Sixth Annual Interdisciplinary Women's Health Research Symposium November 17, 2009

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AS THE TWENTIETH ANNIVERSARY of the establishment of the Office of Research on Women's Health at the National Institutes of Health (NIH) in 1990 approaches, the NIH interdisciplinary research and career development programs, specifically designed to advance knowledge about women's health and illnesses, determine sex and gender differences, and promote career advancement in research that will address these issues, will be among the major accomplishments to provide hope for new horizons and strategies for future years. During the Sixth Annual NIH Interdisciplinary Women's Health Research Symposium, presentations of the progress from the research and researchers funded through these interdisciplinary programs will emphasize the productive endeavors and encouraging results from a collaborative scientific approach to sex differences in the health of women and men. The abstracts of these presentations, published in this issue of the *Journal of Women's Health*, demonstrate some of the current efforts to expand the knowledge base that can improve women's health and the ever growing numbers of research scientists dedicated to these efforts.

Recognizing that the many factors affecting women's health, from the molecular to behavioral influences, demands a comprehensive and interdisciplinary approach among researchers, the NIH Office of Research on Women's Health (ORWH) developed and implemented two major programs: the Building Interdisciplinary Research Careers in Women's Health (BIRCWH) career development programs, and the Specialized Centers of Research on Sex and Gender Factors Affecting Women's Health (SCORs). The BIRCWH program was designed to support the career development of junior faculty members who are engaging in basic, clinical, translational, behavioral, or health services research in areas relevant to women's health. This is accomplished by providing protected time and interdisciplinary mentoring to junior faculty to facilitate their transition to research independence, while bridging scientific disciplines or areas of interest. The mentors at each site are senior investigators who are committed to fostering collaborative interdisciplinary approaches to research on women's health. This initiative was intended to support the development of new, independently funded women and men scientists who are prepared to further advance and perpetuate expanded, integrated multidisciplinary approaches to the scientific questions related to women's health and sex differences in disease processes.

During this past year, ORWH announced the fifth round of awards for BIRCWH sites since its inception. There have now been 50 awards made to 38 institutions since the introduction of the program in 2000. Currently, there are 26 active BIRCWH programs across the United States. More than 350 BIRCWH scholars have benefited from the mentoring in research techniques and skills needed to become independent investigators, as well as mentoring about succeeding in academic research careers. And, while the intent of the BIRCWH program is career development, there have also been promising research advances as a result of scholar interdisciplinary research efforts, as the abstracts will reveal. As the program has progressed, the accomplishments of scholars who have reached independent research status are impressive, including their publications, success in obtaining research grant support, and academic advancement. A number of scholars have themselves also become BIRCWH mentors, further perpetuating and strengthening these programs.

While the majority of the funding for the BIRCWH program comes from the ORWH, the BIRCWH is a collaborative effort and has also been supported by the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), the National Institute on Aging (NIA), the National Institute of Allergy and Infectious Diseases (NIAID), the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), the National Institute on Drug Abuse (NIDA), the National Institute on Environmental Health Sciences (NIEHS), the National Institute of Mental Health (NIMH), and the NIH Office of Dietary Supplements, as well as the Office on Women's Health and Gender Research of the Agency for Healthcare Research and Quality. The programmatic oversight for the BIRCWH Program now resides in ORWH, but because the ORWH does not have the authority for direct funding, the grants management aspects of the program remain in NICHD.

The SCORs, first implemented in 2002, are interdisciplinary research centers that focus on sex and gender factors in women's health, and are led by senior investigators. They are designed to provide a collaborative multidisciplinary approach to complex women's health research, and to accelerate the transfer of basic research findings into clinical practice. In 2007 a second solicitation for applications was issued, and 11 new or continuing centers are currently engaged in this research program. Each SCOR emphasizes research in an area of clinical importance to women's health with a focus on asso-

ciated or suspected sex differences. The intent of this program is to promote innovative collaborative research among scientists with expertise in diverse disciplines or specialties to achieve broader research objectives than those likely to occur through traditional grant mechanisms without an interdisciplinary component. The disciplines mobilized in the SCORs are interdepartmental, intercollegiate, and inter-institutional. During this past year, SCOR investigators report publishing 116 journal articles, 176 abstracts, and 63 other publications. The resulting science from these programs is exciting and productive, yielding much new information of which examples are provided during the symposium and summarized in these abstracts.

The ORWH is joined in the funding and programmatic support of these SCORs by NIAMS, which is the main administrator for these centers, NICHD, NIDA, NIMH, and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), as well as the Office of Women's Health of the Food and Drug Administration (FDA).

During this Sixth Annual Women's Health Interdisciplinary Research Symposium, representative BIRCWH scholars recommended by their programs and SCOR investigators present the results of their research or promising preliminary findings, including the effects of sex and gender factors on health and disease. Scientific advances focusing on a broad array of research efforts are highlighted. Examples include exploring the effect of the menstrual cycle on the success of smoking cessation treatment, as well as how prenatal drug exposure influences the development and differences between boys and girls in drug-seeking behavior. Other scientists are looking at innovative approaches to the treatment of HIV and alternative treatments of uterine fibroids. Another group has discovered new approaches to the treat-

ment and prevention of stress incontinence, as well as ways to reduce pelvic floor damage during the birthing process. And, an interdisciplinary team tested genes for osteoporosis that may enable scientists to design diagnostic chips that will permit early prognosis and preventive treatment of a disease that disproportionately affects women.

These abstracts demonstrate the continuing progress in utilizing an interdisciplinary approach to learning more about women's health and diseases and the sex or gender factors that differentiate them from men's health, as well as investigating women's reproductive health processes about which more knowledge is needed. And, the success of the BIRCWH program in advancing academic careers in women's health research, as demonstrated by the work of the scholars, is encouraging for securing future research scientists in women's health. We are optimistic that these programs are having a positive impact on how women's health research will be conducted as the ORWH moves into the next decade of its existence, and will foster new productive and collaborative ways of seeking answers to the complexities of women's health.

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