



CIRWH NEWS FLASH

Center for Interdisciplinary Research in Women's Health

FALL 2003

THE UNIVERSITY OF TEXAS MEDICAL BRANCH

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From the Director's Desk



It has been one year since we developed the Writing Effectiveness Group and solicited applications from prospective members. The 11 scholars

selected for the program met monthly over the past year to learn scientific writing skills, under the direction of Dr. Constance Baldwin, CIRWH assistant director for faculty development.

Six members of the group submitted nine innovative proposals to the National Institutes of Health after discussion and constructive oral reviews in the group sessions. Three proposals—from Drs. Helen Wu, Loree Primeau and Concepcion Arrastia—went out in June alone. Several manuscripts received the same kind of attention, as well.

Beginning this fall, Baldwin plans to devote more time to this group, and to work one-on-one with scholars entering their second year of the program. She will teach her popular four-week scientific writing course next February, as well. This course is available to all interested faculty. So, if you want to brush up on your writing, sign up!

Five new scholars will be selected for the program this year. In a collaboration with the Sealy Center on Aging, three junior faculty members who focus on geriatrics and women have been invited to submit competitive applications for the program.

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Drs. Kathryn Cunningham, from left, Stacy Sell and Mary Thomas in the library of the Department of Pharmacology and Toxicology

UTMB team studying relationship of estrogen to substance abuse

The National Institute on Drug Abuse (NIDA) of the National Institutes of Health announced in June the establishment of a funding initiative specifically for research on women, gender differences and drug abuse.

“Human and animal studies have established that the menstrual/estrous cycle is a determinant of drug action, both pharmacokinetic and behavioral,” the announcement said. Some of those studies have been conducted at UTMB.

Drs. Kathryn Cunningham and Mary L. Thomas, professors of pharmacology and toxicology, have been studying that phenomenon since the mid-1980s. “After working in the same department for several years, we wanted to collaborate,” Thomas said.

Thomas was studying how ovarian hormones functioned in the bone and intestine, while Cunningham had a long-standing interest in the action of drugs of abuse on the brain. Combining the two, they developed a proposal exploring the relationship of estrogen and drugs in the brain that was funded by the National Alliance for Research on Schizophrenia and Affective Disorders. They have been collaborators ever since. Dr. Stacy Sell, a senior post-doctoral fellow in the Department of Pharmacology and Toxicology and the latest addition to the team, recently sent grant applications as principal investigator to both NARSAD and NIDA.

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Researcher Profiles

Name: **Kathryn A. Cunningham, Ph.D.**
Title: Professor and Vice Chairman for Research, Department of Pharmacology and Toxicology



Birthplace: Beaumont, Texas
Education: 1976 B.A. (Major/Minor: Psychology/Philosophy), University of St. Thomas, Houston, Texas; 1985 Ph.D. (Major/Minor:

Behavioral Neuropharmacology/Learning Processes), University of South Carolina, Columbia, SC
How long have you been at UTMB? 18 years.

What is the focus of your women's health research? Hormones, drugs of abuse and their effects on the brain.

What do you enjoy most about your work? Learning something new every day.

What do you enjoy least about your work? Not much.

If money were no object, what would you be doing right now? The same thing.

Name: **Stacy L. Sell, Ph.D.**
Title: Senior Postdoctoral Fellow
Birthplace: Bethesda, Maryland
Education: B.S. University of California, Davis;



Ph.D., Neuroscience Graduate Program, UTMB

How long have you been at UTMB? 15 years

What is the focus of your women's health research? The role of

sex hormones in mental health.

What do you enjoy most about your work? Always learning something new.

What do you enjoy least about your work? The pressure of deadlines.

If money were no object, what would you be doing right now? I plead the 5th.

Name: **Mary L. Thomas, Ph.D.**
Title: Professor, Department of Pharmacology & Toxicology
Birthplace: Columbia, Missouri



Education: 1974, B.S. (biology), Tufts University, Boston, Mass.; 1977, Ph.D.

(pharmacology), University of North Carolina, Chapel Hill

How long have you been at UTMB? 20 years

What is the focus of your women's health research? Molecular actions and interactions of steroid hormones; effects of ovarian hormones on central serotonergic systems; neuroendocrinological phenomena underlying such problems as depression and drug abuse; behavioral and electrophysiological approaches to assess functional correlates of molecular changes.

Team studying relationship of estrogen to drug abuse

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Working with female rats, the three—all fellows in the Center for Interdisciplinary Research in Women's Health—have developed a hypothesis that estrogen, via its receptors which can function as transcription factors, regulate the abundance of neurotransmitter receptors and transporters in the brain. This mechanism would provide estrogen an avenue to affect mood, responses to drug abuse and myriad other neural processes.

Published reports from this work now demonstrate that estrogen does alter the abundance of several such receptors in specific areas of a rat's brain. Ongoing work is aimed at determining the functional significance of specific estrogen effects.

Cunningham points out that these studies will help determine if a woman's response to drugs (pharmaceuticals, as well as substances of abuse), and possibly vulnerability to addiction, may be related to the levels of estrogen in her system.

"Hormones may continuously modulate the drug's actions by regulating the relative abundance of a variety of brain substrates at any given time," Cunningham, said. "What we're doing is taking snapshots of the drug's action at various times relative to estrogen to see what is happening."

Their ultimate goal is to learn how estrogen acts in the brain and divine the implications for mental health. From a clinical perspective, Thomas said she and her colleagues want to find out whether there are points—

either in the life cycle or at specific points in the menstrual cycle—when a woman's response to psychoactive drugs is significantly affected. If so, they wonder, can treatments be tailored to women's menstrual or life cycles?

This does not apply only to drugs of abuse, added Cunningham. "Any psychoactive drug would be affected by estrogen," she said. "For example, a friend of mine related that the effectiveness of Prozac to counteract the symptoms of depression seems variable.

"When I asked her if the variability was associated with different points in her menstrual cycle, she said she had not considered that possibility. But she will now."

Honors and awards

Dr. Martha A. Hargraves, director of health policy and health services research, in June was elected vice-president of the Society for the Study of Social Problems. Founded in 1951, the SSSP is an interdisciplinary community of scholars, practitioners, advocates and students interested in the application of critical, scientific and humanistic perspectives to the study of critical social problems and social policy. *Social Problems*, the journal of the society, provides a forum for fostering these ideals.

Dr. Ellen More, professor in the Institute for the Medical Humanities and the Department of Preventive Medicine and Community Health, is visiting curator at the National Library of Medicine for an exhibit titled "The Changing Face of Medicine: Celebrating America's Women Physicians." The exhibit will open Oct. 23 and remain at the NLM in Bethesda until May 2005, after which it will become a traveling exhibit.

Ruby Navarro Rubio, second-year medical student, earned first prize in Women's Health Research for her poster, "Patient Satisfaction and Perceived Risk of Cervical Cancer: A Quantitative and Qualitative Analysis," June 25 at the Medical Student Summer Research Program.

Dr. Stacy L. Sell, postdoctoral fellow in the Department of Pharmacology & Toxicology, recently was elected a member of the College on Problems of Drug Dependence.

Invited presentations

Dr. Mahmoud S. Ahmed, professor in the Department of Obstetrics & Gynecology, was invited to make a presentation at the 65th annual scientific meeting of the College on Problems of Drug Dependence in Bal Harbour, Fla., in June. His topic was "Placental Transfer and Metabolism of Buprenorphine and LAAM."

Dr. Ayman Al-Hendy is invited to speak in Saudi Arabia in October at the conference Recent Advances in



Dr. Cheryl S. Watson (center) with Drs. Patricia C. Heyn (left) and Tatiana N. Nanovskaya (right)

Winners of CIRWH poster session on women's health research

Dr. Cheryl S. Watson announced that Drs. Patricia C. Heyn and Tatiana N. Nanovskaya won prizes at CIRWH's inaugural research poster session for National Women's Health Week May 14 at Moody Gardens Hotel in Galveston. Heyn, postdoctoral research fellow in the Department of Rehabilitation Sciences in the School of Allied Health Sciences, received the clinical science research award for her study of the effects of exercise on older females with Alzheimer's disease. Nanovskaya's poster about *in vitro* transfer of L-acetylmethadol (LAAM) across human placenta received the basic science research award. Nanovskaya is an instructor in the Department of Obstetrics & Gynecology in the School of Medicine. Watson, associate director for basic science research for the center, chaired the poster program and judging.

Obstetrics & Gynecology. His topic will be "Gene Therapy in Obstetrics & Gynecology."

Dr. Concepcion D. Arrastia, assistant professor of obstetrics and gynecology, is invited to speak at the International Federation of Gynecology & Obstetrics (FIGO) World Congress in Santiago, Chile, in November. Her topic will be "Informatics and Surgery" in the seminar session entitled "Robotics in Gynecological Surgery."

Dr. Constance D. Baldwin, professor in the Department of Pediatrics and Family Medicine, was invited to present a full-day workshop entitled "The Nuts and Bolts of Effective Scientific Writing" at the AAMC Mid-Career Women Faculty Professional Development Seminar in Washington, D.C., in July; at the University of Colorado Department of Family Medicine in Denver in August; and at the Southern Regional Women's Professional Development Conference in Memphis in September.

Dr. Cheryl S. Watson, professor in the Department of Human Biological

Chemistry & Genetics, chaired a symposium session on "Nongenomic Actions of Steroids" at the June meeting of the Endocrine Society in Philadelphia. She also was elected to the nominations committee of the Endocrine Society's Women in Endocrinology group. The group helps women professionals in endocrinology (Ph.D.s and M.D.s) obtain leadership positions. Watson is an endocrinology study section member for the Department of Defense Breast Cancer Initiative grant reviews in July.

New Grants

Al-Hendy, A., Obstetrics & Gynecology. Phase III, 12-Month, Randomized, Double-Blind Study to Evaluate the Efficacy and Safety of Two Doses of J867 Versus Placebo in Subjects with Uterine Leiomyomata. TAP Pharmaceutical Products.

Recent Publications

Hendiani, J., Westlund, K., Lawand, N., Goel, N., Lisse, J., and McNearney, T. Mechanical sensation and pain thresholds in patients with chronic arthropathies. *Journal of Pain* 4: 203-211, 2003.

From the Director's Desk

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Two additional scholars will be selected from other areas. Deadline for applications is August 1. Check out the CIRWH web site for details.

ON ANOTHER FRONT, our successful seminar series becomes a monthly event in the fall. Beginning September 5, the CIRWH seminars will be noon–1 p.m. on the first Friday of each month in Room 2.312 of Children's Hospital. We also expect many of the presenters to come from academic medical centers in Houston. So, watch the web page and this newsletter for next year's schedule of speakers and dates.

Finally, I wish to thank Dr. Susan Rosenthal for her valuable contributions to the center since its inception more than a year ago. Rosenthal, who has been associate director for clinical research, is stepping down due to new and increasing national and institutional responsibilities. We all certainly will miss her expertise, insight and support.

Yours in good health,



Abbey B. Berenson, M.D.



From left, Drs. Mabel Caban, Yow-Jiun Jeng and Terumi Midoro-Horiuti

Center Awards Grants for Pilot Research

The Center for Interdisciplinary Research in Women's Health awarded three seed grants of \$12,500 each for pilot research on the effect of disability on the diagnosis of breast cancer, the changes in certain genes during pregnancy and the relationship between estrogen and allergies. Drs. Mabel E. Caban, Yow-Jiun Jeng and Terumi Midoro-Horiuti received the grants.

Caban, assistant professor in the Department of Orthopedics & Rehabilitation, hopes to provide evidence that disability-related factors present a risk in late-stage breast cancer diagnosis. Jeng, assistant professor in the Department of Obstetrics & Gynecology, plans to study changes in endothelial differentiation gene expression and cell proliferation in rat myometrium during pregnancy to determine their effect on pregnancy. Midoro-Horiuti, assistant professor in the Department of Pediatrics, hopes to determine whether estrogen exacerbates asthma and seasonal allergies, with the aim of improving management of these diseases in women, in whom they are three times more common.

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