

# Center For Women's Health Research Quarterly Highlights

WINTER 2013



UNIVERSITY OF COLORADO  
ANSCHUTZ MEDICAL CAMPUS



*Dr. Judy Regensteiner*

## Message from Center for Women's Health Research Director, Dr. Judy Regensteiner

**Welcome to the inaugural issue of our Center for Women's Health Research (CWHR) newsletter!** 2013 has been a year in which we have continued to pursue our CWHR goals but also have continued to have some remarkable accomplishments.

The three part mission of the CWHR is to perform cutting edge research in cardiovascular disease and diabetes in women (and study sex differences too), to mentor the next generation of researchers in women's health and sex differences, and to provide relevant education to the public and health care providers.

**Scientifically**, we now have 32 scientists affiliated with the Center for Women's Health Research. We just completed the most recent competition for the Building Interdisciplinary Research Careers in Women's Health (BIRCWH) program and have added two new scholars. I would like to extend my thanks to our senior faculty scientists, Drs. JoAnn Lindenfeld, Jane Reusch, Wendy Kohrt and Lorna Moore who contribute greatly to our mission of mentoring! Both junior and senior faculty have made great scientific strides and you will read more about their findings in upcoming issues.

**Educationally**, our Let's Talk program, a collaborative effort between the CWHR and the University of Colorado Hospital, garnered record audiences over the past year. We also had a highly successful Women's Health Research Day as well as the Annual Women's Health Symposium offered to health care providers. Our 2013 annual luncheon with keynote speaker Dr. Eve Van Cauter of the University of Chicago was wonderful too. I always think the next luncheon could not be as good as the last one, but each time, it gets even better. We are excited about the 2014 Annual Luncheon speaker, **Noel Bairey Merz, MD**. Dr. Merz is a cardiologist at Cedars Sinai in LA and is the director of the Barbra Streisand Women's Heart Center. She is known for her research in women's health and has been part of some amazing scientific endeavors. Please mark your calendar for October 8, 2014.

We are very grateful to have received **our first Endowed Chair** – The Judith and Joseph Wagner Chair of Women's Health Research, one of the few chairs in women's health research in the country. I am in still in awe of the amazing power of the Advisory Board and dedicated volunteers and donors who contributed to the Chair.

Finally, last year we said goodbye to **Pat Sterner** who had done great things for the CWHR. This year, we welcome **David Samson** as our new Managing Director and are honored to have him join the leadership of the Center.

Warmly,



**David Samson**  
*CWHR Managing Director*

## **David Samson Named as the Managing Director for the Center for Women's Health Research**

The CWHR extends a warm welcome to the new Managing Director, David Samson. David comes to us from Chicago where he served as Vice President and Chief Development Officer for Rainbow Hospice and Palliative Care. During his successful 15 year tenure, Rainbow Hospice expanded from 35 employees to 240 employees and became the largest provider of hospice care in Cook County, Illinois. David led and managed several sizeable fundraising campaigns and endowment initiatives for the organization. David brings a vast knowledge of nonprofit growth, development, and governance to CWHR.



**Dr. Eve Van Cauter**

## **Attended by over 620 guests, the 2013 Center for Women's Health Research Annual Community Luncheon**

was held on September 26, 2013 at the Denver Center for Performing Arts. Keynote Speaker Dr. Eve Van Cauter from the University of Chicago presented her seminal research findings about the impact of sleep disturbances on women's health. Dr. Eve Van Cauter's research over the past decade has focused on the impact of decreases in sleep duration and quality on markers of health and the interaction of sleep loss with the aging process. Her research group has identified sleep loss and poor sleep quality as novel risk factors for obesity and diabetes.

This signature education and outreach event was chaired by CWHR Advisory Board member, Catherine Petros. Special thanks to Annual Luncheon host committee members Mary Lee & Don Beauregard, Ann & Hal Logan, Sharon & Lanny Martin, Eileen Honnen McDonald, Jessica & Mike McGawn, Susan Noble, Kate Paul, and Nancy & Brian Shloss. We are extremely grateful to our individual, corporate, and foundation sponsors whose generous support funds the programs and research at the Center.

## **Save the Dates!**

### **Wellness While Expecting**

**February 20, 2014**, 6pm-8pm | Anschutz Health and Wellness Center

### **CWHR Women's Health Symposium**

**March 1, 2014**, 7:30 am-1:00 pm | Anschutz Medical Campus

### **Girls on the Run 5K**

**May 10, 2014**, City Park

### **2014 Annual Community Luncheon**

**October 8, 2014**, Keynote Speaker: Dr. Noel Bairey Merz, Director, Barbra Streisand Heart Institute

## A conversation with CWHR donor Donor Spotlight: Helen Jean Mitchell



**Helen Jean Mitchell**

The Center for Women's Health Research is very grateful to the donors and supporters who support its three fold mission of research, mentoring, and education and outreach. Helen Jean Mitchell, who is generously supporting cardiovascular research at the Center, recently shared with us why she chose to direct her gift to the CWHR.

### **CWHR: Why did you connect with the research and work presently being done at the Center for Women's Health Research?**

**HELEN:** *I connected with the research and work presently being done at the Center for Women's Health Research based on my own personal health challenges. Since my physicians are all University of Colorado*

*graduates, I wanted to promote the ongoing research work being performed there. Based upon my assessment of each departments' research objectives, I determined the recipient of my gift. Through my contribution to the Center for Women's Health Research at the University of Colorado School of Medicine, my hope is to fund the research that will help to develop treatments for the management and eventual prevention of heart disease in women.*

### **CWHR: Your gift has provided an important seed grant for Dr. Lori Walker's work. What have you learned about her research and its potential impact on women's health?**

**HELEN:** *Lori Walker's research is focused on causes of heart failure in women and how it may differ from heart failure in men. Heart failure is the leading cause of death and disability in the U.S. It disproportionately impacts women with regard to disease severity and survival. In the heart, cells release chemical signals to neighboring cells that impact their function. Dr. Walker's work is focused on understanding the role of these chemical signals in the diseased heart. She has found that one such signal, a molecule known to be involved in inflammation, is different in hearts of female animals with heart disease than in the hearts of their male counterparts. Understanding the role of this chemical molecule will provide invaluable information on cardiac disease in women and may potentially provide new avenues for more sex-specific targeted therapies.*

### **CWHR: Tell us about what motivates you philanthropically**

**HELEN:** *I am motivated by my gratitude for enduring my health challenges in my own life. Through medical advancements, I have been fortunate to survive each episode. It is only through medical research that I have benefited in my own situations, and I feel it is important to assist where I am able so that continued research may benefit others.*

### **CWHR: Who inspires you? Why?**

**HELEN:** *What has inspired me is the ingrained image of my own mother the day she passed away from a probable preexisting and congenital heart condition. I miss my mother and think of her every day. My mother's untimely death inspires me to provide financial support toward research efforts designed to identify women at risk for this "silent killer," heart disease.*

# 2013 Junior Faculty Development Awards

The Junior Faculty Development Awards provide seed grants for Center for Women's Health Research researchers. Seed Grants are a vital component of training the next generation of scientists. Awardees were selected in September by a committee of senior faculty members in the Department of Medicine. Junior Faculty Research Awards provide seed funding for young researchers who are exploring important questions in women's health and allow them to gather initial findings that are then used when applying for larger NIH grants.

Congratulations to the following CWHR Junior Faculty Development Award recipients:



**Jacinda Nicklas,  
MD, MPH**

## 2013-14 \$25,000 Faculty Development Award: Jacinda Nicklas, MD, MPH

**PROJECT TITLE:** *Fit After Baby: A Mobile Health Intervention to Increase Postpartum Weight Loss in Women at Elevated Risk for Cardiometabolic Disease*

Dr. Jacinda Nicklas is an internist whose work focuses on the importance of healthy behaviors in pregnancy for the avoidance of cardiovascular disease. For some women, pregnancy unmasks a high risk for future diabetes and cardiovascular disease. Dr. Nicklas is developing and testing Fit After Baby, an innovative postpartum program. It uses mobile devices, including cell phones, to deliver a specialized lifestyle intervention program for women who had recent complicated pregnancies, including diabetes and preeclampsia. By helping these women lose weight and make healthy changes in the year after they give birth, she hopes to prevent diabetes and heart disease.



**Christine Tompkins,  
MD**

## 2013-14 \$25,000 Faculty Development Award: Christine Tompkins, MD

**PROJECT TITLE:** *Sex Differences in Cardiac Arrhythmias*

Dr. Christine Tompkins is a cardiologist specializing in electrophysiology. Her research is in the area of sex differences in cardiac arrhythmias. For unclear reasons, men and women exhibit very different vulnerabilities to certain types of arrhythmias. The focus of Dr. Tompkins' application is to investigate the electrical properties that underlie this gender dimorphism and determine how these properties are influenced by sex hormones. Studies will include analysis of novel electrophysiologic parameters in human subjects and ion channel function in animal models.



**Stacy Schmidt, PhD**

## 2013-14 \$25,000 Faculty Development Award: Stacy Schmidt, PhD

**PROJECT TITLE:** *The Effects of Sleep Restriction and Exercise on Sex-based Differences in Lipid Metabolism*

Dr. Stacy Schmidt is a PhD scientist who studies sleep restriction and exercise. Her research has shown that an increased ability to burn fat during sleep is related to less weight gain over time. This suggests that sleeping or night time fat metabolism is important for body weight regulation. Understanding whether and how insufficient sleep leads to any impairment in fat oxidation and potentially contributes to the development of obesity is crucial to clinical interventions, public health policy, and informing future studies. Her long-term goal is to study the physiological changes that occur during sleep following energy imbalance, and to understand how inadequate sleep disrupts weight loss efforts differently in men and women.

# 2013 Junior Faculty Development Awards



**Bridget Young, PhD**

## 2013-14 \$25,000 Faculty Development Award: Bridget Young, PhD

**PROJECT TITLE:** *Impact of Maternal Obesity and Diabetes on Breast Milk Composition*

Dr. Young has her PhD in Nutritional Sciences and is a Certified Lactation Counselor. She is conducting a research study among breastfeeding lean, overweight, and type 2 diabetic mothers and their infants. She is collecting breast milk samples and measuring how the infants grow over the first four months of the infants' lives. The goal of this research is to discover how well the infants grow over their first 4 months of life. She is interested in finding out how certain components of breast milk may differ among these different groups of mothers and how these components may impact how the baby grows.



**Lori A. Walker, PhD**

## 2013-14 \$25,000 Faculty Development Award, \$10,000 Helen Jean Mitchell Award: Lori A. Walker, PhD

**PROJECT TITLE:** *Divergent Sex-specific Expression of IL-19 and its Cognate Receptors IL-20R1 and IL 20R2 in a Female Dominant Model of Heart Failure*

Dr. Walker is a PhD scientist who is investigating some key sex differences in heart failure. Heart failure is the leading cause of death and disability in the U.S. It disproportionately impacts women with regard to disease severity and survival. In the heart, cells release chemical signals to neighboring cells that impact their function. Dr. Walker's work is focused on understanding the role of these chemical signals in the diseased heart. She has found that one such signal, a molecule known to be involved in inflammation, is different in hearts of female animals with heart disease than in the hearts of their male counterparts. Understanding the role of this chemical molecule will provide invaluable information on cardiac disease in women and may potentially provide new avenues for more sex-specific targeted therapies.



**Ryan Mays, PhD**

## 2013-14 Jacqueline's Wish for the Heart Financial Award: Ryan Mays, PhD

Walking ability is significantly decreased in men and women with peripheral artery disease (PAD) resulting in sedentary behavior and poor health outcomes. The goals of Dr. Mays' research are to improve the walking ability and quality of life of people with PAD, using community settings for their walking exercise. Involvement of the community is critically important as well. Since PAD patients have experiential knowledge of the disease, they are directly involved in the study in an advisory board capacity to ensure its effectiveness.

# 1 in 10 Adults May Have Diabetes by 2030



*Currently, thirteen senior and junior faculty researchers at the Center for Women's Health Research (CWHR) are studying diabetes across the lifespan—from inside the womb to the later stages of life.*

The International Diabetes Federation issued a report this month predicting that at least 1 in 10 adults could have diabetes by 2030. According to the World Health Organization, approximately 346 million people worldwide have diabetes, with more than 80 percent of deaths related to diabetes occurring in developing countries. Most of these diabetes cases are type 2 diabetes, which most often manifests in middle age and is linked to weight gain and a sedentary lifestyle.

Currently, thirteen senior and junior faculty researchers at the Center for Women's Health Research (CWHR) are studying diabetes across the lifespan—from inside the womb to the later stages of life. Their research has very important implications for the prevention, management, and treatment of diabetes. CWHR Director **Dr. Judy Regensteiner** and **Dr. Jane Reusch** (CWHR senior faculty) are focused on the cardiovascular implications of diabetes. They have found through their research that exercise capacity is reduced in people with uncomplicated type 2 diabetes, especially in women. Exercise impairment in people with type 2 diabetes may represent the earliest evidence of cardiovascular disease.

Several CWHR affiliated physician scientists are involved in studies extending the original observations of Regensteiner and Reusch. Specifically, **Dr. Kristen Nadeau** is investigating the effects of type 1 and type 2 diabetes on adolescents' cardiovascular health and the role of insulin resistance in the cardiovascular issues that are associated with diabetes. Dr. Nadeau is now mentoring CWHR scientist, **Dr. Melanie Green**, who is studying polycystic ovarian syndrome in teens. This disease is closely related to an increased risk of diabetes.

**Dr. Amy Huebschmann's** research is focused on

understanding and ultimately removing barriers to exercise in underserved women with type 2 diabetes. Women with diabetes are often sedentary in spite of the known importance of exercise in preventing and ameliorating diabetes. Dr. Huebschmann is working to systematically identify the physiological and psychological barriers in order to find the most effective intervention strategies.

Another exciting area of study by CWHR scientists is the fetal origins of diabetes and cardiovascular disease, also known as **fetal programming**. Predisposition to cardiovascular disease and diabetes begins in the womb. If influences inside the womb are harmful, then heart disease and diabetes may result later in life. CWHR scientists **Drs. Laura Brown, Paul Rozance, Stephanie Thorn, Kristen Boyle,** and **Anne Lynch** are involved in these studies. By defining the fetal adaptations that occur in response to an adverse uterine environment, they hope to design unique, state of the art fetal and neonatal interventions to improve outcomes (both short-term and long-term). The goal of this body of research is to provide methods of prevention and treatment of diabetes so as to avoid the development of cardiovascular disease.



*David Kao, MD*

## Researcher Profile: David Kao, MD

CWHR researcher and cardiologist David Kao, MD presented the latest findings in his research, "Heart Failure Research in the Age of Amazon" at the Annual Community Luncheon. Dr. Kao came to the University of Colorado after training at Stanford and Johns Hopkins. His research works to bring the spirit of Silicon Valley to the study of heart failure. With the mentorship of CWHR founder Dr. JoAnn Lindenfeld and funded by CWHR donors Karen and Steve Leaffer, his research represents a novel approach to personalized medicine.

Dr. Kao and his colleagues are using statistical analysis and prediction models like those used by Amazon and Google to more accurately and effectively treat heart failure in women.

Dr. Kao stressed that 50% of all heart failure patients in the United States have the type of heart failure caused by a small, stiff heart, which primarily affects women and has high mortality. No therapy has proven effective for these patients to date. By implementing strategies used by Apple, Amazon, and Google to identify subgroups of users, identification of important groups of heart failure patients may be accelerated. By using this approach, Dr. Kao and his colleagues have identified a group of this type of heart failure patients who may benefit from a specific medication.

## Donate Now!

### *Thank you!*

for considering the Center for Women's Health Research in your end of the year giving.

To donate, [click here](#).



UNIVERSITY OF COLORADO  
ANSCHUTZ MEDICAL CAMPUS