MUSC addressing need for gender-based research

It seems the popular book title “Men are from Mars, Women are from Venus” holds true in research as well. They can be very different.

This year the Women’s Research Center will hold its Second Annual Women’s Health Research Day April 3 from 8:30 a.m. to 2 p.m. at the Medical University of South Carolina’s (MUSC) Institute of Psychiatry. The event will feature presentations and poster sessions that focus on research about disorders and treatments related specifically to women. Sex and gender-based research conducted across campus will also be highlighted.

The research day will highlight how researchers are addressing the missing link between understanding the critical roles gender plays in health, wellness and disease progression and the actual treatment of them. Research over the past 20 years has revealed that from single cells to multiple biological systems and mechanisms, sex differences exist – and that these differences, which are not just hormone based, need to be addressed. This is a policy set out in the National Institutes of Health's (NIH) “Moving into the future with new dimensions and strategies: A vision for 2020 for women’s health research.” Researchers at MUSC’s Women’s Research Center (WRC) are diligently working to increase the body of women’s health research.

“Investigators have discovered interesting gender differences in a broad spectrum of disorders like autism, sleep apnea and pain conditions,” said WRC Co-Director Kathleen Brady, M.D., Ph.D.

Through the Specialized Center of Research (SCOR) on Sex and Gender Factors Affecting Women's Health, housed within WRC, women’s research is being funded across campus in many departments, including pediatrics, internal medicine and obstetrics/gynecology.

“The discoveries being made through the study of women’s health and sex differences are key to crafting individualized treatments for a variety of conditions for men, women, boys and girls,” Brady said.

For example, it’s known that women have a different response to addictions and stress than men, and this can potentially change their treatment.
Brady is working with colleague, Aimee McRae-Clark, PharmD, co-director of the WRC, on a study exploring the role oxytocin has on addictions, especially given the effect this “trust hormone” or “love molecule” as it is sometimes called, has on reducing stress and breaking down social barriers.

“We have had positive results with oxytocin in reducing stress and reducing cravings, which could lead to the development of new therapeutic agents,” Brady said.

Studies, such as the one on oxytocin, are happening in large part because of the strategic plan set by the National Institutes of Health (NIH) through the Office of Research in Women’s Health (ORWH). MUSC’s SCOR is one of 11 specialized centers in the U.S. charged with advancing research on women’s health and promoting interdisciplinary research.

The Women’s Research Center also houses the Building Interdisciplinary Research Careers in Women’s Health (BIRCWH) career development program. It offers mentored research experiences and training to prepare junior faculty for independent investigator positions in women’s health research. One of 29 in the U.S., the program ensures junior researchers receive instruction about how to conduct research responsibly. Junior faculty attend seminars concerning women’s health research to build collaborative relationships with other researchers.

“We recently received a large number of applications for our BIRCWH career development program. It is gratifying to know that we will soon be supporting several new junior investigators who have committed to a career in women’s health research,” Brady said.

The WRC also is working to expose the public to research focused on women’s health. McRae-Clark, who is responsible for overseeing clinical projects, community outreach activities and interaction with cross-campus training programs, said community outreach activities have been expanded. In the past year, the center has provided multiple trainings and educational seminars on women’s health topics to organizations such as the Crisis Ministries Homeless Shelter, the South Carolina Department of Alcohol and Other Drug Abuse Services and Communities In Schools.

At this year’s second symposium, Etta Pisano, M.D., vice president for medical affairs and dean of MUSC’s College of Medicine will talk about her work in the development, application and testing of imaging technology for early diagnosis of diseases. Larry Cahill, Ph.D., professor of neurology at the University of California, Irvine, specializing in gender influences on brain function, will deliver the keynote address titled, “Sex and Hemisphere Influences on Emotional Memory: The Burden of Proof has Shifted.”

McRae-Clark said Women’s Health Research Day is an important opportunity to recognize the broad range of women’s health research being conducted at MUSC.

“It fosters discussions among investigators across the MUSC campus regarding new ideas, methods and collaborations to expand our research activities.”

Echoing McRae-Clark’s sentiments, Brady said, “Women’s Health Research Day underscores the value we place on women’s health research as an institution.”