

THE MARY HARRIGAN CONNORS CENTER  
FOR WOMEN'S HEALTH AND GENDER BIOLOGY

EVENT SYNOPSIS  
FRIDAY, MAY 10, 2013



WOMEN'S HEALTH:  
THE FUTURE  
IS NOW

The Estrellita and Yousuf Karsh Visiting  
Professorship in Women's Health Symposium



BRIGHAM AND  
WOMEN'S HOSPITAL

## PROFESSORS IN WOMEN'S HEALTH IN THE UNITED STATES AND CANADA



### **Sonia Anand, MD, PhD, FRCPC**

Professor of Medicine and Epidemiology  
Eli Lilly Canada-May Cohen Chair in Women's Health  
Heart and Stroke Foundation of Ontario/Michael G. DeGroot Chair  
in Population Health Research  
Canada Research Chair in Ethnicity and Cardiovascular Disease  
McMaster University  
Hamilton, Ontario, Canada



### **Molly Carnes, MD, MS**

Professor, Departments of Medicine, Psychiatry and Industrial & Systems Engineering  
Jean Manchester Biddick Professor in Women's Health Research  
Director, Center for Women's Health Research  
Co-Director, Women in Science and Engineering Leadership Institute  
University of Wisconsin School of Medicine and Public Health  
Madison, Wisconsin



### **Rose S. Fife, MD, MPH**

Professor of Medicine, Biochemistry and Molecular Biology,  
and Public Health  
Barbara F. Kampen Professor of Women's Health  
Indiana University School of Medicine  
Indianapolis, Indiana



### **JoAnn E. Manson, MD, DrPH, FACP, FAHA**

Professor of Medicine, Harvard Medical School  
Professor, Department of Epidemiology, Harvard School of Public Health  
Michael and Lee Bell Professor of Women's Health at Harvard Medical School  
Chief of the Division of Preventive Medicine at Brigham and Women's Hospital  
Boston, Massachusetts



### **C. Noel Bairey Merz, MD, FACC, FAHA**

Professor of Medicine  
Women's Guild Chair in Women's Health  
Director, Barbara Streisand Women's Heart Center  
Director, Preventive and Rehabilitative Cardiac Center  
Cedar-Sinai Medical Center  
Los Angeles, California

# WOMEN'S HEALTH: THE FUTURE IS NOW

## The Estrellita and Yousuf Karsh Visiting Professorship in Women's Health

On May 10, 2013, the five endowed professors of women's health in the United States and Canada came together for the first time in one room—the Bornstein Family Amphitheater at Brigham and Women's Hospital in Boston. As the professors, all of them women, took the stage in this historic lecture hall to share their precedent-setting work in how gender affects disease, the contrast with their surroundings was apparent: the walls were graced by dozens of portraits of renowned men of science and medicine. In the nascent field of women's health, the past provides a strong incentive for transforming the future. "It is my hope and dream that someday there will be an equal amount of women's portraits adorning these walls," said Marshall Wolf, MD, emeritus vice chairman for Medical Education at Brigham and Women's Hospital and long-time advocate for women's health.

it puts a stake in the ground for women's health and makes a case for why continued investment in this work is so important."

Betsy Nabel, MD, agrees. The current president of Brigham and Women's Hospital is a physician-scientist and a former director at the National Institutes of Health (NIH). The 20-year anniversary of NIH's historic Revitalization Act, which mandated the inclusion of women and minorities in medical research, was a reference-point throughout the day.

"We know so much more now than we did even 20 years ago," said Nabel. "But the next frontier for gender biology is vast and challenging, and we have so much more to learn."

### THE IMPACT OF PERSPECTIVE

C. Noel Bairey Merz, MD, provided a vivid illustration of the progress and the road ahead for women's health in

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### THE JOURNEY AHEAD

It was the future of women's health that brought these prestigious professors to Boston for the Estrellita and Yousuf Karsh Visiting Professorship in Women's Health Symposium. This first-ever leadership conference reflects a larger effort to nurture a relatively new field of study applying gender biology to the overall improvement of women's health. Leadership, rigorous research, and a tenacious quest for knowledge were powerful themes as the visiting professors presented their formidable bodies of work.

"It is an honor to be the first convener of this esteemed group," said Paula Johnson, MD, MPH, executive director of the Connors Center for Women's Health and Gender Biology at Brigham and Women's Hospital, the first hospital in the nation to focus on gender medicine in a comprehensive way. "This symposium is not only a great opportunity for faculty,

her presentation on the trajectory of cardiovascular disease in women. Bairey Merz, who holds the Women's Guild Chair in Women's Health at Cedars-Sinai Medical Center in Los Angeles, described a phenomena called "The Yentl Syndrome," which researchers believe contributed to the alarming discovery in 1984 that cardiovascular mortality rates for women were surpassing men.

Named for the Barbra Streisand film in which a female impersonates a man in order to become a rabbi, "The Yentl Syndrome" may be the reason women went undiagnosed and untreated for years. "The physicians at the time were asking the question 'Does this disease look like a man?' and when the answer was no, there was no diagnosis," said Bairey Merz. "The result was that men got treated and women died."



(left to right) Sonia Anand, MD, PhD, C. Noel Bairey Merz, MD, Molly Carnes, MD, MS, Marshall Wolf, MD, Estrellita Karsh, JoAnn E. Manson, MD, DrPH, Rose S. Fife, MD, MPH, Paula Johnson, MD, MPH

It wasn't until 1996 with results from NIH's Women's Ischemia Syndrome Evaluation (WISE), that major differences in male and female patterns in heart disease were discovered. Perhaps the most significant of these findings was the fact that cholesterol plaque may not develop into major blockages in women, but instead may spread evenly through the artery wall.

The WISE study was a game-changer for what had always been thought of as a man's disease. It was followed by new clinical guidelines for treating

practice, such as: the underrepresentation of women in cardiovascular trials; the underreporting of the sex of animals in basic science studies; the low percent of articles that report sex-specific outcomes; and women receiving fewer interventions to prevent and treat heart disease.

Bairey Merz believes eliminating these barriers will require a major ramp-up in advocacy and philanthropy (with a focus on de-politicizing women's health and understanding its value to overall medicine), as well as policy changes—from requirements on data stratification

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cardiovascular disease in women and a major public awareness campaign that contributed to a significant decline in mortality rates for both men and women.

But, as Bairey Merz points out, the sex survival gap still exists, with women continuing to die at twice the rate of men. She also pointed to a number of continuing problems in research, reporting, and

to more specific guidelines for treatment to the pressing need for more research funding.

“Scientific information on gender differences has led to dramatic discoveries in cardiovascular disease,” she said. “Shouldn't we want to know more about this?”

### A LIFE COURSE APPROACH

For physician-scientists like Sonia Anand, MD, PhD, the answer to Bairey Merz's question is certainly yes, and not just about sex differences but also about how differences in ethnicity and socioeconomic conditions impact a person's health throughout their lifetime. Anand is the Eli Lilly Canada-May Cohen Chair in Women's Health Research at McMaster University, in Ontario, Canada. In her presentation on the epidemiology of cardiovascular disease in women and men of various origins in Canada, Anand focused on the interactions of all three of these differences.

Her research unearthed important findings such as the probability of myocardial infarction differences in men and women having to do with risk factors occurring at different times in their lives. This life course approach to health care takes into account differences in both risk and protective factors throughout a person's lifetime, beginning in utero. This approach is particularly instructive in women's health, where understanding causal relationships leads to more precise diagnosis and treatment.

### SCIENCE AS BASIS FOR DISCOVERY AND CONSISTENCY

JoAnn Manson, MD, DrPH, the Michael and Lee Bell Professor of Women's Health at Harvard Medical School, made a strong case for more rigorous science in women's health, as she discussed the controversies over clinical guidelines and recommendations in two areas: estrogen replacement therapy and the use of Vitamin D.

Estrogen therapy for treating symptoms in postmenopausal women has become one of the best examples of diagnostic inconsistency—what Johnson later called “medical flip-flops.” As Manson described, the use of estrogen therapy was common practice until 15 years ago, when the Women's Health Initiative uncovered connections to cancer and stroke. The use of estrogen was then eliminated altogether until recently, when new information called for acceptable use in some cases based on risk stratification.

In studying estrogen use and health outcomes such as stroke and breast cancer, Manson found major differences in women by age, and by years since menopause onset.

“Risk differences are the key to understanding how we can apply estrogen therapy, particularly in



Paula Johnson, MD, MPH

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**C. NOEL BAIREY MERZ, MD**

understanding the effects of different formulations,” said Manson, who believes additional trials will be needed to avoid further inconsistencies. “The reason there are flip-flops is we don't have the evidence to be more definitive.”

Vitamin D, considered by some to be a wonder drug for everything from mood to bone density to cancer, also requires further study. According to Manson, gender biology comes into play with the use of Vitamin D, because there can be very different effects on men and women across a number of different areas.

The Institute of Medicine released conclusions in 2010 that set a daily dosage of Vitamin D at 600



International Units a day. But Manson noted that the only causal evidence this is based on is in bone health. Questions remain about whether Vitamin D reduces the risk of cancer or cardiovascular disease and, if so, whether there are differences by race and sex.

### **A PERSONAL TRAJECTORY OF COMMITMENT**

In her more personal presentation, Rose Fife, MD, MPH, the Barbara F. Kampen Professor of Women’s Health at the Indiana University School of Medicine in Indianapolis, IN, described a diverse career trajectory that went from researcher to administrator to domestic violence specialist and advocate for women. Fife became involved with domestic violence in her work treating underserved women in Indianapolis, largely of Latino origin. In examining their most

passage of the recent Violence Against Women Act in the United States Congress.

### **BIAS AND CONSEQUENCES IN HEALTH CARE**

The final speaker at the Karsh Symposium presented on a dynamic that transcends each of the professors’ work and underscores the mission of the field: How gender bias impacts science, technology, engineering, math, and medicine (STEMM) and why gender equity in medicine is so important to women’s health.

Molly Carnes, MD, MS, believes that everyone has bias, no matter how objective they believe they are. The Jean Manchester Biddick Professor of Women’s Health Research at the University of Wisconsin-Madison hoped to discover how individual bias influences institutional action in her investigation of

**“Without a change in the cultural norms of academic institutions, women’s health will hit a glass ceiling.” MOLLY CARNES, MD**

pressing health needs, she discovered that family violence was the cause of myriad health issues within this community.

As a scientist, Fife approached the issue from an empirical perspective, which eventually led her to an “accidental” study of trauma in Kenya. In detecting an increase in trauma among patients at a university-based clinic in Mosoriot, Kenya, Fife was able to discern—from the new medical records system she had established—that the majority of trauma was due to interpersonal or domestic violence. The data she obtained gave community leaders the evidence they needed to launch an education and intervention program, which temporarily reduced the violence.

“Domestic abuse is perhaps the dominant health issue for women world-wide yet it is difficult to fund and to legislate,” said Fife, who noted the hard-won

stereotypes about men and women in STEMM fields.

According to her research, a close look at federal grant awards revealed that women received fewer renewal grants than men, particularly among those grants associated with field leadership, which is a characteristic more commonly associated with men. Her data also show that faculty positions in medical research institutions remain dominated by men, as does the rate at which promotions occur.

“Without a change in the cultural norms of academic institutions, women’s health will hit a glass ceiling,” said Carnes.

Carnes believes more women in positions of leadership in science and medicine are critically important to women’s health because people’s choices of study are often personal. “People are curious about what matters to them, so the advancement of women



From left to right

Betsy Nabel, MD and C. Noel Bairey Merz, MD;  
Marshall Wolf, MD and Molly Carnes, MD, MS;  
Rose S. Fife, MD, MPH; Sonia Anand, MD, PhD  
Estrellita Karsh, and Catherine Kreatsoulas,  
PhD; JoAnn E. Manson, MD, DrPH

in medicine will always be important to the advancement of women's health," she said.

Johnson later expanded on the concept. "Diversity in institutions brings new ideas, and allows for the adoption of alternative lenses for examination. Having this perspective at your core creates concentric circles of change that can transform entire cultures."

### A GLOBAL IMPERATIVE

In her final question to the professors, Johnson posed what everyone in the room—even around the world—will benefit from knowing: "What do we need to advance women's health over the next 10 years?"

This question launched a lively discussion with comments ranging from funding to cultural change to

government policy. Institutional commitment with money and structure behind it was one suggestion. Rebranding women's health as an economic issue was another. Opportunities in the Affordable Care Act on patient-centered outcomes, data stratification, and transparency will be something to watch closely. And all agreed that women's health should involve incorporating "the health of women" into all practices.

Improving the health of women and transforming their care is the central mission of the Connors Center. As the professors return to their groundbreaking work, they, and other pioneers like them, will continue to look to the Connors Center to create the concentric circles that will eventually change the way women's health is viewed and addressed.



## The Mary Horrigan Connors Center for Women's Health and Gender Biology

Under the leadership of Paula A. Johnson, MD, MPH, the Connors Center for Women's Health and the Division of Women's Health at BWH are committed to improving the health of women and transforming their medical care. The Connors Center works with divisions and departments throughout the hospital to organize collaborative

initiatives to improve patient care by integrating leading-edge research about women's health into clinical practice, developing pilot clinical programs targeting specific populations and areas of women's health, and providing care for all aspects of women's health throughout the lifespan. In addition, the Connors Center:

- conducts and promotes research on sex- and gender-based biology, and the impact of sex and gender on disease, health outcomes, and the delivery of care
- builds awareness of issues related to women's health and gender biology among clinicians, patients, and the general public
- educates leaders with the experience and skills to have a major impact on improving the health of women
- develops programs to build leadership in women's health globally
- advocates for changes in public policy to improve the health of women

Throughout the history of BWH, generous donors have helped us make great things happen. More than ever, philanthropy continues to play a vital role in sustaining current programs while implementing new initiatives that have the potential to change medical care around the world.

**TO SUPPORT OUR EFFORTS, PLEASE CONTACT:**

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