

Graduate Affairs & Research

JULY 2008



COLLEGE OF PHARMACY
UNIVERSITY OF OKLAHOMA
HEALTH SCIENCES CENTER



Phil Coburn and Julie Scott

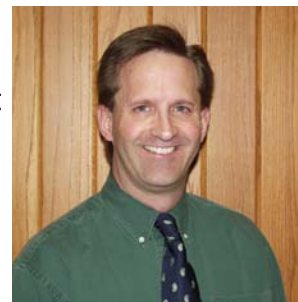
Students receive recognition from the College of Pharmacy

Four graduate students and one postdoctoral fellow have received special recognition from the College of Pharmacy at the annual Pharmacy Banquet..

Phil Coburn and Julie Scott (pictured left) are recipients of the John B. Bruce Award. This award is in honor of John Benjamin Bruce, who joined the faculty at the Oklahoma City College in 1949 and remained on Pharmacy faculty until his death in 1973. In 1983, Mrs. Bruce designated this award to recognize an outstanding graduate student in Medicinal Chemistry and Pharmaco-

dynamics. Julie Scott (Dr. McShan, faculty advisor) will be finishing her graduate work in August 2008. Phil Coburn, Ph.D. (Dr. Shankar, faculty advisor) currently holds a postdoctoral fellowship with the American Heart Association.

Kelly S. Williamson (Dr. Hensley, faculty advisor) was awarded the E. Blanche Sommers Scholarship. Dr. Sommers was the first woman to be named as a dean on the Norman campus and the first recipient of the David Ross Boyd Professorship at the HSC campus. This award is presented to an outstanding student in the pharmaceutical sciences.



Kelly S. Williamson

Ann Howell (Dr. Hagemann, faculty advisor) and **Garry Robbins** (Dr. Carnahan, faculty advisor) each received the H. Richard Shough Award. This scholarship fund was established to recognize the leadership of Dr. Shough of the graduate program and his contributions in the development of the dual degree program.

Congratulations to all these students for their achievements!

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Summer Research Projects at the College



You might anticipate summer months at the College of Pharmacy means quiet hallways, but instead, there has been a flurry of activity—especially in and around research laboratories and conference rooms. Several faculty members have accepted undergraduate students during June and July, providing them with unique research opportunities. These students have come from as close as Oklahoma City and as far away as France.

Four students from the Universite D’Auvergne, located in Clermont-Ferrand, France are participating in a two-month rotation here at the College. They are Pierre Dumont (working with Dr. Shankar); Laure Brunet (working with Dr. McShan), Stephanie Chene and Eric Dessertene (both working with Dr. Vibhu Awasthi).



Dr. McShan and Laure Brunet



Eric Dessertene, Stephanie Chene, Dr. Vibhu Awasthi and Kirk Braggs

Aims for participating in such a rotation include 1) participating actively in a research project in biological or pharmaceutical sciences; 2) learning

about every day life in a re- search lab, and 3) to improve their English skills and learn more about the American way of life.



Marc Gaches, Dr. Standifer and Nina Dang

SURE (Summer Undergraduate Research Experience) students include



Emily Gish, Dr. Shankar and Pierre Dumont

Emily Kish (Dr. Shankar-advisor), Kaelyn Le (Dr. Shanjana Awasthi-advisor), Nina Dang (Dr. Standifer-advisor). Marc Gaches is with the

NARCH program and working with Dr. Standifer. Kirk Braggs is with the LINC program and working with Dr. Awasthi.

Additionally, three students are working on a prerequisite summer research project in preparation for admission to the Pharm.D./M.S. program in the fall. They include Jason Kesinger (Dr. Pento, advisor); Mackenzie Smith (Dr. Gallucci, advisor) and Josiah Schomer (Dr. Teague, advisor).



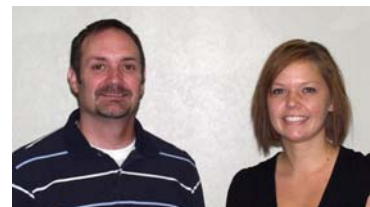
Dr. Shanjana Awasthi and Kaelyn Lu



Jason Kesinger and Dr. Pento



Dr. Teague and Josiah Schomer



Dr. Gallucci and Mackenzie Smith

Upcoming 2008 Summer Research Seminars

“Immuno-spin trapping: ‘Freezing’ Free Radicals for Understanding Redox Biochemistry from Molecules to the Whole Animal”

Speaker: Dario Ramirez, Ph.D., Assistant Member

Dept. of Free Radical Biology & Aging, Oklahoma Medical Research Foundation (OMRF)

Tuesday, July 8, Noon-1 pm / CPB 339 (OKC) and 1D33 (Tulsa)

ABSTRACT: This seminar will focus on the pathway for the rationale and validation of IST for the detection and characterization of protein and DNA radicals as early markers of oxidatively modifying biomolecule during inflammation. We have proposed and secured NIH funding for a new field of research to investigate protein radicals as "primary messengers" and mRNA radicals during the activation of macrophages by lipopolysaccharide. This model can be applied to other stressor (microbial, physical, chemical) and will offer us a unique opportunity to understand the pathway between exposure and chronic inflammatory diseases. Establishing this new field of research in the Oklahoma Medical Research Foundation is creating an extremely promising opportunity for expanding to different disease models through collaboration with established biomedical scientists in the field of toxicology, cell biology and molecular medicine.

“A Global Transcriptional Regulator, Encoded on the *Enterococcus faecalis* Pathogenicity Island, Influences Intracellular Macrophage Survival and Virulence”

Speaker: Phil Coburn, Ph.D.

Postdoctoral Fellow, Dept. of Pharmaceutical Sciences, OUHSC College of Pharmacy

Thursday, July 15, Noon-1 pm / CPB 339 (OKC) and 1D33 (Tulsa)

ABSTRACT: *Enterococcus faecalis* is a member of the commensal flora of the gastrointestinal tract of a multitude of organisms ranging from insects to humans. However, *E. faecalis* is also frequently encountered as the causative organism in hospital-acquired infections that are refractive to antibiotic therapy. By examining infection-derived isolates for genetic traits that might promote virulence of this organism, we previously identified the first pathogenicity island (PAI) in *E. faecalis*. In the prototype strain, MMH594, this PAI is 153 kb in size and harbors ~129 genes encoding a number of novel surface proteins, toxins, regulators and factors of unknown function. An AraC-type regulator, designated *perA* (pathogenicity island encoded regulator), encoded on the PAI was of particular interest since transcriptional regulators of this class are known to play a role in bacterial virulence. Analysis of a select panel of isolates revealed that *perA* expression may be abrogated in some strains due to altered positioning of a transposon element within the *perA* coding region. In order to determine if a biological significance can be attributed to the differential expression of PerA, we compared a wild type *perA*-positive strain to its isogenic *perA*-deficient mutant. Interestingly, while the mutant strain exhibited a slightly higher level of biofilm-forming ability, it was significantly less virulent in a murine intraperitoneal infection model as well as compromised in its ability to survive within macrophages. These findings highlight the importance of PerA as a global regulator of virulence in *E. faecalis* and provide a potential target for therapeutic intervention.

“Molecular MRI Approaches to Understanding Disease Process in Aging”

Speaker: Rheal A. Towner, Ph.D., Associate Member,

Dept. of Free Radical Biology & Aging, Oklahoma Medical Research Foundation (OMRF)

Tuesday, July 22, Noon-1 pm / CPB 339 (OKC) and 1D33 (Tulsa)

“Summer Student Research Project Presentations”

Speakers: Mackenzie Smith (R. Gallucci); Jason Kesinger (T. Pentto) and Josiah Schomer (K. Teague-Tulsa)

Tuesday, July 29, Noon-1 pm / CPB 339 (OKC) and 1D33 (Tulsa)

Please join us for these interesting presentations!

ONE STEP CLOSER

Congratulations to **Lerin Chastain** and **Eric Lee** for passing the General Examination for the Doctor of Philosophy degree! Dr. Gallucci serves as faculty advisor for both of them.

CHAIR CANDIDATE PRESENTS SEMINAR ON JULY 17 AT NOON

Jashvant D. Unadkat, Ph.D., candidate for the position of Chair, Department of Pharmaceutical Sciences, will be presenting a seminar in the HSC Library on Thursday, July 17 at noon. The title of his presentation is: “The role of transporters in pharmacokinetics and pharmacodynamics of drugs.” Please plan to attend.

NIH DIRECTOR ISSUES UPDATE

The Spring 2008 Update from NIH Director Elias A. Zerhouni, MD is available at <http://www.nih.gov/about/director/newsletter/Spring2008.pdf>

More News You Can Use Regarding Research

UPCOMING GRANT DEADLINES:

NIH R01 (new submissions): Oct. 5
NIH R01 (resubmissions): July 5, Nov. 5
NIH R03/R21 (new): Oct. 10
NIH R03/R21 (resubmissions): July 16, Nov. 16
NIH R15 (AREA): Oct. 25

PHARMACY STUDENTS SELECTED FOR CTSA SUMMER PROGRAM

The College of Pharmacy has two participants in the OUHSC CTSA summer program this summer. **Molina Mhatre** (P2 this fall), pictured at right, is working with Dr. Joan Merrell at OMRF. Dr. Merrell is the director of the clinical pharmacology program and also



serves as an adjunct professor in the Department of Pharmaceutical Sciences at the College.



Melissa Ireland (P4 this fall), seated at left, is working with Dr. Michele Splinter (pictured standing). Congratula-

tions to these students for participating in this summer experience!

IMPORTANT INFORMATION FROM ORA

The Office of Research Administration (ORA) will not accept or begin processing **grant applications and contracts** without a completed routing form with all of the required signatures. This new requirement was effective May 12, 2008. ORA will not review incomplete submissions.

Please work with Jeff Wetmore or Paula Meder early in the grant application process and with Nick in the contract process. They will help you with the routing forms and obtaining the necessary signatures. For grants, Jeff or Paula will have the budget and form pages pre-reviewed without a routing form, to expedite the signature approval process.

WELCOME NEW FACULTY

Dr. Hariprasad Gali

Dr. Gali has accepted a position of Research Assistant Professor of Pharmaceutical Sciences at the University of Oklahoma College of Pharmacy-OKC. His immediate responsibility is to assist in the development of the nuclear pharmacy research program, including the animal imaging center and radiosynthesis services.



Dr. Michael J. Miller

Dr. Miller has been appointed Associate Professor of Pharmacy: Clinical and Administrative Sciences-Tulsa. Immediate responsibilities are to establish a multidisciplinary research program and center focused on the role of health literacy as it relates

to patient outcomes; coordinate resources that inform laypersons, faculty, and healthcare professionals about appropriate practices related to health literacy; and provide leadership in the education of entry-level professional students as related to health literacy.

THOMAS HA ADMITTED TO PHARM.D./M.S. PROGRAM

Thomas Ha has been admitted to the Pharm.D./M.S. Program. Dr. Elgene Jacobs is his faculty mentor. Welcome Thomas!



DR. SHANJANA AWASTHI RECEIVES SEED GRANT AWARD FROM COLLEGE

The Research Affairs Committee reviewed and approved Dr. Shanjana Awasthi's seed grant application on "Interaction Between Baboon Lung Surfactant Protein-A and Toll-Like Receptor 4." Congratulations, Dr. Awasthi!