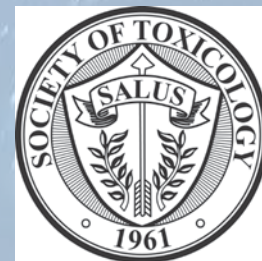


IMMUNOTOXICOLOGY Specialty Section



Winter Edition

**2017-2018
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The Immunotoxicology Specialty Section (ITSS) Newsletter is published three times a year (Summer, Fall, and Winter). If you would like to share an item of interest with members of the ITSS, please send it to the Communications Committee Chair. All comments and suggestions are welcome.

Jiajun (Brian) Zhou
zhoujjaj@msu.edu
Angela Groves
Angela_Groves@URMC
Rochester.edu
Jessica Lynch
jlynch18@ITS.JNJ.com

President's Message

Season's greetings Immunotoxicologists! As we race into the holiday season, we need to take a smidgeon of time to remind ourselves that the 2018 Annual Meeting of the Society of Toxicology is right around the corner. With only a couple months left to prepare, there remains much work ahead. Many are preparing presentations, posters, CE lectures, and sessions following acceptance of their efforts for the 2018 SOT meeting. We are excited to see what everyone has to share with fellow immunotoxicologists and the greater toxicology committee. Keep up the great work!

The ITSS Executive Committee and the many subcommittees have been hard at work since the 2017 SOT meeting. As I prefaced in the last newsletter, the committees have been working on several important goals for this term. I will not rehash these goals, but rather provide a little insight into the progress that has been made.

Education and sharing of science is key to the success of ITSS. The SOT meeting provides a showcase for our passion and it is charge of the ITSS membership to make an infectious showing, pun intended. With the 2018 SOT meeting fast approaching, the deadline for program proposals for the 2019 meeting is fast on its heels. My most urgent plea in this respect is "don't wait, do it now". You will be receiving more information on program in this newsletter and additional notices by email over the coming weeks. Thanks for the hard work Program Committee! In an effort to stimulate program, ITSS Executive Committee has revitalized and organized the "Scientific Advisory Committee" composed of current and past leadership of the ITSS. The goal of this committee is to stimulate ideas focusing on the 2019 round of program proposals. Look for communication from this committee in the coming weeks. Bring your best science to the forefront, and remember, we are here to help so please don't hesitate to reach out.

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President's Message

Exciting news! The Mitzi and Prakash Nagarkatti Research Excellence in Immunotoxicology Award Fund is growing and contributions from the ITSS community are starting to come in. We are extremely pleased to announce that in its inaugural year, this endowment fund is going to support its first travel award! Best of luck to the budding students and post docs that are training to become the next generation of immunotoxicologists. Your mentor will be very excited when you win the travel award so please apply, see the award section below for details on this and other awards provided by ITSS. Sincerest gratitude to the Nagarkatti's for establishing the fund and to those who have helped the fund grow. Please make sure to read the section below providing details on how you can help ensure that this fund matures.

The international exchange committee efforts of ITSS have been a success for another year. Dr. Danuta Herzick was the ITSS delegate selected to provide a Special Lecture at the Japanese Society of Immunotoxicology Annual Meeting this year. She gave an engaging lecture and will provide a summary of her experiences in the pre-SOT newsletter in 2018. JSIT has graciously provided a letter for this newsletter providing insight into their society, enjoy. In addition, a video presentation from ITSS (thanks Vic, Brian, and Angie) was presented at the JSIT meeting with goals of engaging the young Japanese immunotoxicologists. Thanks for the idea and encouragement Kazu. The IEC is actively engaging immunotoxicologists in other countries as well and look forward to sharing science.

December is the time of year for SOT to call for nominations for executive positions for the specialty sections. Nominations for the positions of ITSS Vice President Elect and Junior Councilor are welcome (due by December 31, 2017). Ballots from SOT will be appearing in your email inbox in January 2018. It is important for everyone to contribute by voting for the future leaders of the ITSS.

There is some sad news in this edition as we mourn the loss of two colleagues that recently passed. Memorials for Dr. Allen Silverstone and Dr. Susan Sarlo have been prepared by Dr. Michael Luster and Dr. G. Frank Gerberick. Read the memorials and remember and honor the lives and careers of our fellow immunotoxicologists, they will be missed.

It is time for me to stop talking and let you enjoy the rest of the newsletter. Thanks to everyone who contributed for making this a great edition. Your feedback is always welcome. This is wishing everyone the best for the holiday season. Have fun, celebrate, and stay safe.

Best regards,

Dr. Vic Johnson
President, ITSS 2017 - 2018



2018 SOT ITSS Awards

Dear ITSS Colleagues,

We would like to remind you that the application deadline for the following awards is January 15, 2018:

- Vos Lifetime Career Achievement Award in Immunotoxicology (Contact Vic Johnson; vjohnson@brt-labs.com)
- HESI Immunotoxicology Young Investigator Travel Award (Contact Vic Johnson; vjohnson@brt-labs.com)
- Outstanding Young Immunotoxicologist Award (Contact Jamie DeWitt; dewittj@ecu.edu)
- Outstanding Senior Immunotoxicologist Award (Contact Jamie DeWitt; dewittj@ecu.edu)
- Best Paper of the Year (Contact Rodney Prell; prell.rodney@gene.com)
- Best Presentation by a Postdoctoral Trainee Award (Contact Rodney Prell; prell.rodney@gene.com)
- Best Presentation by a Student Award (Contact Rodney Prell; prell.rodney@gene.com)

In addition, we are very excited to announce the inaugural Mitzi and Prakash Nagarkatti Research Excellence in Immunotoxicology Travel Award. This award is funded by the Mitzi and Prakash Nagarkatti Research Excellence in Immunotoxicology Award Fund, an ITSS/SOT Endowment established in 2017. This award, which will be \$500, will assist graduate students or postdoctoral fellows in attending SOT and presenting their research. Application deadline for this award is also January 15, 2018 and application should be sent to Vic Johnson (vjohnson@brt-labs.com). Applicants should submit their CV, recommendation letter from their supervisor and a brief letter from the applicant describing the importance of receiving this award to travel to the SOT Annual Meeting and how it will impact their career in Immunotoxicology.

We would like to encourage all of you to nominate deserving colleagues for these awards. We would especially like to encourage all eligible students and postdocs to apply for the Student and Postdoctoral Trainee Awards.

For more information and application requirements, please refer to the ITSS website: <http://www.toxicology.org/groups/ss/imtox/deadlines.asp>

Best regards,

Rodney Prell
ITSS Senior Councilor



Student & Postdoctoral Report

Dear graduate students and postdocs,

We hope you have had a wonderful 2017.

It's hard to believe, but SOT's 57th annual meeting in San Antonio, Texas is not too far away! With that in mind, now is the time to be thinking about applying for those travel awards. The ITSS has several awards for graduate students and postdocs that you can take advantage of. The deadline for all of these awards is January 15th, so you still have time to apply!

The awards available for graduate students are:

Best Presentation by a Student Award

Best Paper of the Year Award

Prakash Nagarhatti Research Excellence in Immunology Award

The awards available for postdocs are:

Best Presentation by a Postdoctoral Trainee Award

Best Paper of the Year Award

HESI Immunotoxicology Young Investigator Travel Award

Prakash Nagarhatti Research Excellence in Immunology Award

Many other travel awards are also available to students through the SOT's multiple Specialty Sections and Special Interest Groups. Visit SOT's website for more details.

We would like to encourage students and postdocs to attend the Graduate Student/Postdoc Mixer and the 4th Annual ITSS Networking/Mentoring Event at the Annual Meeting (time and location information to be announced soon). This event gives participants the opportunity to interact with diverse panelists from academia, industry and government. The participants are able to connect with these experts to learn about what it is like to hold their positions and ask advice on career planning. Our tremendous group of mentors made last years event a success, and we are excited to be able to provide another great line up this year.

We also encourage the ITSS graduate student and postdoc members to participate in the ITSS committees. This is a great way to become involved with other ITSS members and to enhance your professional network. There are 4 different committees within ITSS: Awards, Program, Education and Communication/Membership, each chaired by friendly and motivated members of the ITSS executive committee. Participating in these activities can be rewarding and it is also great opportunity to get to know the immunotoxicological community. If you would like to get more involved please contact us at Angela_Groves@URMC.Rochester.edu or zhoujiaj@msu.edu.

We wish you a joy-filled new year.

Angela Groves, Ph.D.



International Collaborations: EUROTOX

ON THE OTHER SIDE OF THE POND: IMMUNOTOXICOLOGY AND CHEMICAL ALLERGY SPECIALTY SECTION (ITCASS) AT EUROTOX

In brief, EUROTOX's interest in immunotoxicology, chemical allergy is exemplified and food allergy through educational activities that emphasize fundamental development and application in immunotoxicology, chemical allergy and food allergy, planning and contribution with scientific programmes (e.g. workshops, symposia, continuous education courses) held during the EUROTOX annual congress.

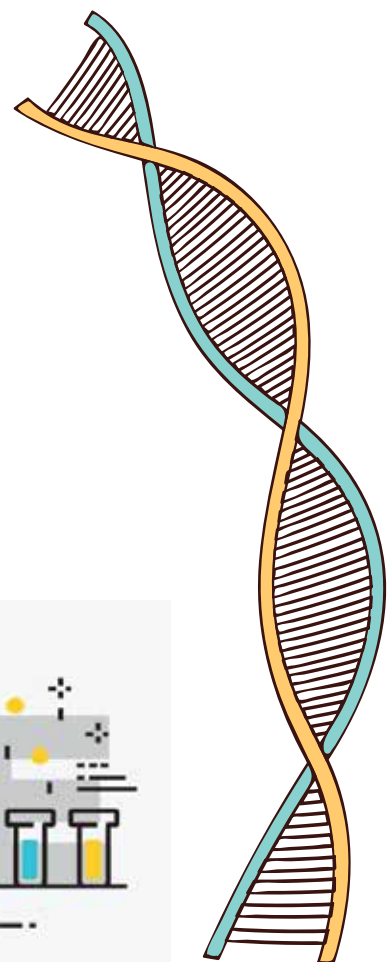
ITCASS goal is to have at least one immunotoxicology symposium or workshop for every day of the congress. This of course requires the submission of attractive, well-structured proposals to the Scientific Committee responsible for the scientific program. The call of proposal usually starts in December. As for ITSS for SOT, also ITCASS is doing a pre-screening asking members to pre-submit their proposals to ITCASS in order to improve them if needed and send the best to EUROTOX. This increases the chance of being accepted.

In addition, ITCASS aims to promote by any means immunotoxicology as a discipline by increasing our understanding of the impact of xenobiotics on the immune system, by a better understanding of the mechanisms of immunomodulation, and by encouraging the development of new methods and techniques to improve risk assessment.

Besides the annual face to face meeting that takes place during the annual EUROTOX congress, ITCASS also organises approximately every two year an informal two-days congress. The last one was in Châtenay-Malabry/Paris in November 2016, while the previous were in Elsinore, Denmark (2012); Den Bosh, The Netherlands (2010); Oslo, Norway (2008); Lodi, Italy (2006); Manchester, UK (2004); Paris, France (2002); Bilthoven, The Netherlands (2000). These meetings are very well attended, with excellent presentations and lively discussion.

Similarly, to the Japanese Society of Immunotoxicology, we wish that the collaboration between ITCASS and ITSS will increase in the near future, and join symposium/workshop/CEC will be organized.

Emanuela Corsini and Marc Pallardy



International Collaborations: JSIT

Report on the 24th Annual Meeting of the Japanese Society of Immunotoxicology

The 24th Annual Meeting of the Japanese Society of Immunotoxicology (JSIT) was held on September 4th - 5th, 2017 at the School of Veterinary Medicine, Kitasato University in Towada, Aomori. I would like to thank my seniors and colleagues of the Immunotoxicology Specialty Section (ITSS) for the great support.

The theme, “New perspective of immunoenhancement and immunosuppression” was set as the main theme of the meeting by myself. Autoimmunity or allergy is not necessarily initiated by “immunoenhancement”, but can be caused by even immunosuppression or normal immunity simply recognizing altered-self antigen or MHC. I intended to discuss and to disseminate this new aspect of immunotoxicity in the meeting. In addition, I thought that we should consider the physiological (normal) state of “immunosuppression”. In this connection, a symposium titled “Reproductive immunotoxicology: Immunological mechanism of pregnancy and its breakdown” was presented. Immunotoxicity was discussed from new perspectives in this meeting.

The meeting was started with the keynote lecture by Dr. Jack H. Dean. I asked him at the last ITSS meeting in March, 2017 to give a lecture for JSIT members. He kindly provided permission to play his video lecture from Eminent Toxicologist Lecture Series at the JSIT meeting and later sent the abstract of his lecture. Dr. Jack H. Dean had never appeared in our previous meetings, but I was thinking for a long time that he should be invited to present the keynote lecture. To my honor and proudness, he accepted my invitation and provided the keynote lecturer “Immunotoxicology: A historical perspective” for the 2018 JSIT meeting. Immunotoxicology was established by his pioneering works and vast achievements. To explore the new perspective today I thought his lecture would be of great benefit for the JSIT members and I wanted especially the next generation to know his challenges to create a new perspective in toxicology nearly a half century ago. The lecture gave very impressive messages to audiences. I am so pleased that his name has been inscribed in the history of our JSIT.

I was also lucky and honored to be the meeting president which provided me the opportunity to invite Dr. Danuta Herzyk as part of the researcher exchange program between the ITSS and JSIT. As I used to work for a pharmaceutical company, she and I are sharing similar views on immunotoxicology. I had been longing to have her lecture in a JSIT meeting, and finally my dream came true. I really appreciate Dr. Mitch Cohen for his efforts on this project. Without him, my dream would still be a dream. Her lecture “Immunotoxicity Assessment of Biopharmaceuticals” received great attention from audiences because it was well prepared being based on the data and experiences in her immunotoxicological research.

Another special lecture was presented by Dr. Tsuyoshi Yokoi from Nagoya University, who is now a distinguished researcher on the immunology of drug-induced liver injury (DILI). He reported his works and clearly explained involvement of Th17 cells and TLR4 of Kupffer cells in the liver injury. His works are expected to improve the poor predictability of animal experiments for the idiosyncratic DILI.

Dr. Takeharu Minamitani from National Institutes of Biomedical Innovation, Health and Nutrition gave an educational lecture on autoimmune diseases. In his current study, he demonstrated the molecular pathogenesis by which Epstein-Barr virus infection induces autoimmune diseases. He showed us that EBV-encoded LMP2A mimics B-cell antigen receptor signaling in murine germinal center B cells causing systemic lupus erythematosus-like autoimmune phenotypes.

The symposium “Reproductive immunotoxicity: Immunological mechanism of pregnancy and its breakdown” discussed the immunological tolerance and placenta formation during pregnancy. Since mothers should accept fetus alloantigen, immunological mechanisms should properly work for successful pregnancy. Abortion and eclampsia may be caused by immunotoxicity of xenobiotics. The symposium focused on Th1/Th2 balance, the roles of Treg, gamma/delta T cells and uNK cells during pregnancy. The immunotoxicological effects of nano-silica on pregnancy was also presented.



International Collaborations: JSIT

The workshop dealt with safety evaluation method of biopharmaceuticals (protein formulation) with the perspectives of regulatory agency and industry. Expectation of in vitro studies to support in vivo studies and immunogenicity assessment of antibody/antibody-drug conjugate therapeutics were main topics in the workshop. Interpretation of ICH S6 (R1) guideline was also mentioned by the PMDA.

Among 11 oral and 22 poster presentations, the Best Presentation Award went to Dr. Masashi Tachibana from Osaka University presenting “Regulation of myeloid-derived suppressor cells by glutamate signaling” and the Students and Young Scientists Award to Dr. Toshiyuki Ohtake from Chemicals Evaluation and Research Institute presenting “Comparison of skin sensitization potential of isocyanates by a local lymph node assay and an integrated testing strategy with an in silico, in chemico and in vitro assays”, respectively. As part of this year program, I gave a big surprise to my JSIT colleagues. It was plotted in collaboration with Dr. Victor J. Johnson who gave a lecture at the last year’s JSIT annual meeting. He sent me three video messages to be shown in the evening banquet on the first day of the meeting. Dr. Victor J. Johnson introduced ITSS current activities as the ITSS president. Jiajun (Brian) Zhou also appeared talking about the ITSS Newsletter as the ITSS graduate student representative, while Dr. Angela Groves explained the ITSS annual immunotoxicology mentoring event as the ITSS post-doctoral representative. Very big cheers rose from the banquet participants. The plot was successful! I would like to thank those great people.

The meeting gathered about 100 attendees. Since the JSIT encourages enthusiastic participation of researchers especially from the next generation and the JSIT members know each other well, the discussion was very active in very friendly atmosphere. I would like to once again express my sincere gratitude for the support from ITSS and your friendship. Thank you very much.

Please visit <http://www.immunotox.org/annualmeeting/24/photo.html> to see photos of the meeting.

Kazuichi Nakamura, D.V.M., Ph.D.

President of the 24th JSIT Annual Meeting
Kitasato University



Pictures from the JSIT annual meeting:



Memorium

It is an honor to write a remembrance letter for my friend and colleague, Dr. Katherine Sarlo, who passed away in March after courageously fighting a long-term illness. Kathy was born in Brooklyn, NY. She attended the State University of New York-Stony Brook where she received a BS in Biology and then later obtained her PhD in Microbiology and Immunology from The Ohio State University. In 1985, she started a distinguished career at the Procter & Gamble Company, working in the field of respiratory allergy.

Kathy contributed major insights and methods for assessing the respiratory sensitization potential of chemicals and proteins. She published a novel tiered approach for evaluating the respiratory allergenicity of low molecular weight chemicals that was widely cited and adopted. The approach allowed one to rank order chemicals based on their respiratory allergy potency which was beneficial for risk assessment purposes. Kathy was very proficient in use of in vivo models for respiratory allergy assessments, specifically the guinea pig intratracheal model. She also contributed significantly to the development of the mouse intranasal model and showed its utility in determining allergenic potency of detergent enzymes and other proteins. Kathy made important contributions to control of occupational asthma and allergy in the detergent industry. She showed that proteolytic detergent enzymes enhance allergic antibody responses of guinea pigs to non-proteolytic enzymes in a mixture that was critical information for setting occupational guidelines. Kathy was very proud of her work that contributed to development of guidelines for the handling of enzymes to assure their safe use, both occupationally and in consumer products. One of Kathy's more significant pieces of work was designing a robust testing strategy that, in the end, showed an enzyme-containing personal cleansing product was not safe to proceed to market. One of Kathy's many virtues were her outstanding ability to collaborate with scientists from around the world. I know many of the scientists she collaborated with - whether colleagues from P&G or scientists from academia, government, or industry - loved working with her because she was an expert in her field, never afraid to speak up for what she thought was right in terms of either science or relationships, and so much fun to be around.

In addition to Kathy's scientific side, she was a creative and talented artist. After her retirement from P&G, she continued to develop her love for painting and photography. On more than a few occasions, her creative work was shown in galleries around the Cincinnati area. She also loved to travel and spend time with her beloved husband, Christopher G. Schleifer. I would say that what defined Kathy best was her love for family and friends, and boy did her family and friends love her.

Kathy will be missed by so many but not forgotten. For me, her legacy will be less about her scientific achievements and more about remembering her amazing personality and friendship.



G. Frank Gerberick

Memorium

The toxicology and immunology community mourns the passing of Allen (Al) E. Silverstone. He leaves behind his loving son David and wife Barbara, a lifetime of scientific achievement, social activism, and an international community of colleagues, collaborators and admirers. Al conducted his undergraduate work at Reed College (BS 64) and his graduate work at MIT (Ph.D. 70). He was on the faculty for many years at SUNY Upstate Medical University where he taught and conducted research in Immunotoxicology focusing on T cell immunity, dioxins, and the Ah receptor. Whether at meetings, dinners, or at the local watering hole, Al was fond of talking about his current research, environmental justice, scientific topics of the day, and even his graduate school days with his mentor David Baltimore, and their work on terminal deoxynucleotidyl transferase. Students and colleagues who worked with Al admired his scientific tenacity, ethics, and tireless work for excellence in research.

For those of us that knew him, he will always be remembered as a gentle, kind, thoughtful man.

Michael I. Luster



Allen E. Silverstone
(Sept. 20, 1942 - Nov. 19, 2017)

Achievements



C o n t r a g u l a t i o n s



Congratulations to Allison Ehrlich, PhD, for winning a K99 Pathway to Independence Award from the National Institute of Diabetes and Digestive and Kidney Diseases for her grant titled "AhR activation and susceptibility to type 1 diabetes".

Announcement

Immunotoxicology Specialty Section *Networking/Mentoring Event*

2018 information:

Date: Tuesday, March 13th

Location: TBA

Time: 4:00 - 5:00 pm

We can not wait to fill you in with more updated information about the event.



Member Spotlight

An interview with Dr. Emanuela Corsini

When did you begin your career in immunotoxicology and what do you currently do?

It was 1988 when my boss Corrado Galli decided that we should start to work in the field of immunotoxicology, at that time a new area of investigation. I spent six months at the Mario Negri Institute in Milan to learn how to work in the field of immunology under the supervision of Annunciata Vecchi. Then, I joined at the end of August 1989 the Laboratory of Immunotoxicology, directed by Mike I. Luster at the NIEHS in North Carolina, under the supervision of Gary Rosenthal. This was my start, and since then I have been working in the field of immunotoxicology.



Currently, the primary focus of my laboratory centres on the refinement of alternative in vitro tests to identify and discriminate contact allergens from irritants and respiratory sensitizers, based on the use of DC-like cells and keratinocytes, and to classify allergens according to their potency. The other area of research is on the understanding at the molecular level the mechanism of action of immunotoxic/immunomodulatory compounds (i.e. perfluorinated compounds, pesticides, vegetal extracts) on innate and adaptive immunity. Finally, immunosenescence represents the other area of interest of my laboratory. Specifically, studies are being conducted to define the role of RACK1 and protein kinase C in the decline or remodelling of the immune responses associated with aging, and to identify compounds able to reverse such changes (i.e. DHEA, natural extracts). Close to this, it is the recent interest on endocrine disruptors, as we have data that support their ability to modulate RACK1 expression and innate immunity.

When did you start participating in the ITSS?

Long time ago, my first SOT was in Miami I believe in 1991. I joint SOT and ITSS as in 1993.

What was you most rewarding experience involving ITSS or ITCASS at Eurotox?

Of course, the most rewarding experience, besides being elected last March in Baltimore as President elect, it was when in 2004 I received Outstanding Young Investigator Award.

Regarding ITCASS at EUROTOX, I still remember when together with Jacques Descotes, Henk Van Loveren and Ian Kimber, we sit down to discuss the by-laws drafted by Jacques and started the Speciality Section. In ITCASS, I have served as Secretary, Councilor and President (or better to say Chair as we call us at EUROTOX, being the title President reserved for the President of EUROTOX!!!), and I am still very involved. Although I no longer have official positions, I am actively involved in preparing proposals for the annual congress and in the dissemination of immunotoxicology as a central discipline in assessing the safety of xenobiotics.

What has been the largest benefit, for you, of being an active participant in an SOT SS like the ITSS or ITCASS?

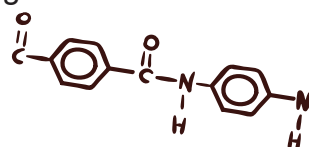
I think the largest benefit, it is to see and confront with others on issues of interest in the field of immunotoxicology, and emerging issues. An extremely useful way of updating on how immunotoxicology is moving globally.

Do you have any advice for someone who is considering becoming more involved in an SS?

Having served as a member of the executive committees of IUTOX (2010-2016) and EUROTOX (2014 – to present), I realized how this is fundamental to opening the mind, knowing different realities, and establishing connections that will last forever. Engaging means contributing to the good and to the interest of our scientific community: if you do not actively participate then you cannot then complain if things do not go as well as you wish.

What is one fun fact about yourself that you would like to share with others?

When I was at the NIEHS, I still remember when during the Branch meeting when it was my turn to present my research, my supervisor introduced me as Emanuela Corsini from the University of Brooklyn, as to say attention to the accent as one of Little Italy!!! Absolutely true, I still got a very strong Italian accent.



Recent Immunology Publications

Compiled by Angela Groves and Jiajun (Brian) Zhou. Anytime you have a new fully-published or electronically available article to report, please send the citation to Angela at angela_groves@urmc.rochester.edu.

Asthma, Allergy, Autoimmunity & Hypersensitivity

Galbiati, V., Papale, A., Marinovich, M., Gibbs, S., Roggen, E. and Corsini, E., 2017. Development of an in vitro method to estimate the sensitization induction level of contact allergens. *Toxicology Letters*, 271, pp.1-11.

Gibbs, S., Kosten, I., Veldhuizen, R., Spiekstra, S., Corsini, E., Roggen, E., Rustemeyer, T., Feilzer, A.J. and Kleverlaan, C.J., 2017. Assessment of metal sensitizer potency with the reconstructed human epidermis IL-18 assay. *Toxicology*, 393, pp.62-72.

Johansson, E., Boivin, G.P. and Yadav, J.S., 2017. Early immunopathological events in acute model of mycobacterial hypersensitivity pneumonitis in mice. *Journal of immunotoxicology*, 14(1), pp.77-88.

Kuroda, Y., Yuki, T., Takahashi, Y., Sakaguchi, H., Matsunaga, K. and Itagaki, H., 2017. Long form of thymic stromal lymphopoietin of keratinocytes is induced by protein allergens. *Journal of Immunotoxicology*, 14(1), pp.178-187.

van Vliet, E., Kühnl, J., Goebel, C., Martinozzi-Teissier, S., Alépée, N., Ashikaga, T., Blömeke, B., del Bufalo, A., Cluzel, M., Corsini, E. and Delrue, N., Consensus Report State-of-the-art and new options to assess T cell activation by skin sensitizers: Cosmetics Europe Workshop.

Developmental Immunotoxicology

Grandjean, P., Heilmann, C., Weihe, P., Nielsen, F., Mogensen, U.B., Timmermann, A. and Budtz-Jørgensen, E., 2017. Estimated exposures to perfluorinated compounds in infancy predict attenuated vaccine antibody concentrations at age 5-years. *Journal of immunotoxicology*, 14(1), pp.188-195.

Nicholson, S.M., Carlesso, G., Cheng, L.I., Cook, H., DaCosta, K., Leininger, J., McKeever, K., Taylor, D., Streicher, K., Eck, S. and Reed, M., 2017. Effects of ICOS+ T cell depletion via afucosylated monoclonal antibody MEDI-570 on pregnant cynomolgus monkeys and the developing offspring. *Reproductive Toxicology*, 74, pp.116-133.

General Immunotoxicology

Bhatti, S.A., Khan, M.Z., Saleemi, M.K., Saqib, M., Khan, A. and ul-Hassan, Z., 2017. Protective role of bentonite against aflatoxin B1-and ochratoxin A-induced immunotoxicity in broilers. *Journal of immunotoxicology*, 14(1), pp.66-76.

Bouallegui, Y., Ben Younes, R., Turki, F. and Oueslati, R., 2017. Impact of exposure time, particle size and uptake pathway on silver nanoparticle effects on circulating immune cells in *mytilus galloprovincialis*. *Journal of Immunotoxicology*, 14(1), pp.116-124.

Buoso, E., Galasso, M., Ronfani, M., Papale, A., Galbiati, V., Eberini, I., Marinovich, M., Racchi, M. and Corsini, E., 2017. The scaffold protein RACK1 is a target of endocrine disrupting chemicals (EDCs) with important implication in immunity. *Toxicology and applied pharmacology*, 325, pp.37-47.

Recent Immunology Publications

General Immunotoxicology

Buoso, E., Galasso, M., Ronfani, M., Serafini, M.M., Lanni, C., Corsini, E. and Racchi, M., 2017. Role of spliceosome proteins in the regulation of glucocorticoid receptor isoforms by cortisol and dehydroepiandrosterone. *Pharmacological research*, 120, pp.180-187.

Buoso, E., Galasso, M., Serafini, M.M., Ronfani, M., Lanni, C., Corsini, E. and Racchi, M., 2017. Transcriptional regulation of RACK1 and modulation of its expression: Role of steroid hormones and significance in health and aging. *Cellular Signalling*, 35, pp.264-271.

Castano, R., Yucesoy, B., Johnson, V.J., Castellanos, L. and Cartier, A., 2017. Inflammatory proteins in nasal lavage of workers exposed to occupational agents. *Clinical & Experimental Allergy*, 47(12), pp.566–1573.

Cetkovic-Cvrlje, M., Thinamany, S. and Bruner, K.A., 2017. Bisphenol A (BPA) aggravates multiple low-dose streptozotocin-induced Type 1 diabetes in C57BL/6 mice. *Journal of immunotoxicology*, 14(1), pp.160-168.

Corsini, E., Ozgen, S., Papale, A., Galbiati, V., Lonati, G., Fermo, P., Corbella, L., Valli, G., Bernardoni, V., Dell'Acqua, M. and Becagli, S., 2017. Insights on wood combustion generated proinflammatory ultrafine particles (UFP). *Toxicology letters*, 266, pp.74-84.

Corsini, E., Vecchi, R., Marabini, L., Fermo, P., Becagli, S., Bernardoni, V., Caruso, D., Corbella, L., Dell'Acqua, M., Galli, C.L. and Lonati, G., 2017. The chemical composition of ultrafine particles and associated biological effects at an alpine town impacted by wood burning. *Science of The Total Environment*, 587, pp.223-231.

Ehrlich, A.K., Pennington, J.M., Bisson, W.H., Kolluri, S.K. and Kerkvliet, N.I., 2017. TCDD, FICZ, and other high affinity AhR ligands dose-dependently determine the fate of CD4+ T cell differentiation. *Toxicological Sciences*.

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