

Pharmacology & Toxicology Update

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Boonshoft
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Department of Pharmacology
and Toxicology

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CHAIR'S CORNER



The Department of Pharmacology and Toxicology has started a newsletter to keep our alumni and the Boonshoft School of Medicine and Wright State University apprised of the happenings in the department. This newsletter will be issued three times per year. Each issue will also contain a "Spotlight" section that highlights a faculty colleague or a program. 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.

FACULTY NEWS

Drs. Lockwood and Lucot retire and return in emeritus fashion



Thomas
Lockwood, Ph.D.



James Lucot, Ph.D.

After more than 30 years of dedicated service to the Department, Drs. Thomas Lockwood and James Lucot have retired as of July 1, 2015. Given that these two scholars have much more to give in terms of all three missions of the department (education, research, service), we are all fortunate that both have agreed to return as emeritus faculty. In particular, both of our colleagues have

expressed interest in pursuing research projects to keep their golden years brightly occupied!

Thanks for your service and for remaining in the department!

Dr. Ravi Sahu recruited to department



Ravi Sahu, Ph.D.

It is with great pleasure that we announce that Ravi Sahu, Ph.D., has been recruited as an assistant professor of pharmacology and toxicology. Dr. Sahu has a successful research program studying the immunology of melanoma, in particular, the role of environmental influences that can induce oxidative stressors. He is presently funded by an NIH K-22 grant. Dr. Sahu comes to us from Indiana University, where he was an assistant professor in the Department of Pathology.

Look for Dr. Sahu to be in the Spotlight section of a future issue of the Newsletter!



Yanfang Chen,
M.B.B.S., Ph.D.



Khalid Elased,
Pharm.D., Ph.D.

Drs. Chen and Elased promoted to full professor

It is with great pride we announce that Drs. Yanfang Chen and Khalid Elased have been promoted to full professor, becoming official July 1, 2015. Both of our esteemed colleagues have developed nationally recognized investigative programs that warrant their promotion. Congratulations to Drs. Chen and Elased!

FACULTY SPOTLIGHT

Each issue of the departmental newsletter will “spotlight” an individual faculty or program in the department. For our first newsletter, we are taking the opportunity to spotlight Normal Adragna-Lauf, Ph.D., professor of pharmacology and toxicology.



Dr. Adragna was born and raised in Cordoba, Argentina, the youngest of six children. Her father was a businessman, and her mother was a homemaker. From an early age, she was very interested in education and science. In fact, her parents had related to her that when she was five, she was queried as to her future career, and Dr. Adragna replied she wanted “to be surrounded by books and learning.” Dr. Adragna was fascinated by the concept of energy, and how it was formed and used in cells and tissues. Following high school, she obtained a B.S. in biochemistry (graduating summa cum laude) and then went on for her Ph.D. in biochemistry at the University of Cordoba, actually finishing her dissertation at the University of Buenos Aires. Her work related to ion channels, and she describes that her

environment was filled with strong female scientist role models, somewhat rare in those days. Dr. Adragna obtained a very competitive Fogarty Fellowship that allowed her to work for two years at the University of Cambridge, and also worked at the Center for Nuclear Studies in France. She then emigrated to the United States to pursue a postdoctoral fellowship at Harvard in the laboratory of the noted scientist Dr. Daniel Tosteson. While at Harvard, she was involved in seminal studies that helped to separate the Na-K versus the K-Cl pumps. Moreover, at a biophysical national meeting, she sought out the advice of Dr. Peter Lauf of Duke University, as she was trying to replicate some of his published work to no avail. Dr. Adragna was not only able to replicate Dr. Lauf’s studies, she found a life-long collaborator in this up-and-coming scientist. Dr. Adragna transferred to Duke where she was a research assistant professor, then, in 1982 married Dr. Lauf. When Dr. Lauf was recruited to Wright State University to chair the Department of Physiology and Biophysics in 1985, Dr. Adragna was recruited to become associate professor of pharmacology and toxicology. These two have certainly transformed Wright State! Her career was

quite successful, and she was promoted to professor in 2001. Over the years, Drs. Adragna and Lauf continued close collaborations that were highly successful as measured by grants, publications, and training of students and postdoctoral fellows. Dr. Adragna’s work has certainly added to our understanding of ion transporters. Yet, their proudest collaborative effort is most likely their son Adrian, who is a successful assistant professor of engineering at the University of Louisville. Dr. Adragna also served the department as interim chair from March 2013 until February of 2015. As her “successor,” I can attest to the superb job that she did in this role, which made my job much easier.

When asked about her hobbies, Dr. Adragna stated that, “science is my hobby.” She spends her “free time” reading on various scientific areas, and her latest interest is on nanomedicine. Dr. Adragna has truly enjoyed her career to date. “I am so thankful to be able to do what I want to do in life—one is very lucky when one loves what they do.”

Indeed, we are the ones who are most lucky to have a colleague of your caliber and energies in our midst!

—Jeffrey Travers

DEPARTMENT UPDATES

CBRN Program goes national

The Chemical, Biological, Radiological, and Nuclear Defense Program (CBRN) has now become national! Under the leadership of director Terry Oroszi and associate director Captain Kelly Williams, the CBRN program is now set up to teach courses nationwide to meet the expanding needs for quality education in this vital area. The Wright State program is the nation’s only graduate-level CBRN defense certificate program. The three-course program, which can be completed in four months, is taught by experts with current industry and armed forces experience. The program equips graduate and advanced undergraduate students with cutting-edge knowledge and experience in CBRN defense. The application process has been streamlined

for non-Wright State students who are interested in CBRN defense but are attending another university, serving in the armed forces, or working in an industry or agency responsible for CBRN defense. This expansion is funded by a grant from the Boonshoft School of Medicine. The increased course availability and streamlined enrollment also make the program accessible to students who want to use tuition assistance through military service. For more information about the CBRN certificate program, go to: <http://catalog.wright.edu/chemical-biological-radiological-nuclear-defense>.

Kudos to Terry and Kelly for their efforts in keeping us educated and safe!



ALUMNI NEWS

With all of the recent curriculum changes, to ensure that the departmental educational endeavors are optimized, we are sending a short electronic poll to all alumni to obtain their feedback.

Department retreat unveils new motto



The department partook in an off-site retreat on September 16, 2015. Directed by senior HR training/development specialist Cindy Schisler from the WSU Human Resources Office, the retreat consisted of “fun” activities in the morning, followed by a SWOT (strengths-weaknesses-opportunities-threats) analysis, and then focused discussion on faculty work loads. The faculty received new t-shirts, and a new motto for the department was unveiled: “Pharmacology and Toxicology Advancing Research from Molecule to Man.” Thanks to Cindy Schisler and our own Catherine Winslow for organizing this retreat!



Pharmacology translational unit opens



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. With that important goal in mind, the department is thrilled to announce the opening of our new Pharmacology Translational Unit. Housed conveniently in the Wright State Physicians Health Center on campus, the Pharmacology Translational Unit supports both translational research studies that presently include studies to define the ability of skin wounding of geriatric skin to protect against the increased carcinogenic potential of sunlight in this population as well as other ongoing NIH- and VA-funded studies. The Pharmacology Translational Unit is also designed to support pharmaceutical clinical trials, which can provide patients in the Dayton community with new cutting-edge therapies. We are quite fortunate to have recruited Faye Hager, B.S.N., R.N., CRC, a very experienced colleague, to direct the Pharmacology Translational Unit.

KUDOS

Dr. Lauf was appointed chair for the Distinguished Physiologist Committee for a three-year term

Dr. Jeffrey B. Travers, who was able to get one of his NIH R01 grants renewed for another five years, and a VA Merit grant renewed for another four years.



Dr. F. Javier Alvarez-Leefmans, who obtained a grant from the Dayton Children’s Hospital to study hydrocephalus.

Dr. Courtney Sulentic received the distinguished service award at the Regional OVSOT meeting! A nice surprise since it was the first time it was given!

SCHOLARLY ACTIVITY

GRANTS

NIH/NHLBR01 2R01HL062996-15 (Travers PI) 2015-2020 Platelet-activating Factor and Epidermal Cytotoxicity. The objectives of these studies are to define the role of oxidized glycerophosphocholines in ethanol exposure mediated acute inflammatory and delayed systemic immunosuppressive effects in response to thermal burn or UVB injuries in mice and humans.

Congratulations to Dr. **Alvarez-Leefmans** whose grant application entitled “Pharmacological control of cerebrospinal fluid secretion with bumetanide targeting the choroid plexus Na⁺-K⁺-2Cl⁻ cotransporter NKCC1: a rational medical treatment of idiopathic intracranial hypertension” was approved by the Dayton Children’s Hospital Foundation. Funding will be released upon approval of the IRB.

Congratulations to **Dr. Richard Simman** who was awarded a clinical research grant (WV-GRANT-ID-0001) for the study titled Early Identification of Suspected Deep Tissue Injury (sDTI) Utilizing Long-Wave Thermographic Imaging (LWIT). Dr. Simman reported the work will be done at Kindred Hospital and will involve 100 patients. Software will predict the level of injury of the wound. They will also use night goggles to see colors of the perfusion.



PUBLICATIONS

Sahu RP. Expression of the platelet-activating factor receptor enhances benzyl isothiocyanate-induced apoptosis in murine and human melanoma cells. *Molecular Medicine Reports.* 2015; 12(1):394-400.

Sahu RP, Ferracini M, Travers JB. Systemic chemotherapy is modulated by platelet-activating factor-receptor agonists. *Mediators of Inflammation.* 2015; 2015:820543.

Ferracini M, **Sahu RP**, Harrison KA, Waeiss RA, Murphy RC, Jancar S, Konger RL, **Travers JB.** Topical photodynamic therapy induces systemic immunosuppression via generation of platelet-activating factor receptor ligands. *Journal of Investigative Dermatology.* 2015; 135(1):321-3.

PRESENTATIONS

Mari, M., Younes, S., **Simman, R., Oroszi, T., Alsabri, Chen, Y., Cool, D.R.,** (2016). The Correlation Between Wound Healing Rate and Circulating Microvesicles Collected from Stage III and IV Pressure Wounds Fluid Treated with NPWT Alone VS NPWT and Oasis Ultra. Society of Thoracic Surgeons, STS 52nd Annual Meeting.

Scott, R. P., Gallimore, J., Burke, B., Benton, N., Carabello, H., Davidson, M., Ingmundson, P., McCoy, S., Graham, C., **Oroszi, T.,** Dominguez, M., (2015). The VA Virtual Medical Center: Implementing a Vision for a Virtual Healthcare Campus for our Veterans, In Interservice/ Industry Training, Simulation, and Education Conference (I/ITSEC).

Mari, M., Younes, S., **Alsabri, S.G.,** Shaban, A., **Simman, R., Chen, Y., Cool, D.R., Oroszi, T.,** (2015). The Correlation Between Wound Healing Rate and Circulating Microvesicles Collected from Stage III and IV Pressure Wounds Fluid Treated with NPWT Alone VS NPWT and Oasis Ultra. The Amputation Prevention Symposium, Chicago, IL.

Oroszi, T., (2015). Traditional Faculty Meeting Style Is Not Conducive to Group Decision Making. Midwest Academy of Management Conference. (Manuscript)

Oroszi, T., (2015). Egos at the Table, a Study of Meeting Behaviors. Midwest Academy of Management Conference. (Manuscript)

Oroszi, T., (Oct. 2015). Disruptive technology; Don't get caught with your pants down. Technical Symposium Cincinnati-Dayton Chapter of INFORMS. (Abstract)

Oroszi, T., (Oct. 2015). Americans' Participation in Islamic Extremism. 8 Hour workshop, Advanced Technical Intelligence Center (ATIC), Beaver-creek, OH. (Oral Presentation)

Oroszi, T., (Oct. 2015). A New Model for Collaborative Decision Making. VA Simulations Center, VAMC Dayton, OH. (Oral Presentation)

Oroszi, T., (Oct. 2015). 4-5-6 Power Platform. Midwest Academy of Management Doctoral Consortium. Columbus, OH. (Oral Presentation)

Oroszi, T., (Sept. 2015). The Use of Power in Organizations. Qualifying Defense, CEHS, WSU, Fairborn, OH. (Oral Presentation)

Yanfang Chen, M.D., Ph.D. and Ji Bihl, Ph.D. published a paper in *Vascular Pharmacology*

OTHER

Jinju Wang, a Ph.D. student in Dr. Chen's lab, received a predoctoral award from American Heart Association (AHA).

The Scientific Writing II Book has been published, Case Report Markedly Elevated Carbamazepine-10,11-epoxide/Carbamazepine Ratio in a Fatal Carbamazepine Ingestion Jason L. Russell,1,2 Henry A. Spoiler,2,3 and Daniel D. Baker4

Toxicologist Dr. Sol Bobst teaching an online journal club this spring (January).

1.- April 1, 2015. Reelected as Member of the Faculty Senate, representing the Boonshoft School of Medicine, for 2015-2017 academic years.

2.- June 18, 2015. Elected member of the Research Committee for the Office of Research Affairs at Boonshoft School of Medicine, for the elected term ending in 2017. Term of office begins on July 1, 2015 and ends on June, 30 2017.

August 10, 2015. Graduated a Master of Science student, Pankaj Patyal, who successfully defended his thesis "Expression of Aquaporins in Mouse Choroid Plexus and Ependymal cells."

SEMINARS

Yanfang Chen was invited by the Chinese Pharmacological Society as a distinguished guest to give a talk on the 30th anniversary in Beijing Nov 2-4, 2015, titled "Extracellular Microvesicles: Potential for Biomarkers and Therapeutics"

Francisco Javier Alvarez-Leefmans, M.D. is invited as seminar speaker at University of Pittsburgh School of Medicine. This seminar will be co-sponsored by the neurology department, and the renal-electrolyte division, under the series "Neurology-Renal Grand Rounds Lectures." The seminar was scheduled for November 11, 2015.