

30th Annual meeting of the Ohio Physiological Society held at the University of Toledo College of Medicine and Life Sciences

Dr. Lance Stechschulte
Postdoctoral Fellow
Department of Physiology and Pharmacology
Officer, Ohio Physiological Society

Dr. Terry D. Hinds, Jr.
Assistant Professor
Department of Physiology and Pharmacology
President, Ohio Physiological Society

The American Physiological Society (APS, <http://www.the-aps.org/>) is a member of the Federation of American Societies for Experimental Biology (FASEB), a coalition of 26 independent scientific societies devoted to fostering education, scientific research, and dissemination of information in the physiological sciences. The Society was founded in 1887 with 28 members and now has over 10,500 members. The National headquarters of the Society is based in Bethesda, Maryland, on the campus of the Federation of American Societies for Experimental Biology (FASEB). The Ohio Chapter of the APS, the Ohio Physiological Society (OPS, <http://ohio-physiological-society.org/>), was established in 1986, and one of the highlight events of this organization is an annual meeting. On October 17, 2015, the 30th annual meeting was hosted by the OPS President, Dr. Terry D. Hinds, Jr., and the Department of Physiology and Pharmacology at the University of Toledo College of Medicine and Life Sciences. Fifty-seven members of OPS, including faculty members, postdoctoral fellows, graduate trainees and undergraduate students from 10 of Ohio's universities and Colleges attended the meeting and exchanged their scientific interests rooted in Physiology. Prominent among the faculty supporters and members of the OPS meeting were the OPS Founder, Dr. Peter Lauf (Wright State University), Dr. Dan Halm the Treasurer of the OPS (Wright State University), and Dr. Norma Adragna (Wright State University), and Dr. Bina Joe the 2008 OPS President (University of Toledo). Besides funding from the OPS and the APS, the meeting was supported by Dr. Christopher Cooper, the Dean of the University of Toledo College of Medicine and Life Sciences, and other corporate sponsors.

The conference began with opening remarks from the OPS President Dr. Terry Hinds from the University of Toledo College of Medicine and Life Sciences (<https://www.utoledo.edu/med/depts/physpharm/faculty/Hinds.html>). The scientific sessions started with outstanding research presentations by graduate students. The first talk was by Natalie Sirianni (University of Toledo) titled "Angiotensin II induces adipogenesis in human mesenchymal stem cells: Contributions of the HO-1-SIRT1 pathway". The second talk was given by

Pavani Beesetty (Wright State University) titled "TRPM7 channel activity in transgenic mice lacking TRPM7 kinase activity". Then, Harshal Waghulde (University of Toledo) gave a talk titled "Development of a novel Gper-1 Knock out rat model using a modified CRISPR/Cas9 technology". The following presentation was from Alisa Blazek (The Ohio State University) titled "Walking Exercise regulates Gene Expression to Maintain Cartilage Health and alters Genes Associated with Osteoarthritis". The last talk of the session was from Xi Cheng (University of Toledo) titled "CRISPR/Cas9-based genome modification of a Novel Rat Long Non-coding RNA within a homologous GWAS associated locus for QT-intervals." The topics were diverse, and the scientific impact was reflected through the active discussions that followed each presentation. Ending the morning session was an interactive event entitled 'Networking Bingo', which is an activity that enhanced interactions between meeting attendees from different Institutions.

The second scientific session opened with presentations from faculty members. The first given by Dr. Kathleen Broomall (Miami University) titled "Chronotherapy to Normalize Fasting Blood Glucose May Attenuate Metabolic Syndrome with Hyperglycemia". The second talk was given by Dr. Edwin Sanchez (University of Toledo) titled "Nuclear Receptor Chaperones: Fulcrums of Molecular and Metabolic Equilibria". Both presentations received excellent questions, which is a testament to the enthusiasm of the attendees.

Dr. Don DeFranco from the University of Pittsburgh gave an excellent Keynote presentation titled "Integration of genomic and non-genomic signals in embryonic stem cells". He discussed his laboratory's work on the risk of glucocorticoids administered to pregnant women at risk of premature delivery. His group showed that glucocorticoids increase the development of neurons at the expense of the progenitors, thus leading to a thinner cortex and decreased neurodevelopment. Also, he described his laboratory's findings demonstrating glucocorticoid receptor phosphorylation controls the receptors activity. The phosphorylation changes can be from genomic and non-genomic signals. Finally, Dr. DeFranco described sex-specific effects of glucocorticoids and the idea of an optimal dose for males versus female offspring.

After the keynote speaker, nine students presented during the Data Blitz session, which were 90 seconds in length designed to stimulate interest in the poster session. The meeting then moved into the poster room, where a total of 20 posters were displayed, presented and judged by their overall scientific caliber. The energy of the room had continued for several hours before the meeting reconvened at the Radisson Hotel for dinner and announcements of awards. The students that presented at the Data Blitz session were eligible for the Dr. Peter K. Lauf Travel Award to attend the Experimental Biology Meeting in April 2016 (San Diego). Thanks to the generosity of Dr. Lauf, along with the APS and the OPS, one award was made possible. Praveen Kumar Alla (Wright State Univ.) earned the prestigious Dr. Lauf travel award with an outstanding poster presentation. Two additional prizes, funded by the Office of the Dean of the University of Toledo College of

Medicine and Life Sciences were given for best oral presentation and outstanding science. Alisa Blazek (The Ohio State University) was awarded the Dean Cooper best oral presentation award while Harshal Waghulde (University of Toledo) was awarded the Dean Cooper outstanding science award. Congratulations to all of the competition winners and all of our presenters for their high-quality research presentations and posters.

Before the meeting concluded, Dr. Peter Lauf (Wright State University) gave concluding remarks. He was enthusiastic for the young scientists, their mentors, and their research projects. He also thanked the faculty and staff at the University of Toledo for hosting a fruitful and inspiring conference, the President of OPS Dr. Hinds for making the conference more exciting, and Dr. Don Defranco for taking the time to visit and deliver the Keynote lecture.



Alisa Blazek (The Ohio State University) giving her graduate oral presentation titled “Walking Exercise regulates Gene Expression to Maintain Cartilage Health and alters Genes Associated with Osteoarthritis”.



OPS members participating in the 'Networking Bingo' function.



OPS lunch from Grape Leaf in Toledo.



The President of the Ohio Physiological Society, Dr. Terry D. Hinds, Jr., and the Keynote Speaker, Dr. Don DeFranco.



Dr. Peter K. Lauf Travel Award winner Praveen Kumar Alla (not present), Dean Cooper best oral presentation award winner Alisa Blazek, and Dean Cooper outstanding science award winner Harshal Waghulde with 2015 OPS President Dr. Terry Hinds, keynote speaker Dr. Don DeFranco, and OPS founder Dr. Peter Lauf (Wright State University).