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

A Record Breaking Year!

Greetings! We find ourselves well into the fall season with a number of recent events and accomplishments to celebrate. Thanks to our talented advisory board, money raised from the “Board Challenge” this year helped the CWHR set a new record by doubling the number of seed grants awarded to junior researchers. Ten talented researchers joined our team and will benefit from the mentoring partnership that is central to our mission. In total, we have over 45 researchers affiliated with the CWHR, and their phenomenal work is advancing women’s health each day.

We broke another record with attendance at our Let’s Talk event on August 26th, reaching 250 guests in our community. In partnership with University of Colorado Hospital, we brought together experts to share the latest in research on the topic: Preserving the Active Life You Love Throughout Your Lifetime. Participants left with tips on how women can stay healthy, strong and active as they age.

This summer Sarah Westmoreland joined the CWHR team as Public and Community Education Liaison. Her addition breaks yet another record, making the CWHR team the largest it’s ever been. In her new role she will focus on communications, sharing our work and accomplishments with a wide audience.

Given these successes, along with the growth and outstanding research coming out of the CWHR, the time has arrived to bring together a renowned group of scientists to share, collaborate and learn. We are thrilled to announce the debut of our National Conference on Women’s Health, to take place September 28-30, 2016 at The Broadmoor in Colorado Springs, Colorado. Stay tuned for exciting details which will include education for our community supporters!

Please join us at an upcoming Let’s Talk: Conversations about Women’s Health event:
• November 19, 2015: Palliative Care and Advance Directives: It’s Always Too Soon Until It’s Too Late
• February 4, 2016: Keeping Your Interior Highway in Top Condition
• March 15, 2016: Taboo Topics for Women Featuring Girls Only®
• June 2016 (date TBA): Exploring Careers in Health Care for High School Aged Girls

Many thanks for your interest in and commitment to the work of the CWHR!

Judy Regensteiner
2015 Seed Grant Recipients

The CWHR welcomes our newest researchers! We extend great appreciation to our very talented Board members, who raised additional funds through the “Board Challenge.” These funds were able to support five additional seed grants in 2015.

**Peter Baker, MD**

**Gestational Diabetes and Maternal Obesity: Dysfunctional Offspring Cellular Metabolism & Prevention Through Altered Maternal Diet**

Dr. Baker’s highly collaborative project employs a novel model to examine the effects of maternal obesity and gestational diabetes dietary therapy on the child. The results may influence the way gestational diabetes is treated and provide a preventative intervention for fetal programming in obesity.

**Blair Dodson, PhD**

**Fetal Endothelial Insulin-like Growth Factor-1 (IGF-1)Therapy in Intrauterine Growth Restriction**

Dr. Dodson is an engineer who is studying ways to prevent and treat intrauterine growth restriction (IUGR) in pregnancy, a complication characterized by a baby who fails to reach its full growth potential. IUGR increases the risk of perinatal complications and predisposes the infant for developing cardiovascular disease in childhood and adult age. He hopes to define how the intrauterine environment shapes both short- and long-term fetal vascular health.

**Anna Euser, MD, PhD**

**The Effect of High Altitude Residence on Myometrial Vasoreactivity in Term Pregnancy**

Residence at high altitude (above 8,250 ft.) increases the incidence of intrauterine growth restriction (IUGR) and other pregnancy complications that pose immediate health threats as well as predispose both mother and infant to an increased risk of cardiovascular disease later in life. Dr. Euser will study utero-placental blood flow at the time of Cesarean section from women delivering either at high altitude in Frisco or at lower altitude.

**Kathleen Gavin, PhD**

**Basic Studies of De Novo Generation of Adipocytes from Human Myeloid Cells**

Dr. Gavin is investigating whether cells (progenitor cells from bone marrow) that were not previously believed to contribute to fat generation in humans are indeed capable of becoming fat cells. If fat generation differs between younger and older women and men, it could potentially play a role in sex differences in body fat distribution.

**Kerry Hildreth, MD**

**Vascular Mechanisms for the Effects of Loss of Ovarian Hormone Function on Cognition in Women**

The loss of estrogen with menopause is associated with stiffer, less healthy blood vessels and an increase in cardiovascular risk factors. Estrogen is also important for brain health. Dr. Hildreth is studying whether the negative effects of the loss of estrogen on memory and thinking in women may be explained by changes in the health of blood vessels, and whether exercise can counteract these effects.
2015 Seed Grant Recipients

**David Kao, MD**  
*Characterization of Gender-Specific Heart Failure Phenotypes: Profiles, Prognosis and Treatment Response*  
Dr. Kao is a cardiologist working to find patterns of disease using large-scale analyses of patient characteristics to understand how heart failure varies between individuals and different groups of people. He works in the emerging field of personalized medicine using bioinformatics technologies to identify and characterize subgroups of heart failure. He hopes to develop strategies for personalizing treatment of heart failure based on the specific type of heart failure a patient has and their unique characteristics such as age, gender, and race.

**Corey Rynders, PhD**  
*Sex-Specific Differences in the Effects of Prior Exercise on Sleeping Fat Metabolism*  
Dr. Rynders will examine sex-differences in the effects of aerobic exercise on fat utilization during sleep. His preliminary data shows that aerobic exercise performed during the daytime enhances sleeping patterns of fat utilization in men but not women. This study will lay the groundwork for investigating factors that upregulate or downregulate the ability to release fat from storage depots during sleep in women compared to men.

**Viral Shah, MD**  
*Bone and Vascular Health in Postmenopausal Women with Type 1 Diabetes*  
Dr. Shah will study the association between bone and heart health in postmenopausal women with type 1 diabetes (T1D). His research will help to design future studies to identify biomarkers to screen for both diseases to prevent illness and death.

**Lori Walker, PhD**  
*Does Loss of IL-19 Protect Females from Heart Disease?*  
In previous work supported by the CWHR, Dr. Walker found that a novel signaling molecule, interleukin-19 (IL-19), is higher in hearts of female animals with heart disease than in the hearts of their male counterparts. This continuing project is now focused on determining whether loss, or inhibition, of IL-19 will protect female animals against heart disease.

**Hongyu Xue, MD, PhD**  
*Modulating Doxorubicin-induced Cardiotoxicity by Glutamine and n-3 Polyunsaturated Fatty Acids in Breast Cancer*  
Dr. Xue is studying how to prevent toxic effects on the heart of a chemotherapy drug (Doxorubicin or DOX) which is commonly used to treat breast cancer. High doses of DOX may result in severe cardiotoxicity (i.e. compromised heart structure and/or function). Xue will study if dietary supplementation with glutamine and n-3 polyunsaturated fatty acids (PUFA) can provide benefits in enhancing the anti-tumor effects of DOX while preventing damage to the heart.
On September 29th, Keynote Speaker, JoAnn Manson, MD, spoke eloquently about her research regarding controversies in the prevention of heart disease to a crowd of 700 supporters.

Recent media conveys a flurry of information suggesting Vitamin D, aspirin and estrogen can all prevent heart disease, and Dr. Manson shared her caution that these supplements may not be effective for everyone. She explained that there is a positive potential for their use, but their benefits are heavily dependent on an individual’s personal health status and age. Sex differences between men and women also play an important role in how these supplements function. For instance, regular low-dose aspirin could be beneficial for women over 65, but not necessarily for women less than 65, while for men it can be beneficial starting at age 50. This new recommendation is reflective of the well-recognized knowledge that the degree of atherosclerosis in a typical 65-year-old women is similar to that in a typical 50-year-old man. Dr. Manson’s large clinical trials on this topic are ongoing and she expects that her more conclusive data, available in 2017, will help better inform doctors’ recommendations for the prevention of heart disease in both their female and male patients.

Sarah Perman, MD, one of CWHR’s faculty researchers, gave an excellent talk on sex differences in resuscitation after cardiac arrest. Dr. Perman, an emergency room physician, shared information about her research seeking to evaluate if there is a difference in how often and under what circumstances life support is discontinued in women versus men after cardiac arrest. Her hope is that this pilot work will shed further light on the gender differences in cardiac arrest outcomes that have been observed.

The CWHR was honored to have Dr. JoAnn Manson and Dr. Sarah Perman educate luncheon guests on these important topics.
PALLIATIVE CARE AND ADVANCE DIRECTIVES: IT’S ALWAYS TOO SOON UNTIL IT’S TOO LATE

People come into this world surrounded by love, comfort and care. Don’t we deserve the same when we leave it? Just as new parents surround themselves with information, resources and professionals who can help them navigate a new reality, it’s time to equip ourselves with the same level of knowledge and confidence when we or someone we love is approaching the end of life.

“I wish I would have known about this sooner.” Patients and families say it all the time, and doctors and caregivers hear it all too often. If you or someone you know is facing a life-limiting illness, the time to learn about palliative care, caregiving and advance directives is now.

Perhaps you or someone you know has recently been diagnosed with a serious illness. Or perhaps the treatments intended to prolong life are not working or causing a lot of pain and suffering. As a caregiver or as a patient, you may have questions and concerns about what to do. You may also be dealing with many feelings as you or a loved one faces a serious and life-threatening illness, or is dying.

Please mark your calendar for this Let’s Talk event. Attendees will be able to:

• Define palliative care and know how to access it.
• Understand the emotional, social and physical impacts of caregiving.
• Understand and complete an advance care plan. It’s never too early to start the conversation about care at the end of life.

WHO: Families seeking information on palliative care, advance directives and caregiving

WHEN: Thursday, Nov. 19, 2015 • 5:15 to 8:15 p.m.

REGISTRATION: http://uchealth.org/letstalkgoodbyes

QUESTIONS? Please contact Nan Oudet at 303-724-9179 or Nancy.Oudet@ucdenver.edu

SPEAKERS:
Jean S. Kutner, MD, MSPH, Chief Medical Officer, University of Colorado Hospital
Harekli (Harri) Brackett, RN, MS, ACHPN
Benjamin Brewer, PsyD
Jeanne Lee, MD
Erin Rosenberg, LCSW, ACHP-SW
As a geriatrician, Kerry has been working with elderly patients for over a decade, seeing them in her clinic for personalized treatment and in innovative group medical visits. Cognitive impairment and dementia, primarily Alzheimer’s disease, are common in this population, but few treatments are effective. Seeing patients and their families deal with the terrible effects of these diseases, Kerry’s goal through her research is to find a way to prevent onset and delay progression. Risk factors for cardiovascular disease, including high blood pressure and diabetes, are also risk factors for dementia and Alzheimer’s disease, and women account for two-thirds of individuals with Alzheimer’s disease in the United States. Kerry wants to understand how these diseases differ between men and women and how sex hormones, namely estrogen, play a role in their onset and progression.

Kerry’s interest in research grew as she became acquainted with colleagues on the CU Anschutz Medical Campus during her fellowship. Working with Dr. Wendy Kohrt and the renowned IMAGE (Investigations in Metabolism, Aging, Gender and Exercise) Research Group in the Division of Geriatric Medicine, Kerry has been able to link up with an ongoing clinical trial to obtain data on the role of estrogen in blood vessel and brain function. She uses cognitive tests as well as ultrasound and functional MRI to observe differences in cognitive function and vasculature in healthy women nearing menopause who are receiving a medication to suppress their estrogen levels as part of this clinical trial.

Kerry loves to enjoy the beautiful Colorado outdoors with her nine year old son. She also loves reading, cooking and traveling when she’s not hard at work in her lab.
Breaking the Cycle of Obesity

Kristen Boyle, PhD

The obesity epidemic affects a staggering number of people in our population, and pregnant women and their babies are not untouched. Large observational studies indicate that obese mothers are more likely to give birth to babies who grow up to also be obese. It is apparent that lifestyle and diet heavily affect this correlation, but what is less clear is the genetic mechanism working behind the scenes.

Kristen is busy working on exciting and timely research to help bridge this connection. She uses a novel research technique stemming from those learned during her doctoral studies. Kristen collects stem cells from the umbilical cords of babies just after birth. In her lab, she coaxes these cells to become fat cells and documents the differences in growth between cells from babies born to healthy weight moms and those born to obese moms. So far, she has identified that cells from babies born to obese moms have a 50% greater capacity to become fat cells. She can also see that there is a correlation between the cells’ fat content and the fat mass of the baby at birth. She is working to determine the mechanism that causes these stem cells to retain their fat-growth characteristics and whether stem cell factors continue to correlate with the children’s percentage of body fat as they grow up.

As she continues her research with support from the Center for Women’s Health Research and a new K-01 NIH Grant, she plans to follow up on the stem cell outcomes as the children grow older. She is collaborating with Dr. Dana Dabelea’s Healthy Start Study in which kids are followed from before birth through age 5. Blood samples are taken from the children between the ages of 4 and 6, and she is working on ways to culture enough stem cells from the blood sample to carry on her research.

Recently, Kristen has been featured in TIME magazine and interviewed by CBS Denver news about her groundbreaking research. Her eventual hope is that her clinical research will demonstrate a clear cause of the maternal programming of stem cells in unborn babies, and that effective interventions can be put to work to reduce the risk of obesity in kids.

Outside of her lab, Kristen loves to spend time with her active young kids, playing and teaching them to ride bikes. She also loves to sew and makes a lot of her own clothes.
A former exercise physiologist, health is close to Nancy’s heart. And speaking of the heart, Nancy spent years working with patients in cardiac rehabilitation after they had experienced a heart attack. She noticed that most of her patients were men, despite the fact that more women have heart attacks. She also noticed that women were often misdiagnosed; they had had a heart event, but were told it was something else such as depression, anxiety, or side effects of menopause.

Nancy seized the opportunity to effect change in women’s health through her long-term support of the Center for Women’s Health Research. On a group trip to the Eastern Bloc countries shortly after the Berlin Wall came down, she became good friends with Judi Wagner, a Denver businesswoman and community volunteer who is also a supporter of the CWHR. Judi added her to the mailing list for the CWHR and sent her an invitation to the first CWHR Luncheon, held in the basement of the Tattered Cover Book Store in Cherry Creek. Eating lunch from a small box, Nancy listened to the CWHR founder Judy Regensteiner talk about differences in diagnosis and treatment of women’s heart disease and diabetes. The CWHR’s mission sparked her interest, and she immediately knew that getting involved and supporting the CWHR was a way to bridge her passions for women’s health and philanthropy.

As Nancy continues to support the CWHR, her aspirations for its community impact grow. In ten years, she hopes to see the Center fund more young scientists and broaden its scope to explore other important health issues for women. She also hopes to see the CWHR’s work reach a larger population of younger women who could benefit from its research findings. Nancy feels passionate about philanthropic giving, especially to grassroots organizations such as the CWHR, whose programs and reach within the community have grown significantly since she became involved in 2004. Nancy recently announced that she has included the CWHR in her estate planning. She knows this contribution will eventually leave a great impact on women’s health as her generosity will fund future researchers and events that strive to elevate everyone’s knowledge of women’s health issues.

Nancy encourages everyone to do two simple things to raise awareness about women’s health: ask your doctor about it and talk to your friends. As a former health care worker, Nancy knows that by engaging your doctor in the conversation, you will help them become aware of the importance of sex differences in research and treatment. By talking to your friends, you are spreading the word about topics that could one day improve their treatment for health issues and save their lives.

The CWHR extends its deep appreciation to Nancy Tankersley for her long time support!
Welcome to Our New Staff Member

Sarah Westmoreland

Sarah Westmoreland joined the staff of the Center for Women’s Health Research in August 2015. As the Public and Community Education Liaison, she focuses on promotion of the Center through its website, newsletter, and other communications tools.

Sarah comes from the CU Boulder Study Abroad Office where she served as Assistant Director and Website Manager. Prior to that, she taught abroad in France and Tunisia.

Sarah holds a BA in Molecular, Cellular, and Developmental Biology as well as a BA in French, both from the University of Colorado Boulder. She will soon complete her Master’s Degree in Public Health at the Colorado School of Public Health.

Sarah grew up in the Denver area and loves all the outdoor activities Colorado has to offer. She enjoys spending time with her husband, young daughter and two dogs, and often takes one or all three of them running or hiking.
# 2015 Donor Honor Roll

The following gifts to the CWHR were received between March 31, 2015 and October 25, 2015. We are very grateful for this generous support! Questions or corrections? Please call Anne Kercsmar at 303-724-0305.

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(continued...)
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