

Pharmacology & Toxicology Update

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Boonshoft
School of Medicine
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Department of Pharmacology
and Toxicology

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CHAIR'S CORNER



The Department of Pharmacology & Toxicology has a newsletter designed to keep our alumni and the Boonshoft School of Medicine and Wright State University apprised of the happenings in the department. The newsletter will be issued three times per year, and can be found on the department website: medicine.wright.edu/pharmacology-and-toxicology

Each issue will also contain a "Spotlight" section that highlights a faculty colleague or a program. For this issue, we will be highlighting Dr. Mauricio DiFulvio, assistant professor of Pharmacology & Toxicology. To get on the departmental mailing list to receive an electronic version, or to provide suggestions

as to content, please contact Catherine Winslow at catherine.winslow@wright.edu.

DEPARTMENT UPDATES

Historic Master's Class enrolled in the Department of Pharmacology & Toxicology

We are pleased to announce that a total of 32 new students are enrolled in the Master's Program this year. The students include four in the new M.D./M.S. program. The students are from varied backgrounds and come from places ranging from Ohio to India. Welcome!



Dr. Richard Simman is recruited to Toledo



It is with mixed feelings of great pride and some mild sadness we announce that Dr. Richard Simman has been recruited to the University of Toledo

where he will lead a new wound healing program with strong ties to the University of Michigan. Professor Simman has played an important role in both the research and educational missions of the department. We all wish him the best for this well deserved promotion, and will miss him!

Dr. Peter Lauf honored by the APS



Congratulations to Dr. Peter Lauf, who has been asked to serve as an Editorial Advisory Board member of the American Journal of Physiology-Cellular

Physiology. Moreover, Professor Lauf has been approved as a Fellow of the American Physiological Society. The rank of Fellow is designed to honor distinguished members who have demonstrated excellence in science, contributed to the physiological sciences and served the society. Our emeritus colleague certainly meets these criteria! Fellows are considered to be in the top tier of all eligible members. Professor Lauf will now be using the designation "FAPS" after his name to indicate this honor.

Sounds like our Emeritus colleague is going to need new business cards...

New personnel changes in the Pharmacology Translational Unit

One of the goals of the department is to foster translational studies to facilitate the process where discoveries at the laboratory bench can be brought to the clinic. Moreover, the Pharmacology Translational Unit (PTU) located in the Wright State Physicians Building next to our campus is set up to conduct both translational research studies as well as pharmaceutical clinical trials. The founding director, Faye Hager, has now retired and Elizabeth Cates, LPN, CRC has taken over much of her administrative duties. Gordon Simmons has been hired to supervise the regulatory aspects of the PTU. In addition to Amy Williams, CMA, and nurse practitioner Scott Newman, M.S.N., NP, WSU dermatology residents will also be working in the PTU. We are pleased to announce that the PTU has active pharmaceutical studies enrolling both adults and children subjects with atopic dermatitis (eczema) or psoriasis. For questions or more details, please contact PTU Director Elizabeth Cates at 937.245.7500.

FACULTY SPOTLIGHT

For this issue, we are taking the opportunity to spotlight Mauricio Di Fulvio, Ph.D., assistant professor of pharmacology & toxicology.



Dr. Di Fulvio was born and raised in Córdoba, Argentina. His father, Hedgar Di Fulvio, was a pediatrician, accomplished musician and published poet. His

mother, Norma, is a homemaker. His family has Italian roots as his grandfather emigrated from Italy. Dr. Di Fulvio has always had a strong interest in science, and was strongly encouraged by his chemistry teacher in high school. In fact, Dr. Di Fulvio served as a chemistry tutor in high school and in college. After graduation, he trained in clinical biochemistry at the University Hospital Nuestra Señora de la Misericordia and then decided to pursue a Ph.D. degree in biochemistry at the National University of Córdoba. His dissertation work concerned thyroid hormone biosynthesis, and he obtained his doctorate December 18, 1999. Through a mutual acquaintance, Dr. Di Fulvio came to the attention of our own Córdoba native Dr. Norma Adragna, who recruited him to Wright State University to work with her and Dr. Peter Lauf on ion transport. After almost two years,

Dr. Di Fulvio then transferred to the laboratory of Dr. Julian Cambroner, at that time in the Department of Physiology and Biophysics, but now in Biochemistry, where he spent the next four years studying the role of phospholipase D on cell growth. He then returned briefly to Argentina, but, luckily for all of us, his talents were needed back here and was again recruited back to WSU to work in the laboratory of Dr. Javier Alvarez-Leefmans. By 2010, he obtained his own independent laboratory and was a research assistant professor in the department. Following receipt of a coveted career development grant from the American Diabetes Association, Dr. Di Fulvio became an assistant professor in Pharmacology & Toxicology in 2012. His work concerns insulin secretion, and he is well known for his innovative studies defining novel pathways by which islet cells generate this critical hormone. As outlined in the winter 2016 issue of this newsletter, Dr. Di Fulvio's research has been showcased many times, including having images from his research papers thrice placed on the cover of the prestigious Journal of Endocrinology. His important research is funded by additional grants from the ADA as well as a three-year NIH R21 grant (he received an amazing 1.3% score!).

Dr. Di Fulvio is passionate about his research as well as passionate about



Dr. Di Fulvio and research assistant, Lisa Kelly demonstrating sartorial brightness

teaching and education. He approaches both with considerable rigor. He is amongst our "brightest" colleagues, as shown by his laboratory attire.

Dr. Di Fulvio met his future wife Coti while he was a sailing instructor and she was one of his students. Married in December 2000, they have two sons, Tomas (age 15) and Mateo (age 13). When not working on his research or teaching responsibilities, Dr. Di Fulvio enjoys spending time with his family, especially camping. He also enjoys cooking, and apparently is well known for making pizzas on the grill.

For Dr. Di Fulvio, our colleague who brightens the department in many ways, especially regarding its future, we are very pleased to highlight you and your efforts!

KUDOS



Ravi P. Sahu, who has been busy with presentations, including a presentation entitled, "Aspirin attenuates melanoma tumor growth via PGF2 α -SOX-2 dependent pathways" presented at the EB 2017 meeting and invited talk "Evaluation of potential anti-cancer drugs to target key signaling pathway for melanoma intervention" for the International Conference on Pharmaceutical Drugs.

Our colleague has been quite busy!

Dr. Jeffrey Travers, who just finished his four-year tenure as a standing member of the NIH study section, Arthritis, Connective Tissue and Skin.

Hopefully he will have more time on his hands!



Dr. Yanfang Chen, who recently served as a member of the American Diabetes Association Research Grant Review Committee.

How sweet!

Dr. Khalid Elased, whose son Ramzi spent the past summer working in the department as part of the prestigious STEP-UP program sponsored by the NIDDK. As part of this NIH program, Ramzi Elased presented a poster at a special symposium in Bethesda on his studies involving testing of a novel traditional Indian (Ayurvedic) compound used to treat snake bites on epithelial cell lines. Congrats to Ramzi who currently is a senior at Centerville High School.



Ramzi and proud father, Professor Elased.

Christine Rapp, M.S., research associate II, is the proud mum of Allison Rapp, Greene County Fair Queen



Jeannine M. Crum Gregoriades obtained her Ph.D. degree directed by Dr. Alvarez-Leefmans, on August 28, 2017, with the thesis entitled: "Functions of the apical Na⁺/K⁺/2Cl⁻ cotransporter 1 in choroid plexus epithelial cells."

SCHOLARLY ACTIVITY

PUBLICATIONS

Heme deficiency sensitizes yeast cells to oxidative stress induced by hydroxyurea. Singh A, **Xu YJ**. *Journal of Biological Chemistry*. 2017 Jun 2;292(22):9088-9103. PMID: 28377506

Marasini B, **Sahu RP**. Natural Anti-Cancer Agents: Implications in Gemcitabine-Resistant Pancreatic Cancer Treatment. *Mini Reviews in Medicinal Chemistry*. 2017;17(11):920-927. doi: 10.2174/1389557517666170315124438. PMID: 28302042

Pan Q, Liao X, Liu H, Wang Y, **Chen Y**, Zhao B, Lazartigues E, Yang Y, Ma X. MicroRNA-125a-5p alleviates the deleterious effects of ox-LDL on multiple functions of human brain microvessel endothelial cells. *American Journal of Physiology-Cellular Physiology*. 2017 Feb 1;312(2):C119-C130. PMID: 27903586

Thyagarajan A, Saylae J, **Sahu RP**. Acetylsalicylic acid inhibits the growth of melanoma tumors via SOX2-dependent-PAF-R-independent signaling pathway. *Oncotarget*. 2017 Jul 25;8(30):49959-49972. PMID: 28636992

Thyagarajan-Sahu A, **Sahu RP**. Potential Contributions of Antioxidants to Cancer Therapy. *Integrative Cancer Therapies*. 2017 Mar 1;1534735416681639. doi: 10.1177/1534735416681639. PMID: 28627256

Travers JB, Poon C, Rohrbach DJ, Weir NM, Cates E, Hager F, Sunar U. Noninvasive mesoscopic imaging of actinic skin damage using spatial frequency domain imaging. *Biomedical Optics Express*. 2017 May 23;8(6):3045-52. PMID: 2863925

PRESENTATIONS

Oroszi, T. (2017). A Preliminary Analysis of High-Stakes Decision-Making for Crisis Leadership. National Homeland Security, Buffalo, NY. (Oral presentation/Abstract).

Oroszi, T. (2017). Americans Killing Americans: A Comparison of U.S. Male Citizens Charged with Acts Related to Terrorism Since 9/11. Infragard, Dayton, OH. (Oral presentation/Abstract).

Oroszi, T., Lukey, B., DelRaso, N., Marcel, B., Mattie, David (2017) Department of Defense Toxicology Efforts, TriService Toxicology Consortium Meeting (Oral Presentation/Abstract).



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