



Center For Women's Health Research

Quarterly Highlights

SPRING 2019 QUARTERLY HIGHLIGHTS

Hello!

from **Dr. Judy Regensteiner, CWHR Director**

Welcome to the Center for Women's Health Research (CWHR) Spring Newsletter! The CWHR is committed to improving the lives of women, their families, and communities by focusing on the understudied areas in women's health and sex/gender differences. The purpose of this newsletter is to provide CWHR advisors, community members, supporters, and scientists with useful health information, news of CWHR events and progress in women's health and sex/gender differences research on the Anschutz Medical Campus as well as nationally.

A major part of the CWHR mission is to fund, train, and mentor the next generation of scientists. By supporting early career scientists, we are helping build a solid pipeline of male and female researchers of who are focused on women's health and sex/gender differences. It brings me great joy to work with our young faculty and watch them grow into independently funded investigators who are contributing greatly to the growing body of knowledge in women's health and sex/gender differences.

Another major part of the CWHR mission is education. It is by sharing new knowledge with the public as well as practitioners that we hope to improve the health of everyone. I hope you will come to meet, support, and learn more about our young scientists by attending the Annual Community Luncheon, which will be held on September 23rd.



I am thrilled to announce that the 2019 keynote speaker will be Siddhartha Mukherjee, MD, a Pulitzer Prize winning author, physician, and researcher (please see page 4). This year's luncheon promises to be an inspiring, sold out event. Luncheon sponsorships provide critical support for the operations and programs of the Center for Women's Health Research. We hope that you will reserve your table today!

Thank you for your generous support!

Judy Regensteiner, PhD

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Upcoming Events

May 24 Researcher Training led by **Wendy Kohrt, PhD**
Getting Motivated to Multi: Leading or Participating in Multi-PI and Multi-Site Research

June 4 Let's Talk: Girls' Career Day

June 21 CWHR Seed Grant Applications Due

August 15 Host Committee Lunch and Researcher Talk

September 23 Annual Community Luncheon featuring **Siddhartha Mukherjee, MD**

October 3-4 LEADERS (Leaders Empowering the Advancement of Diversity, Education, Research, and Science) Women's Health Summit

The CWHR was pleased to host students from West High School who are participating in the *FACES for the Future* program about careers in health care.

Amy Huebschmann, MD, MS, CWHR Lead Scientist for Community Outreach and Education, displays a beautiful gift basket presented to her by the students.



We appreciate the feedback and have made some changes to our newsletter.

Key changes are:

- Greater frequency with shorter articles.
- More “news you can use.”
- Provide donor list twice a year.
- Look for our next *Thank you to our Donors* in our Summer Issue with donors from December 2018 to July 2019.

Support the Center for Women's Health Research

If you are interested in learning about ways you can support the Center for Women's Health Research please contact Elizabeth Hepworth, Senior Principal Gifts Officer, at 303.724.8197

Researcher Trainings

Advancing careers in women's health research through academic & career development training



David Schwartz, MD, leads a master training for 70 junior faculty researchers

CWHR scientists receive not only funding and mentoring, but also professional trainings on key academic and career development topics.

- In January, Tim Lockie, the Administrative Director of the Colorado Clinical and Translational Sciences Institute, presented on grant budget reconciliation tools and understanding financial reports. The researchers found this session useful and would appreciate even more training on developing and managing budgets.
- In March, Julia Milzer and David Kelly from CU Communications provided tools on how the media can help amplify research studies and advance the career of scientists.
- In April, Dr. David Schwartz taught over 70 junior faculty researchers about how to write a persuasive hypothesis and specific aims page for a grant proposal.

"Our advisory board has been instrumental in helping us further women's health research."

~ Dr. Judy Regensteiner, CWHR Director



CWHR Welcomes New Program Assistant Carly Pilius!

Prior to joining the Center for Women's Health Research, Carly served as the Donor Relations Coordinator at the National Sports Center for the Disabled. She also spent several years on the development team at the American Indian College Fund where she supported the Director and Assistant Director of Major Gifts with stewardship efforts. Originally from Vermont, Carly earned her B.A. in Environmental Studies from the University of Colorado at Boulder. Carly loves skiing, climbing and taking advantage of Denver's 300+ days of sunshine.



Announcing New Board Member Cathy J. Hart

Cathy is a retired executive of Xcel Energy Inc., Minneapolis, Minnesota, where she served as Corporate Secretary, Chief Compliance Officer and Vice President of Business Services. During her 23 years at Xcel Energy and its subsidiary, Public Service Company of Colorado, she had management responsibility for corporate communications, advertising, real estate, enterprise security, aviation and shareholder relations. A graduate of Ohio University, she previously worked for Standard Oil, AEP, and as a newspaper editor. She has served on various non-profit boards, including the Women's Foundation of Colorado, past chair, and the National Samaritan Institute. Cathy and her husband, Mark, live in Denver and have a home in Naples, Florida. They have four children and five grandchildren.



2019 CWHR Annual Community Luncheon to feature Siddhartha Mukherjee, MD

Siddhartha Mukherjee, MD, is a pioneering physician, oncologist, and author who has redefined our public discourse on human health, medicine, and science.

A profoundly influential voice in the scientific community, Dr. Mukherjee is best known for his books, *The Emperor of All Maladies: A Biography of Cancer*, which earned him the 2011 Pulitzer Prize, and *The Gene: An Intimate History*, which won international awards and was recognized by *The Washington Post* and *The New York Times* as one of the most influential books of 2016. His published works exhibit an outstanding literary skill that has left an indelible mark on our culture. *The Emperor of All Maladies* has been adapted into a documentary by filmmaker Ken Burns and was included among *Time* magazine's 100 best nonfiction books of the past century.

Dr. Mukherjee's achievements as a writer and educator build upon his career as a renowned medical scholar. His groundbreaking studies have pushed the boundaries of modern medicine, and his innovative research has enabled the development of treatments that reach beyond current pharmaceutical models. In addition to serving as an oncologist at Columbia University's Irving Medical Center, Dr. Mukherjee writes for *The New Yorker*, *The New York Times Magazine*, and many other publications. He has received numerous awards for his scientific work and has published his original research and opinions in journals such as *Nature*, *Cell*, and the *New England Journal of Medicine*.



The 2019 Annual Community Luncheon will be on Monday, September 23rd. To find out more, call 303-724-0305 or email us at cwhr@ucdenver.edu.

New Study Increases Understanding of Why Women Receive Less Bystander CPR Than Men

“Until we address public concerns and CPR becomes normalized, not sexualized, it is likely women will continue to receive less bystander CPR and suffer worse health outcomes.”

A new national study led by Dr. Sarah M. Perman, CWHR researcher in the Department of Emergency Medicine at CU Anschutz School of Medicine is the first to explore public perceptions of why community bystanders may not administer Cardiopulmonary Resuscitation (CPR) to an unresponsive women in cardiac arrest. Study co-authors are Shelby K. Shelton, Christopher Knoepke, Kathryn Rappaport, Daniel D. Matlock, Kathleen Adelgais, Edward P. Havranek, and Stacie L. Daugherty.

Women who responded to the survey identified fear of inappropriate touching as the greatest inhibitor to providing CPR, while men identified fear of sexual assault or harassment accusations. The study is based on a national survey of over 500 respondents.

According to National Heart Association data, nearly 45% of out-of-hospital cardiac arrest victims survived when bystander CPR was administered.

“Until we address public concerns and CPR becomes normalized, not sexualized, it is likely women will continue to receive less bystander CPR and suffer worse health outcomes,” Dr. Perman said.

The study suggests that public concern for a charge of sexual assault or sexual harassment could be addressed in a similar manner to how “Good Samaritan Laws” target the fear of causing injury in a medical emergency. Another suggestion is more education to increase understanding of cardiac arrest in women and the importance of bystanders administering CPR to women, such as the new, moving video from the American Heart Association (link can be found on cwhr.org). Watching the video and sharing information with your network can help to save lives.

Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

Moving the Scientific Workforce to Consider Sex and Gender Differences



GAP: Despite increased awareness, policies, and guidelines, the scientific workforce is not yet prepared to conduct medical research that considers sex and gender differences. In response to this issue, Drs. Judy Regensteiner, Anne Libby, Janine Clayton, and Rachel Huxley wrote a commentary in *The Lancet Diabetes and Endocrinology* describing concrete actions to close this gap and help achieve sex and gender equity in research, a critical component of improving health for everyone.

KEY: The development of curricula alone will not improve the adoption of sex and gender considerations in all aspects of scientific endeavor. The means to maximize uptake of these ideas must be encouraged alongside wider efforts to improve sex and gender reporting in medical research. For instance, a sex and gender lens could be integrated throughout medical research training programs or a standardized sex and gender-specific research course could be mandated for all medical research trainees. Such training should also be required for institutional review boards, granting organizations, and journal editors, among others.

Act: Visit CWHR.org to read the commentary and lend your voice, support, and leadership to integrate women’s health and sex differences into medicine and science as currently practiced, published, and taught.



Annual Women's Health Symposium

On February 23rd, a room full of nurse practitioners, registered nurses, mental health providers, and physicians attended the CWHR's Annual Women's Health Symposium. This event provides clinicians with the most up-to-date, evidence-based guidelines and treatments. Topics this year included:

- Management of mental health during the perinatal period
- Addressing mental health and substance abuse issues in a primary care setting
- Sex differences in pharmaceutical treatments of diabetes and cardiovascular disease
- Non-invasive imaging for cardiovascular disease
- New physical activity guidelines

Attendees noted the value of the symposium and how it positively influences their practice. They particularly appreciated the emphasis placed on mental health this year.



- Ejection fraction is a measurement, expressed as a percentage, of how much blood the heart's left ventricle pumps out with each contraction. A normal heart's ejection fraction is between 50-70%.
- It is possible to have a diagnosis of heart failure with a seemingly normal (or preserved) ejection fraction of greater than or equal to 50%.
- Dental disease is significantly related to the incidence of fatal and nonfatal coronary events, as well as to overall mortality.

Let's Talk: Conversations about Women's Health ~ Getting to the Heart of It

Heart disease kills 1 in 4 Americans, and signs and symptoms can be very different in women and men. In honor of heart health month, our February Let's Talk program featured three experts on heart conditions and treatments, as well as the connection between oral health and dental health.

Prateeti Khazanie, MD, MPH, explained the symptoms, diagnosis, and treatment of heart failure, particularly in women; Christine Tompkins, MD, presented on why women may be more predisposed to certain heart rhythm disorders, particularly during times of hormonal change such as pregnancy and menopause, and treatment options for arrhythmias; and Sangeetha Chandrasekaran, BDS, MS, spoke about the positive impact of protecting oral health for good cardiac health.

Community Presentations

The CWHR is very proud to partner with Arrow Electronics to provide speakers for a quarterly lunch and learn series. 2019 marks the third year of this partnership. This winter, Dr. Marsha Guess, an associate professor in the Department of Obstetrics & Gynecology, presented "WOMENopause: The Art of Graceful Aging." Attendees were interested to learn that –

- 1 in 4 women experience pelvic floor issues.
- Menopause onset, symptoms, and duration are different for every woman. The average age of menopause is 51.2 years.
- Hormone Replacement Therapy (HRT) can be a remedy for challenging menopause symptoms if other options are not working. HRT should be the lowest dose possible and the shortest duration possible to relieve symptoms.

In February, Dr. Clare Paterson, an assistant professor in the Department of Psychology, spoke about sex differences in brain development and mental health. Dr. Paterson pointed out that –

- Mental illnesses represent the leading cause of disease burden in the United States.
- Women respond more poorly to anti-depressant medications than men.
- 33.7% of Coloradans in poor physical health also report poor mental health.



Kerrie Moreau, PhD, CWHR Researcher with students

CWHR Collaborates with the American Heart Association and Denver Health FACES Program

Over the past several months, the CWHR has partnered with the American Heart Association and Denver Health to welcome two groups of high school students interested in careers in health care from Northglenn High School and Denver West High School.

CWHR Director Dr. Judy Regensteiner kicked off each event with an inspiring talk on her career and finding meaning in your work. The groups participated in a cooking demonstration with a registered dietician, visited the lab of a CWHR researcher studying cardiovascular health, and, finally, spoke with a diverse group of scientists on their careers and how to craft a good research question.





Donor Spotlight

Katie MacWilliams

"I'm even more energized and excited by the impact the Center is making—the plans and the footprint—and the energy behind it."

With her quick wit and sharp mind, Katie MacWilliams is a tremendous asset to the CWHR advisory board. Since 2012, the CWHR has been very fortunate to count Katie as an active board member and thoughtful, intelligent donor. Katie has brought a wealth of corporate and non-profit experience with over 30 years of finance experience across various industries. Her expertise includes international business, corporate finance, capital markets, enterprise risk management, investor relations, mergers and acquisitions, and corporate governance. She served as Corporate Treasurer and division Chief Financial Officer of Coors Brewing Company and as CFO of CaridianBCT, which was acquired by Japanese owned Terumo Transfusion.

Much of Katie's nonprofit experience has focused on helping women and families in times of transition, and she has contributed her time and talents to Warren Village, the Gathering Place, the Denver Foundation, and the Denver Scholarship Foundation. So why did Katie add the Center for Women's Health Research to this impressive list? "I really have to believe in the mission and be comfortable that my time and contributions are being stewarded and managed in a way that I think honors my wishes. Increasingly, if the organization is local, I want to know who's running it, what their vision and mission are, and believe that my dollars are going to be well used. I get this with the Center," Katie shared.

Katie possesses a unique talent in making financial statements highly transparent and helping people with various levels of financial literacy understand an organization's financial growth and trajectory to

sustainability. "Katie can transform a dry, complicated spreadsheet into a comprehensible, interesting story. Plus, she is so much fun to work with," CWHR Director and co-founder Dr. Judy Regensteiner points out.

Katie regularly attends the CWHR *Let's Talk: Conversations about Women's Health* lecture series. "The Let's Talk lecture series is a fantastic resource for the community. I really enjoy learning about relevant health topics from experts on the CU Anschutz Medical Campus. The take-away information is priceless," Katie mentions.

Katie is equally drawn to another key component of the CWHR mission: mentoring junior faculty scientists. Having served as a mentor to many women throughout her career, she is particularly passionate about supporting the career development of young, talented researchers. Some of her generous gifts to the CWHR have been directed to mentoring and training for researchers as well as to supporting the CWHR's biennial National Conference on Women's Health and Sex Differences Research.

Thanks to Katie's strong leadership skills and commitment to sustained growth, the CWHR is implementing a bold vision and strategy for women's health and sex differences research over the next decade. Katie shared, "I'm even more energized and excited by the impact the Center is making – the plans and the footprint – and the energy behind it." And the CWHR is excited to continue this with Katie.

Researcher Spotlight

Dr. Prateeti Khazanie

“Our goal is to build on this research to develop a more standardized and equitable system for evaluating women and men for advanced heart failure therapies.”



An Assistant Professor in the Division of Cardiology at the University of Colorado School of Medicine, Dr. Khazanie specializes in Advanced Heart Failure and Transplant Cardiology.

Cardiology has long been a male-dominated field. Only 12% of all board-certified cardiologists are women. I became a cardiologist because I was inspired by Dr. Sharon Hunt, a heart failure and transplant cardiologist, during my internal medicine residency at Stanford University. After residency, I went on to receive specialized training in cardiology and then focused on advanced heart failure and transplantation at Duke University. During my clinical and research training, I became concerned about sex disparities in heart failure care, including differences in diagnosis, medication use, referrals to specialists, and use of advanced therapies like heart transplant and heart pumps.

Once patients develop end-stage, advanced heart failure, their only treatment options are hospice, heart transplant, or left ventricular assist devices (LVADs), surgically implanted heart pumps that help blood circulate in the body. Approximately 25% of all heart transplants and only 20% of all LVADs occur in women even though women are equally likely to have heart failure as men. This disparity occurs for multiple reasons, and my research supported by the CWHR focuses on exploring why these disparities occur and how we can reduce them in the future.

The number of heart transplants available is very limited so LVADs are often the only treatment option available. Most LVAD implants currently occur in older men. In order to receive an LVAD, a patient must pass both a standardized medical evaluation

and an unstandardized social evaluation. There are many necessary caregiver requirements for LVAD implantation, but every center has different rules. For example, some centers require a 24-7 caregiver for three months while others allow more flexibility. We hypothesize that many women are unable to receive LVADs because they are disqualified for social reasons rather than medical reasons (i.e., they are often caregivers for other people but have difficulty finding caregivers for themselves). This type of problem is potentially correctable with policy changes. Through our research project supported by a CWHR grant, we are using data collected at multiple LVAD centers in the U.S. to better understand social factors that disqualify patients for LVADs. We are comparing caregiver plans for men and women who were evaluated for LVADs at different centers. We are also conducting a nationwide survey among social workers to compare social evaluation practices for LVADs at different centers. These data will help us identify social barriers to LVADs and potential interventions that will make it easier for women to receive LVADs if it is the right therapy for them.

The financial support of the Center for Women’s Health Research is a critical step to develop a foundational understanding, eliminate inequities and provide better treatment opportunities. Our goal is to build on this research to develop a more standardized and equitable system for evaluating women and men for advanced heart failure therapies, like LVADs, across the country. I am incredibly thankful to be a CWHR researcher. The support and guidance I receive makes me a better researcher, and I have the opportunity to investigate important issues that will help physicians better treat our patients.

ACCOLADES to our CWHR Faculty Researchers



Seth Creasy, PhD



Paul J. Rozance, MD



Jennifer Armstrong, MD



Stacey L. Simon, PhD



Kathryn Rappaport, MD

Seth Creasy, PhD, received an NIH Mentored Research Scientist Development Award (K01) from the National Heart, Lung, and Blood Institute. This is a five year award focused on identifying the timing or consistency of behaviors such as physical activity, diet, and sleep in relation to body weight regulation.

Paul J. Rozance, MD, was elected Secretary Treasurer of the Society of Reproductive Investigation.

Jennifer Armstrong, MD, MPH, FAHA, was elected President-Elect for Central Colorado Area Health Education Program (CCAHEC).

Stacey L. Simon, PhD, received the CCTSI Child Maternal Health Pilot Program award. The goal of the project is to examine associations between sleep and circadian rhythms with health outcomes including glycemic control and insulin sensitivity in teens with type 1 diabetes.

Kathryn Rappaport, MD, was awarded the best pediatric research presentation award at the National Association for EMS Physicians in 2019 for her research on pediatric prehospital simulation, "Prehospital Emergency Assessment of Kids (PEAK) Performance."

Christine Swanson, MD, received a CCTSI Junior Faculty CO-Pilot award.

Michael Rudolph, PhD, was appointed Associate Director of the Colorado Nutrition Obesity Research Center Metabolic and Cellular Analysis Bioinformatics Core.



Christine Swanson, MD



Michael Rudolph, PhD



Judy G. Regensteiner,
PhD



Jane E. B. Reusch,
MD



Josiane L. Broussard,
PhD

Judy G. Regensteiner, PhD, Jane E. B. Reusch, MD, and Josiane L. Broussard, PhD, jointly received a Heart and Soul philanthropic gift from Rose Community Foundation to examine the impact of insufficient sleep on cardiovascular fitness and insulin action. The goals of this study are to test the hypothesis that reduction in vascular function during insufficient sleep is the mechanism by which insufficient sleep impairs insulin sensitivity.



CWHR Researchers Recognized as Rising Stars, Outstanding Early Career Scholars



Kristen Demoruelle,
MD, PhD



Kathleen Gavin,
PhD

The Department of Medicine (DOM) recently recognized two CWHR researchers with impressive honors. Dr. Kristen Demoruelle, Assistant Professor in the Division of Rheumatology, was named an Outstanding Early Career Scholar, which recognizes young faculty who have shown a high level of achievement and potential for growth. It provides funding support for career development, research, or other innovative work.

Dr. Kathleen Gavin, Assistant Professor in the Division of Geriatric Medicine, was named a DOM Rising Star, which recognizes outstanding early-career faculty who exemplify the department's core values of excellence in patient care, research, education and community service.



Anne Libby, PhD

An Economist turned Mental Health Researcher becomes a Leader in Career Development

Anne Libby, PhD, joined the CWHR senior faculty in 2017 and has brought with her a wealth of knowledge from her unique career path. Her energetic, engaging, and innovative approach has invigorated the training curriculum for CWHR researchers. Through her work with the CWHR, she is embarking on an exciting new project that has the potential to reach countless physicians and researchers.

Dr. Libby's background is somewhat unconventional for a tenured professor in medicine. While she was working on her PhD in Economics at Washington University of St. Louis, Dr. Libby became interested in health care economics. After a post doc fellowship at UC-Berkeley, Dr. Libby moved to Colorado and joined the CU Department of Pediatrics, leading large studies at the Kempe Center for Child Abuse and Neglect. She then transitioned to the Department of Psychiatry followed by an appointment at the CU Skaggs School of Pharmacy and Pharmaceutical Sciences. Subsequently, she was named a tenured Professor in the Department of Emergency Medicine.

Dr. Libby's experience in a variety of departments and schools paved the way for her to gain a national reputation as an excellent researcher, a highly sought after mentor to all stages of learners, and a respected thought leader on campus. In addition to her role at the Center for Women's Health Research, she is the founding co-director of the Colorado Clinical Translational Sciences Institute (CCTSI) Clinical Faculty Scholars Program, the CCTSI Colorado Mentoring training program, and a co-principal investigator with Dr. Judy Regenteiner of the Doris Duke Foundation's Fund to Retain Clinical Scientists. Her expertise centers around professional development skills that are essential to scientists' success but are seldom taught, such as writing, communication, building a solid CV, and negotiation skills to advance a career.

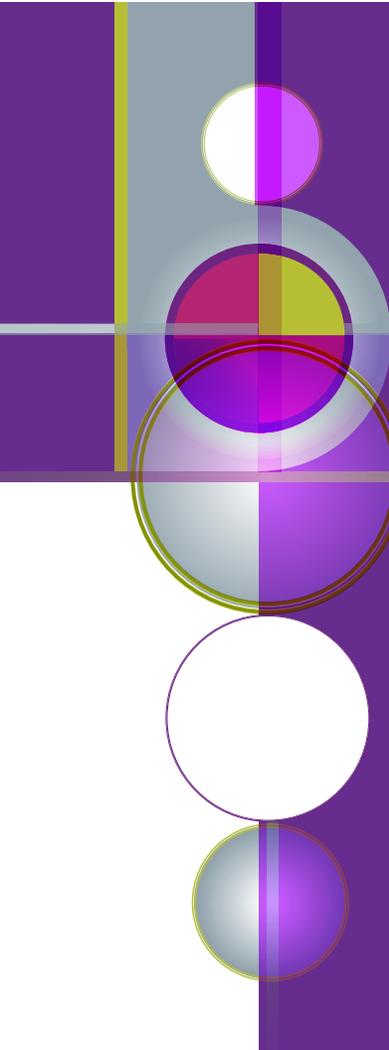
Dr. Libby's passion for professional development has recently opened her eyes to the dearth of sex and gender medicine focused curriculum in medical schools. This surprising revelation led her to write an article with lead author Dr. Judy Regensteiner about the problem, which was published this year in the renowned journal, *Lancet*. Her collaboration with Dr. Regensteiner will be bolstered by a grant from the Doris Duke Foundation to produce and film a series on professional development skills and topics in academic medicine, which will ultimately be distributed through an online learning platform. Last year, Dr. Libby was named by the CU School of Medicine as the representative for Executive Leadership in Academic Medicine (ELAM), and she recently won CU's prestigious Elizabeth Gee award for her contributions to medical education. Yet surpassing all of her many accolades and achievements is Dr. Libby's warmth, guidance, and empathetic and insightful coaching and mentoring.



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SAVE THE DATE

MONDAY **23** SEPTEMBER

2019 ANNUAL COMMUNITY LUNCHEON



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To find out more call 303-724-0305 or email us at cwhr@ucdenver.edu.