Graduate Affairs & Research

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COLLEGE OF PHARMACY
UNIVERSITY OF OKLAHOMA
HEALTH SCIENCES CENTER

Special points of interest:

Migraines—Pharmacists can provide significant help—page 1

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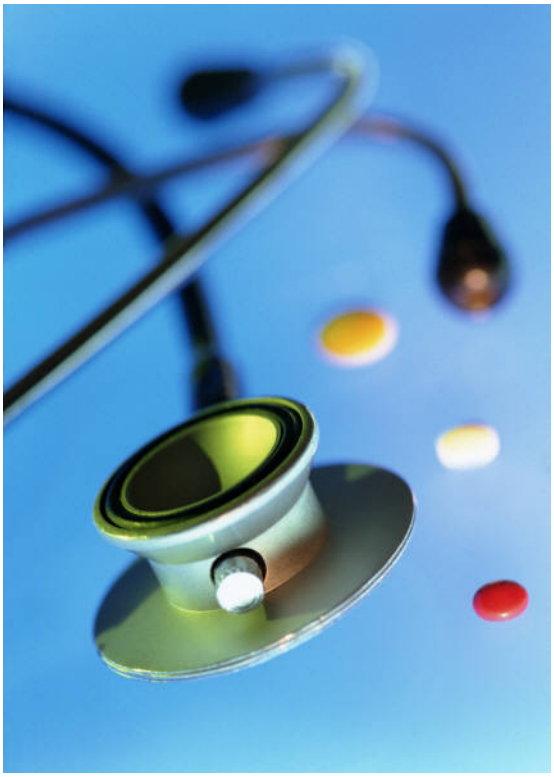
SPOTLIGHT ON RESEARCH;

A Useful Tool: Pharmacists' Care of Migraineurs Scale



Migraine is an under-diagnosed and under-treated condition affecting millions of Americans and costing the U.S. approximately $13.2 billion per annum in direct costs and lost productivity. Migraine is among the leading causes of worker absenteeism and has been demonstrated to have a deleterious impact on quality of life, even more so than asthma. There are a number of reasons why under-diagnosis and under-treatment is so prevalent, including a lack of knowledge among prescribers and patients of effective migraine therapy and difficulty in migraine diagnosis. Researchers (Dr. Desselle and colleagues) undertook an examination of factors associated with migraineur physician consulting behaviors, employing a more comprehensive social/behavioral perspective. The researchers found that the presence of supportive others (ie, social support from family, friends, and relevant others), along with healthcare locus of control (a predisposition about the effectiveness of health care practitioners in solving problems) were even more predictive of consulting behavior than the frequency and severity of migraine attacks and considerably more important than beliefs about medicines and patient demographic factors. The results underscore the need for pharmacists and other health care practitioners not only to provide support, but also elicit support of other family members and demonstrate his/her expertise in managing migraine to elicit the patient's confidence and trust.

As part of the same project, the investigators determined the effectiveness of a pharmacist-managed intervention in a large employer to improve migraineur consulting rates. While the more intensive educational effort was not significantly more effective than a control of a brief pharmacist encounter, migraineur consulting improved greatly among both groups, indicating that pharmacists have the potential to greatly improve consulting rates and migraineur outcomes simply by being proactive, triaging recurrent headache sufferers, encouraging them to seek consultation, and demonstrating supporting behaviors, roles that should be part of routine care.

(Continued on page 2)

Inside this issue:

Congratulations to College Graduate Students!

We are proud to report on the success of our College of Pharmacy Graduate Students during the recent GREAT symposium competition.

Eric Lee received the Graduate Student Association's (GSA) Award for Outstanding Research. Eric's faculty mentor is Dr. Randle Gallucci.

Garry Robbins and Julie Scott each received $500 travel awards. Garry's faculty mentor is Dr. Ryan Carnahan (Tulsa) and Julie's mentor is Dr. Mike McShan.

Congratulations to these three hard-working students and their advisors!

Spotlight on Migraine Research (continued from page 1)

As such, the researchers have embarked upon the development of a tool that will document the level of care provided by community pharmacists to recurrent headache sufferers. The Pharmacists' Care of Migraineurs Scale (PCMS) elicits behaviors by pharmacists within the following domains: 1. Empathy; 2. Prospective drug utilization review for newly diagnosed migraineurs; 3. Medication counseling; 4. Non-pharmacologic treatment plan; 5. Headache sufferer triage; 6. Dissemination of public health information; and 7. Maintenance of knowledge on migraine. The PCMS has demonstrated construct validity and reliability. It can be used as a basis to inform instruction of PharmD students and pharmacists as part of continuing education as well as means of documenting the effectiveness of educational interventions aimed at improving migraineur care. It is hoped that these efforts will assist in ameliorating the clinical and economics consequences of migraine. *-Shane Desselle, R.Ph., Ph.D., F.A.Ph.A.*

Congratulations to Dr. Pento's New NIH AREA Grant

"Selective KGFR Antagonists for the Prevention of Cancer Metastasis"

Preliminary observations of keratinocyte growth factor (KGF) and its receptor (KGFR) suggest the possibility that inhibitors of KGF or KGFR may be useful in the treatment of breast cancer and perhaps other metastatic diseases as well. It has been established that the mammary glands of adult female animals are sensitive to KGF. To test the hypothesis that KGFR is an important therapeutic target in breast cancer and the selective inhibition of KGFR-mediated signaling will reduce or eliminate breast cancer cell proliferation, motility, and metastasis Dr. Pento and his trainees will evaluate a series of antagonists to the KGF receptor for their specificity and activity. The confirmation of KGFR as a significant therapeutic target should result in the rapid development of novel, selective therapeutic agents to prevent the metastatic progression of cancer.

Dr. Pento's project will address the AREA grant objectives by stimulating research, providing opportunities for students, and strengthening the department. The AREA grant will enable Dr. Pento and his trainees to translate their initial findings to ultimate use of KGFR antagonists in cancer treatment. The project will expose students to meritorious research in cancer chemotherapy and will make use of existing specialized equipment and has the added benefit of being utilized for a new, purposed imaging system.

Student involvement in research has recently enabled two of Dr. Pento's trainees to receive "Gateway Research" scholarships from AFPE. Ultimately, the AREA grant will enable the development/confirmation of a potential, significant, novel therapeutic agent to be used to treat a significant disease(s) that affect many people.

Upcoming 2008 College of Pharmacy Seminars

"Dual HIV Protease Inhibitor Therapy:
Pharmacokinetic and Pharmacodynamic Implications"

Speaker: R. Chris Rathbun, Pharm.D., BCPS, AQ-ID
Associate Professor, Dept. of Pharmacy: Clinical & Administrative Sciences

Tuesday, April 15, Noon-1 pm / CPB 101 (OKC) and 1D18 (Tulsa)

ABSTRACT: Antiretroviral drug resistance may require the use of dual HIV protease inhibitor therapy in patients who are extensively treatment experienced; however, limited information is available regarding the safety and efficacy of select combinations. Pharmacokinetic and pharmacodynamic implications for the concurrent use of atazanavir and topinavir/ritonavir will be presented.

"Overcoming Pharmacy's Challenges".(2008 Anthony Lecture)

Speaker: David L. Gilliland, Ph.D., Owner and Operator of
Geodax Imaging, Greensboro, North Carolina

Thursday, April 24, Noon-1 pm / CPB 103 (OKC) and 1D18 (Tulsa)

ABSTRACT: The profession of Pharmacy in today's uncertain health care environment seems to be adrift. Some even say lost. How do you as a young, new, and hopefully eager beginning pharmacist find fulfillment in the profession? Where do you go with your license? How do you set a goal, much less reach it? Is your Pharmacy education and chosen life's work a "labor of love", or a "ball and chain"? Can pharmacy provide you with a life-long learning experience? Many people are questioning pharmacy's relevance today. Are there answers? Yes! And they may surprise you.

"Current Use of Bacteriophage in Clinical Medicine" (2008 Ashby Lecture)

Speaker: Randall D. Wolcott, M.D., C.W.S., President, Randall D.
Wolcott MD Professional Association and Research

Tuesday, April 29, Noon-1 pm / CPB 103 (OKC) and 1D18 (Tulsa)

ABSTRACT: Bacteriophages are the most common biological entity on the planet. Since their discovery about a century ago, scientists and clinicians have been trying to harness their natural killing power to control microbial infections. The discovery of antibiotics overshadowed the potential of phage therapy for decades, but the surge in antibiotic-resistant bacteria and the understanding of bacterial biofilm infections have reignited Western interest in phage therapy.

Grant Funding Opportunities

NIH Grant Deadlines (current round)
R01 (new applications): June 5 / (resubmissions): July 5
R03 and R21 (new applications): June 16 / (resubmissions): July 16

AACP New Investigators Program for Pharmacy Faculty
The 2008-09 application deadline is May 23, 2008, with a letter of intent due date of April 23, 2008. The application material is not yet posted on the AACP website, but interested faculty can review last year's materials. These materials only slightly change each year. Go to http://www.aacp.org for information.

Presbyterian Health Foundation
Deadline date for Seed, Bridge and Equipment grant applications is Monday, April 21st.

Call for Astracts—37th Ann. Mtg., ACCP

The 2008 Program Committee is requesting abstracts of research for presentation at the 37th Ann. Mig. of the Amer. College of Clinical Pharmacology (ACCP).

A copy of the abstract form appeared in the Jan, Feb. and March 2008 issues of ***The Journal of Clinical Pharmacology,*** and is also available on our website.

ACCP is pleased to also offer eight (8) Student/Trainee Awards for the best abstract submissions. Each award will consist of a $1,000 honorarium, a certificate, and a complimentary registration to attend the annual meeting and an invitation to attend the Honors and Awards dinner. The 37th Ann. Mtg. will be held at the Sheraton Philadelphia City Center Hotel Sept. 14-16, 2008.

The abstract submission deadline is May 15, 2008.

More News You Can Use Regarding Research

NIH Public Access Policy Effective 4/7/08 (http://publicaccess.nih.gov)

SUMMARY: The National Institutes of Health (NIH) Public Access Policy requires that all investigators funded in whole or in part by the NIH submit or have submitted for them to the National Library of Medicine's PubMed Central an electronic version of their final, peer-reviewed manuscripts upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication. Compliance with this NIH policy is a statutory requirement and a term and condition of NIH grant awards and cooperative agreements active in the NIH Fiscal Year 2008 (October 1, 2007- September 30, 2008) and beyond, and for all NIH contracts awarded after April 7, 2008.

IMPORTANT DATES

April 7, 2008—As of April 7, 2008, all articles arising from NIH funds must be submitted to PubMed Central upon acceptance for publication.

May 25, 2008—As of May 25, 2008, all NIH applications, proposals, and progress reports must include the PubMed Central reference number when citing an article that falls under the NIH Public Access Policy and is authored or co-authored by the investigator or arose from the investigator's NIH award.

For College of Pharmacy NIH Investigators—Please provide Paula Meder or Jeff Wetmore an electronic copy of your peer-reviewed manuscript. They will forward it to the journal (per instructions from both NIH and the journal) and also to PubMed Central. They will take care of all the details regarding the above notice.

Grant Applications FY08

Did you know that there have been submitted 42 grant applications from the College of Pharmacy during FY08 (July 1, 2007 through April 7, 2008)?

College of Pharmacy Seed Grants

The purpose of the College of Pharmacy (COP) Seed Grant Program is to provide funds to COP investigators to enhance their competitiveness in research. Proposals designed to collect preliminary data for projects that will eventually be submitted for extramural funding are given priority. Proposals should be developed that can be accomplished within a 1-year time frame. The Principal Investigator (PI) submitting an application must be a COP faculty, resident, or fellow holding a full-time appointment. Proposals are reviewed by the COP Research Development Committee which evaluates them on the significance and feasibility of the project, the qualifications of the PI and other project personnel, and the potential for attracting future extramural funding.

The latest approved seed grant project is "Development of a Novel VMAT2 Tracer for *in vivo* Imaging" by Dr. Seonghwan Yee, principal investigator. Below is a short explanation of the research he proposes for the seed grant:

The vesicular monoamine transporter 2 (VMAT2) has been shown to have a key role in regulating the levels of presynaptic and synaptic monoamine neurotransmitters by sequestering cytoplasmic monoamine neurotransmitters, such as dopamine, into presynaptic vesicles. Given the neurotoxicity caused by excessive monoamines in the process oxidative deamination, the monitoring of *in vivo* VMAT2 distribution and function would be critical for the study of neurodegenerative disoreders such as Parkinson's disease. Also, considering the link between the failure of dopaminergic signaling and drug addiction, and the role of monoamines in the neurodevelopment, the *in vivo* monitoring of VMAT2 (a monoamine regulator) would be a useful tool for studies involving drug addiction. In Dr. Yee's project, a novel compound, which can be labeled with fluorine for either positron emission tomography (PET) or magnetic resonance imaging (MRI), will be developed using a lobeline analogue so that it can be effectively used, when combined with the noninvasive tomography technique, to detect and monitor *in vivo* VMAT2 distribution.

The successful completion of the development of a new compound to be used *in* vivo for PET/MRI scans will be of great benefit to the COP. The project utilizes existing faculty, as Co-Investigators, and a graduate student and the small animal imaging facility available at the COP. Dr. Pento, a COP faculty member, has expressed interest in Dr. Yee's project because VMAT2 has been found in the endocrine pancreas and the novel compound has the potential of being useful to detect the early occurrence, development and/or metastasis of pancreatic cancers. Dr. Pento is in the process of developing a novel pancreatic cancer model in the rat and welcomes the opportunity to test/use the lobeline-based compound for PET/MRI imaging in his new pancreatic model. Dr. Sonntag, Director of Reynolds Oklahoma Center on Aging, from the College of Medicine has also expressed an interest in Dr. Yee's project; stating that the study would benefit other research programs on campus in the area of aging research, especially Parkinson's Disease. Because so many fields of research use PET/MRI imaging Dr. Yee's project has a great potential to attract future funding.

College of Pharmacy Seed Grant applications are available on the website at http://pharmacy.ouhsc.edu/downloads/SeedGrantApplicationForm2008.pdf