kimber I and Griffiths CEM. The effect of ageing on the phenotype and function of monocyte-derived Langerhans cells. Br J Dermatol 165:184-188, 2011.

Ruwona TB, Johnson VJ, Schmechel D, Simoyi RH, Beezhold D and Siegel PD. Monoclonal antibodies against toluene diisocyanate haptenated proteins from vapor-exposed mice. Hybridoma. 29:221-229, 2010.

Singh KP, Garrett RW, Casado FL and Gasiewicz TA. Aryl hydrocarbon receptor-null allele mice have hematopoietic stem/progenitor cells with abnormal characteristics and functions.
Stem Cells Dev 20:769-784, 2011.

Stølevik SB, Nygaard UC, Namork E, Granum B, Pellerud A, van Leeuwen DM, Gmuender H, van Delft JH, van Loveren H and Løvik M. In vitro cytokine release from human peripheral blood mononuclear cells in the assessment of the immunotoxic potential of chemicals. Toxicol In Vitro 25:555-562, 2011.

Recent Immunotoxicology Publications - Continued

Methods

Adler S, Basketter D, Creton S, Pelkonen O, Ban Benthem J, Zuang V, Anderson KE, Angers-Loustau A, Aptula A, Bal-Price A, Benfenati E, Bernauer U, Bessems J, Bois FY, Boobis A, Brandon E, Bremer S, Broschard T, Casati S, Coecke S, Corvi R, Cronin M, Daston G, Dekant W, Felter S, Grignard E, Gundert-Remy U, Heinonen T, Kimber I, Kelinjans J, Komulainen H, Kreiling R, Kreysa J, Batista Leite S, Loizou G, Maxwell G, Mazzatorta P, Munn S, Pfuhler S, Phrakonkham P, Piersma A, Poth A, Prieto P, Repetto G, Rogiers V, Schoeters G, Schwarz M, Serafimova R, Tahti H, Testal E, Van Delft J, Van Loveren H, Vinken M, Worth A and Zaldivar J-M. Alternate (non-animal) methods for cosmetic testing: current status and future prospects. Arch Toxicol 85:367-485, 2010.

Dietert RR. Fractal immunology and immune patterning: Potential tools for immune protection and optimization. J Immunotoxicol 8:101-110, 2011.

Kimber I, Humphris C, Westmoreland C, Alepee N, Dal Negro G and Manou I. Computational chemistry, systems biology and toxicology. Harnessing the chemistry of life: revolutionizing toxicology. A commentary. J Appl Toxicol 31:206-209, 2011.

Reviews/Workshops/Editorials

DeWitt JC and Dietert RR. Response to "Theoretical aspects of autism: Causes - A review" by Ratajczak, HV (Journal of Immunotoxicology 8:68–79, 2011). J Immunotoxicol 8:195-197, 2011.

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