

ITP Symposium April 21-April 22, 2021 (all times are Central)

April 21, 2021

Morning session

10:00-10:05 Opening and Plenary Lecture-introduction, **Dr. Carey Pope**

10:05-10:50 **Dr. Daniel Schlenk**, Professor of Aquatic Ecotoxicology, UC Riverside, CA

Adverse outcome pathways in ecotoxicology

10:50-10:55 Mini-Platform Session Overview-moderator, Md. Ibrahim, President, Graduate Society for Interdisciplinary Toxicology

Undergraduate

10:55-11:00 Justin Leuga, University of Central Oklahoma, "Does parental exposure to Deepwater Horizon crude oil impact offspring development in birds?"

11:00-11:05 Brice Koons, Oklahoma State University, "Effects of PFAS on lipid homeostasis and cell viability in RTL-W1 cells"

11:05-11:10 Hallum Ewbank, University of Central Oklahoma, "The physiological effect of moderate urbanization on song sparrows"

11:10-11:15 Alex Benton, Oklahoma State University, "Use of protein dynamics modeling to enhance butyrylcholinesterase-mediated ghrelin deacylation"

Graduate

11:15-11:20 Sarah Hileman, Oklahoma State University, "Toxicology for Museum Application: the Case of the Pink *Peromyscus*"

11:20-11:25 Md Ibrahim, Oklahoma State University, "Measurements of labile zinc (Zn²⁺) in the rainbow trout gut cell line (RTgutGC) using a fluorescent dye, FluoZin-3AM"

Postgraduate

11:25-11:30 Himanshi Upadhyaya, University of Derby, UK, "Phytochemical composition of hexane, chloroform, and methanolic extracts from the roots of *Erigeron multiradiatus* by GC-MS

11:30-12:00-Student roundtable, Dr. Tim Shafer, USEPA: Toxicology opportunities as a government scientist

12:00-1:00 Break

Afternoon session

ITP Fellows Presentations-moderator, **Dr. David Wallace (ITP co-director)**

1:00-1:15 **Debarati Chanda**-Repeated, ultralow-level oral chlorpyrifos exposures elicit paradoxical increases in serine hydrolase activities and modify the gut microbiome.

1:15-1:30 **Sarah Hileman**-Levels of Polycyclic Aromatic Hydrocarbon and Metal Contamination in Urban Playground Soils throughout Oklahoma City Metropolitan

1:30-1:45 **Md. Ibrahim**-Effects of Environmental Chloride Concentration on Copper and Silver Bio-availability and Bio-reactivity in Bluegill (*Lepomis macrochirus*) Fish

1:45-2:00 **Katie Oswalt**- Developing a tissue-engineered eye model to test an ocular drug delivery system

2:00-2:15 **Justin Scott**- Evaluation of the sensitivity of three rainbow trout cell lines (RTgill-W1, RTgutGC, and RTL-W1) to effluent toxicants

2:15-2:30 **Adriana Townsend**-Assessing how adaptation to warmer temperatures impacts susceptibility to toxicity

2:30-2:45 **Shauni Windle**-Effect of atrazine on development of the native amphibian *Acris blanchardi* (Blanchard's cricket frog)

2:45-3:00 Break

Dean's Lecture in Interdisciplinary Toxicology-introduction and moderator, **Dr. Jason Belden**, ITP co-director

3:00-3:45 **Dr. Stacey Harper**, Oregon State University, Corvallis, OR

Integrative nanotoxicology: linking rapid assays and informatics to understand nanomaterial-biological interactions

20th Annual Sitlington Lecture in Toxicology-introduction and moderator, **Dr. Pope**

3:45-4:30 **Dr. Tim Shafer**, United States Environmental Protection Agency, Research Triangle Park, NC

Reducing the Use of Animals in Toxicity Testing: The In Vitro Developmental Neurotoxicity Testing Battery

4:30 1st Day closing remarks; preview of 2nd day-**Dr. Wallace**

April 22, 2021

ITP Faculty presentations

Morning session

8:55-9:00 Introduction, C. Pope

9:00-9:20 Dr. Charles Abramson, Regents Professor of Psychology, Lawrence L. Boger Professor of International Studies, OSU STW

The contribution of comparative psychology to behavioral toxicology

9:20-9:40 Dr. Ken Olivier, Olivier KConsulting, Cambridge, MA (Adjunct Associate Professor, OSU STW)

Genetically modified T cell therapy, the next evolution towards individualized medicine

9:40-10:00 Dr. Lin Liu, Regents Professor, Lundberg-Kienlen Endowed Chair in Biomedical Research and Director, Oklahoma Center for Respiratory Infectious Diseases, OSU STW

Ferroptosis and Asbestos-induced Toxicity

10:00-10:20 Dr. Edralin Lucas, Professor, Jim and Lynne Williams Professor, OSU STW

Bioactive food components and gut health: potential for xenobiotic interactions

10:20-10:40 Dr. Matteo Minghetti, Assistant Professor, Integrative Biology, OSU STW

Probing the intracellular environment: use of x-ray absorption spectroscopy to detect intracellular metal speciation

10:40-11:00 Dr. Carey Pope, Regents Professor and Sitlington Chair in Toxicology, OSU, STW

Pharmacology and toxicology of cholinesterases

11:00-11:20 Dr. Jarrad Wagner, Professor and Director, School of Forensic Sciences, OSU Center for Health Sciences, Tulsa

Public health impacts of illicit fentanyl

11:20-1:00 Break

Afternoon session

1:00-1:20 Dr. Josh Ramsey, Professor, School of Chemical Engineering, OSU STW

Zwitterionic hydrogel microbeads for encapsulation and delivery of protein

1:20-1:40 Dr. Ashish Ranjan, Professor, Kerr Chair and Director, Institute for Translational and Emerging Research in Advanced Comparative Therapy, OSU STW

Device-directed nanomedicines for chemo-immunotherapy of solid tumors

1:40-2:00 Dr. Janeen Salak-Johnson, Associate Professor, Temple Grandin Professorship in Animal Behavior and Well-Being, Department of Animal and Food Sciences, OSU STW

Systematic approach to understanding maternal prenatal stress effects on brain, behavior, and immunity of her progeny

2:00-2:20 Dr. Pratul Agarwal, Professor, Assistant VP for Research and Director, High Performance Computing Center, OSU STW

Protein dynamics of butyrylcholinesterase in modulation of ghrelin signaling

2:20-2:40 Dr. David Wallace, Professor and Co-Director, OSU Interdisciplinary Toxicology Program, OSU Center for Health Sciences, Tulsa

Pancreatic cancer: Impact of toxic metals, pesticides and mixtures

2:40-3:00 J. Belden, Summary/2nd day closing comments/preview of quiz and reception/announcements

3:00-4:00 Zoom multiple-choice quiz over material presented by *Drs. Schlenk, Harper and Shafer*, the *ITP fellows and ITP faculty* (Open to all participants)

4:00-5:00 Judges review of quiz scores and selection of awards; review input from mini-platform and ITP Fellows presentations/selection of awards

5:00-6:00 Zoom Reception/Student-Presenter Interactions; Announcement of Awards/Close meeting (C. Pope)