From the Director:

Jane F. Reckelhoff

WHRC members and colleagues:

Greetings from Women's Health Research Center! As Fall is developing and the holidays are fast approaching, we are busy with new ideas and plans in the WHRC. One important item is that we are busy planning our international conference to be held on campus next Fall, "Physiology of Cardiovascular Disease: Gender Disparities". The conference will take place October 12-14, 2011, and is being sponsored by the WHRC, the American Physiological Society and the Society for Women's Health Research. The preliminary program is available on our website and will include a great mix of clinical and basic research. More to come on that as the time approaches.

We had a great turn out for our first WHRC Speaker's Forum. Dr. Sharon Lobert, of Nursing and Biochemistry, spoke and it was very well received by our members. The next speaker, Dr. Ian Paul, from the Department of Psychiatry, will be November 4. See our advertisement in this newsletter for time and place. We will aim to have a speaker every other month to allow us to get to know each other's research better. If you have suggestions for speakers, or if you yourself would like to speak, please let me know.

If you know of anyone who wants to be a member of the WHRC, it's free; please email us and we will add the person to our member list.

Janie

WHRC Seminar

Dr. Ian Paul

“Early life antidepressant exposure: A rat model of autistic behaviors, neuroanatomy and physiology.”

Thursday, November 4, 2010
4 P.M. CW 308 (classroom wing)

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Our Mission: Women have health care issues that are different from men. Recent research indicates that there are sex differences in the incidence, outcome, and physiological and pathophysiological mechanisms responsible for various diseases. Mississippi has the dubious honor of having one of the highest incidence rates of cardiovascular disease, obesity, diabetes, hypertension, end-stage renal disease, high risk pregnancy, pre-eclampsia (pregnancy induced hypertension), infant mortality and poor child health outcomes in the United States. The Women's Health Research Center (WHRC) was established in 2009 at the University of Mississippi Medical Center (UMMC) to accomplish the major goal of fostering excellence in basic and clinical research in issues that affect women’s health across their lifespan.
**Dr. Sharon Wyatt** and **Dr. Lucio Miele** were recently named co-PIs on the Deep South Network for Cancer Control Grant. Cancer rates in minority and under-served populations in the South are among the nation’s highest. Thus, the purpose of this grant is to eliminate the disparity in cancer death rates between blacks and whites in the Deep South. The Deep South Network for Cancer Control Grant targets two poor rural areas - the Black Belt of Alabama and the Delta of Mississippi; and two urban areas: Jefferson County, AL and the Hattiesburg /Laurel Metro area in MS. Dr Lucio Miele, member of the WHRC and Director of the Cancer Institute at UMMC, will serve as a co-leader for the Administrative Core; Dr. Sharon Wyatt, a member of the WHRC and professor Nursing at UMMC, will serve as a co-leader for the community outreach core.

Drs. Wyatt and Miele will work with the University of Alabama at Birmingham and the University of Southern Mississippi to build upon community infrastructures, state partnerships and coalitions to provide cancer awareness activities; support minority enrollment in clinical trials; and promote the development of minority junior biomedical researchers. Funding from this grant has trained more than 1,000 volunteers in these communities, called community health advisors trained as research partners (CHARPs), to educate family and friends about the importance of prevention and early detection of cancer. This grant is also funding randomized community interventions into cancer research within its target areas to look at the sociocultural influence on dietary intake among black women in the Deep South and assess the ability of regular physical activity to reduce substantially the risk for developing and dying from cancer. Dr Jennifer Robinson is a co-investigator on this research intervention. Thus, this grant incorporates education and awareness, AND also includes research to expand the efforts and scope of our CHARPs and local community partners.

**Women’s health issues are underfunded and understudied.**

*Help support women’s health research by making a tax-deductible contribution. For more information contact the Development Office at UMMC at 601-815-7473*

*Your help is greatly appreciated!*
Dr. Joey P. Granger is the President-Elect of the American Physiology Society and will become its president next spring at the annual meeting to be held in Washington, D.C. April 9-13, 2011. The American Physiology Society has over 10,000 members worldwide. The American Physiology Society is a nonprofit organization devoted to fostering education, scientific research and dissemination of information in the physiological sciences. Dr. Granger, a member of the WHRC, is a Billy S. Guyton Distinguished Professor, a Professor of Physiology and Medicine, and the Dean of the School of Graduate Studies at UMMC. Dr. Granger also serves as the Director of the Center for Excellence in Cardiovascular/Renal Research. Dr. Granger is a past recipient of the Lewis K. Dahl Award from the American Heart Association, the E.H. Starling Distinguished Lecture Award and the Bodil M. Schmidt-Nielsen Distinguished Mentor and Scientist Award from the American Physiological Society.

Members of the WHRC awarded the University of Mississippi Medical Center Medal of Excellence in Research on October 27, 2010 include Dr. Lucio Miele, Director of the Cancer Institute, Bronze Award; Dr. Kenneth Liechty, Associate Professor of Medicine, Gold Award; Dr. Richard Roman, Professor and Chair of Pharmacology and Toxicology, Gold Award; and Dr. George Booz, Associate Professor of Pharmacology and Toxicology Gold Award.

Mark your calendar!

The “Global Obesity Summit 2010” will be held November 9-11, 2010 in Jackson, MS. The Summit will highlight innovative solutions to the causes of obesity, preventive strategies, and therapeutic management approaches. For more details visit: http://gos.umc.edu
Kudos

*Kandis Backus*, a graduate student working with Dr. Lucio Miele of the Cancer Institute and Department of Pharmacology and Toxicology; *Loai Alzghoul* and *Junlin Zhang*, graduate students in the Autism Spectrum Disorders Research Group and working with Dr. Rick Lin in the Neurosciences Program and the Department of Anatomy, respectively; and *Fouad Zouein*, a graduate student working with Dr. George Booz in the Department of Pharmacology and Toxicology received recognition for their poster presentations at the Annual Research Day sponsored by the School of Graduate Studies in the Health Sciences held October 22, 2010 at UMMC.

*Dr. Christine Maric* is the newly appointed Chair of the American Physiological Society Awards Committee. Dr. Maric is the Assistant Director for Basic Research for the WHRC and is an Associate Professor in the Department of Physiology at UMMC.

Conference Announcement

The American Physiological Society holds one to two small specialty APS Conferences every year. Previous meetings relevant to the goals of the WHRC sponsored by the APS include the “Sex and Gender in Cardiovascular-Renal Physiology and Pathophysiology” held August 2007 in Austin, TX and “Sex Steroids and Gender in Cardiovascular-Renal Physiology and Pathophysiology” held July 2009 in Broomfield, CO. The WHRC is proud to host the 2011 conference entitled “Physiology of Cardiovascular Disease: Gender Disparities” to be held in Jackson, Mississippi on October 12-14, 2011. This meeting, sponsored by the American Physiological Society, Women's Health Research Center, and Society for Women's Health Research will bring research scientists and clinicians together to discuss the latest issues of cardiovascular disease, including the effect it has on the brain, kidneys, and other organ systems.

Infants born to mothers taking selective serotonin reuptake inhibitors (SSRIs) late in pregnancy have been reported to exhibit signs of antidepressant withdrawal. Such evidence suggests that these drugs access the fetal brain in utero at biologically significant levels. Recent studies in rodents revealed that early exposure to antidepressants can lead to long lasting abnormalities in adult behaviors. This study determined that SSRIs may not only interfere with the establishment of chemically balanced circuits in the neonate, but may also impose selective impairment on higher cortical function and cognitive processes.


Membranous nephropathy is a leading cause of primary nephrotic syndrome in adults. It is a disease that affects the filtering units of the kidney, the glomeruli and results in proteinuria accompanied by loss of kidney function. Cytochrome P450 (CYP) 2B1 is indicated to play an important role in several models of acute renal injury. Thus, in this study Liu et al., utilized an experimental model which mimics membranous nephropathy called Passive Heymann nephritis (PHN) to determine that cytochrome P450 (CYP) 2B1 serves as a source of reactive oxygen species, is a significant source for catalytic iron, and plays an important role in altering the cytoskeleton, all processes that implicated in proteinuria. Findings from this study may provide a basis for identifying corresponding CYP forms in human kidneys leading to potential therapeutic targets for treatment of membranous nephropathy in humans.

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**Mark your calendar!!**

The **Organization for the Study of Sex Differences** will hold its ‘Fifth Annual Meeting’ June 2-4, 2011 in Oklahoma City, OK. This meeting will offer researchers from across all biomedical research areas and disciplines the opportunity to present and discuss sex differences research.

Influenza morbidity and mortality remain high in the United States although vaccination clearly improves health outcomes and reduces health expenditures. This study addressed the effectiveness of mail and telephone reminder strategies on improving existing clinic influenza vaccination rates among those not seeking early seasonal vaccination. Vaccination rates were significantly higher in the intervention groups, and both mail and phone interventions increased vaccination rates in all age and sex groups. Thus, this study indicates that both mail and phone reminders effectively increased clinic vaccination rates.


Transcription regulatory genes are crucial modulators of cell physiology and metabolism whose intracellular levels are tightly controlled in response to extracellular stimuli. This study reports the effects of a set of Angiotensin II-modulated transcription regulatory genes on aldosterone and cortisol secretion and the expression levels of the last and unique enzymes of the mineralocorticoid and glucocorticoid biosynthetic pathways. Abnormal regulation of mineralocorticoid or glucocorticoid secretion is involved in several pathophysiological conditions. These transcription regulatory genes may be involved in adrenaroidogenesispathologies, thus merit additional study as potential candidates for therapeutic intervention.