



UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS

Center For Women's Health Research Quarterly Highlights

SUMMER 2018

Message from Dr. Judy Regensteiner, CWHR Director



Dr. Judy Regensteiner

As I reflect upon the last few busy months at the Center for Women's Health Research, I am struck by how much progress has been made in funding the work of our researchers and educating and informing the community about critical health issues affecting both men and women. These great strides would not have been possible without our amazing Advisory Board, the support of an engaged community, very strong mentors, incredible researchers, supportive university leadership and a highly talented and dedicated staff. Each member of the CWHR's extended team contributes uniquely and critically to fulfill the mission of the CWHR. Team science by definition is a collaborative effort to address a scientific challenge that capitalizes on the strengths and expertise of professionals trained in different fields. I am so glad and appreciative to have you all on the CWHR team! We at the CWHR are delighted to tell you that we have an exciting fall planned. Our upcoming 2nd National Conference on Women's Health and Sex Differences Research: A Focus on Metabolism will be held September 26-28th. Preeminent scientists from across the country will share their contributions to the field and present their latest findings. A community breakfast with four fantastic speakers will be offered to the public on September 27th. Please visit www.cwhr.org for more details and information about how to register.

We are very pleased to announce that **Laura Bush, First Lady of the United States (2001-2009)**, will be the keynote speaker for our 2018 Annual Community Luncheon. For decades, Mrs. Bush has championed key issues in the fields of women's health, education, healthcare, and human rights. In 2003, Mrs. Bush partnered with the National Heart, Lung, and Blood Institute to launch The Heart Truth campaign. She also helped launch the first international partnership for breast cancer awareness and research. It is because of her focus on women's health issues that the Laura W. Bush Institute for Women's Health at the Texas Tech Health Sciences Center was founded and named for her.

As Chair of the George W. Bush Institute's Women's Initiative, Mrs. Bush promotes access to education, healthcare, and economic opportunity for women and girls around the world. She also continues to work to promote women's health through Pink Ribbon Red Ribbon, an independent affiliate of the Bush Institute and a global partnership fighting women's cancers.

At the CWHR Annual Luncheon, Mrs. Bush will participate in a moderated conversation facilitated by Dr. Marjorie Jenkins, the Founding Director and Chief Scientific Officer for the Laura W. Bush Institute for Women's Health. Dr. Jenkins, who is a Professor of Medicine at Texas Tech, currently serves at the FDA's Office of Women's Health. **Please mark your calendars for October 31, 2018.**

Finally, please join us in congratulating Atul Gawande, MD, on being named Chief Executive Officer of the recently announced joint health care venture led by J.P. Morgan, Amazon and Berkshire Hathaway. This new role has necessitated that Dr. Gawande step back from previous commitments, including his planned keynote address at the Annual Community Luncheon, originally planned for November 14, 2018.

Judy Regensteiner, PhD
Director, Center for Women's Health Research
Judith and Joseph Wagner Chair in Women's Health Research

**Please give us your feedback
about the CWHR newsletter.**

Go to www.cwhr.org for a short survey.



Community Outreach: Girls' Career Day

The fourth annual Girls' Career Day held at the Anschutz Medical Campus was hosted by the Center for Women's Health Research (CWHR) and UHealth on June 19th. 50 high school-age girls from all over Colorado came to explore various careers offered in healthcare. During this all-day program, the girls were exposed to numerous fields of work and were able to interact directly with successful women in each field who talked to the girls personally about what it's like to be a woman in healthcare.

The day started for the girls at a parent-daughter breakfast, where they had the chance to talk to representatives from the CU School of Medicine, the College of Nursing, the CU School of Dentistry, the CU School of Pharmacy, and the CU Physical Therapy Program. After hearing from the CWHR director, Dr. Judy Regensteiner, the group went off to the first activity of the day: a visit to the Center for Surgical Innovation and the Bioengineering labs. In the Bioengineering

department they learned about different ways to study pulmonary structure as well as vascular mechanics. Through a monitor, the girls were even able to observe how a rat's brain functions.

In the Center for Surgical Innovation, the girls practiced sutures and other fine motor skill tasks in one of the most high-tech training facilities in the region. The girls were also able to practice the skills they had learned on a real human leg and observed the different parts of a real human head while talking to surgeons about what their day-to-day lives look like. An 11th grader from Vista Peak Prep said she liked "having [the residents] be able to both teach actual technique and attest to the lifestyle as residents."

After a full morning in labs, the girls gathered for a "lunch and learn" where they heard Aviva Abosch, MD, PhD, one of the top neurosurgeons in the country, speak about her educational journey and what her life looks like now.

Community Events: Let's Talk events

In April, cancer experts from the CU School of Medicine shared their research and knowledge with over 150 attendees at the **Let's Talk** event, **Bringing down the Boogeyman: Expert Views on Preventing, Finding, and Treating Cancer**. Dr. Chris Lieu gave a fascinating overview of the history of cancer, how we currently treat cancer, and the exciting breakthroughs that we will see in the near future. Targeted therapy is a promising new direction in cancer treatment. By identifying genetic mutations that drive the growth of a specific cancer, researchers can try to develop a targeted therapy to inhibit the expression of the mutation.

Additionally, Dr. Regina Brown discussed cancer prevention, and oncologist Dr. Ross Camidge shared his vast knowledge about lung cancer and current clinical trials. Lung cancer kills more women and men than breast cancer, prostate cancer, colon cancer, and pancreatic cancer combined. Attendees also learned about the importance of accessing supportive services at UHealth from Marianne Pearson and heard the incredible journey of UHealth provider and lung cancer patient Alexandra Coffey, MD.

Since most of the girls are starting to think about post-secondary education, the girls enjoyed hearing from a successful woman who had gone through almost 20 years of education and additional years of training.

A 10th grader from Cherokee Trail observed that “it isn’t necessarily a direct path to medicine, but a few detours and exploration.” After Dr. Abosch spoke, the girls had the opportunity to talk to a panel about admissions into the CU School of Medicine and the CU College of Nursing. The girls appreciatively said it was “inspiring how passionate some people are about their career.”

The afternoon was full of hands-on activities for the girls to participate in. Starting with a CPR class taught by Sarah Perman, MD, who explained to the girls what being in Emergency Medicine is like and showed them how to perform CPR on a mannequin, all the while discussing how important it can be to someone’s life to be able to perform CPR.

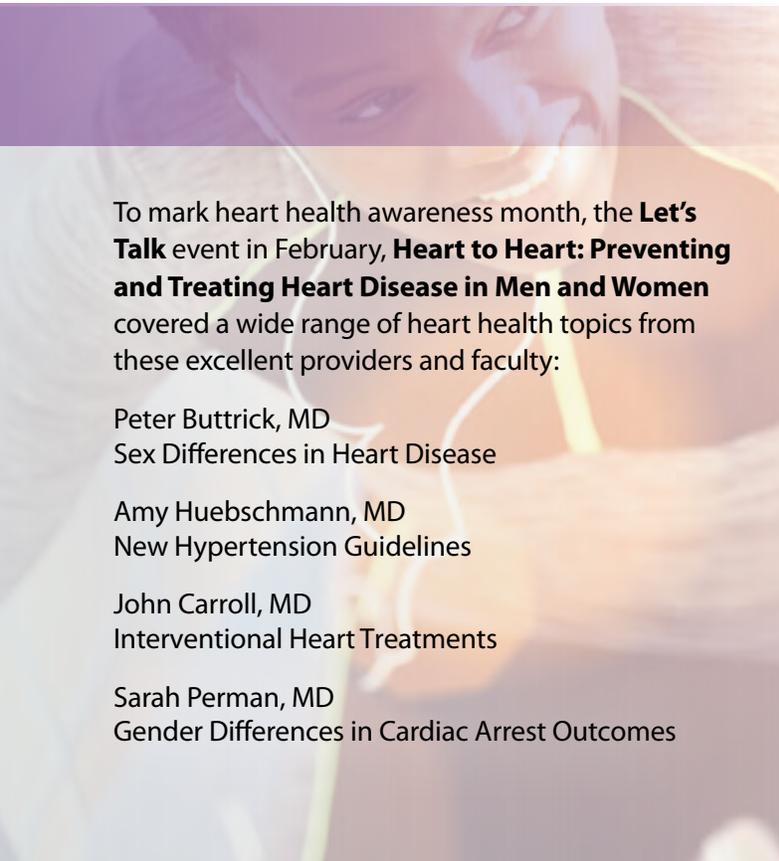
Following the CPR session, the girls continued to the ambulance bay, where they spoke with Emergency Medical Technicians (EMT) who took them inside an ambulance to show them how similar it is to an emergency room. They also talked to a Lieutenant of the Aurora Fire Department who showed them the different compartments of the fire truck and what they must have ready in case of an emergency.

After seeing a job that takes place more in the field, the girls were able to see the other side of the job in the Wells Simulation Center, where they were thrown into a simulation with a high-fidelity mannequin/patient who was having respiratory problems. The girls took turns performing the CPR they had learned earlier, shocking the “patient” and using teamwork skills they had acquired throughout the day to actively help save the “patient” together. They left the simulation center laughing in relief that they had saved the patient and figured out what to do very quickly. One student remarked afterwards, “I’m so glad we literally just learned CPR!”

Ending the day back at the Health and Wellness Center, where it had started, the girls excitedly talked to each other about the highlights of their day: one of the girls from Manitou Springs High School explained how she liked that they were able to “interact with people in the career rather than just having an informational booklet.”

The CWHR is committed to introducing high school aged girls to careers in health and is looking forward to hosting the event again next June.

By Kat Libby, CWHR intern



To mark heart health awareness month, the **Let’s Talk** event in February, **Heart to Heart: Preventing and Treating Heart Disease in Men and Women** covered a wide range of heart health topics from these excellent providers and faculty:

Peter Buttrick, MD
Sex Differences in Heart Disease

Amy Huebschmann, MD
New Hypertension Guidelines

John Carroll, MD
Interventional Heart Treatments

Sarah Perman, MD
Gender Differences in Cardiac Arrest Outcomes

DID YOU KNOW?

- More women die of heart disease than the next 7 causes of death combined.
- High blood pressure is a major cause of heart failure. It can also lead to stroke, vision loss, heart attacks, and kidney disease.
- Regularly exercising 30 minutes daily can lower blood pressure.
- Cardiac catheterization may be used to detect and clear clogged arteries. Using advanced devices and image guidance, cardiac interventions are less invasive than traditional surgery. Patients are often awake with mild sedation, and they benefit from a quicker recovery.

Community Awareness



Left to right: Jennifer Engleby, Rep. Diana DeGette, Petter Bjornstad, MD; Judy Regensteiner, PhD; Kristen Boyle, PhD; and CU School of Medicine Dean John Reilly, MD

U.S. Congressional representatives visit the Center for Women's Health Research to learn more about women's health and sex differences research.

In May, the CWHR partnered with We Work for Health Colorado and the Colorado Bioscience Association to host a panel discussion with U.S. Congressman Mike Coffman. CWHR Director Judy Regensteiner, PhD, and Associate Director Jane Reusch, MD, educated Rep. Coffman about issues related to women's health research, focusing on cardiovascular disease and diabetes in women. The panel also included CU School of Medicine faculty member Michael Bristow, MD, PhD, and Rusty Montgomery, PhD, Director of Research at miRagen Therapeutics.

In July, Rep. Diana Degette visited the Center for Women's Health Research and learned more about advances in diabetes research from CWHR researchers Petter Bjornstad, MD, and Kristen Boyle, PhD. Dr. Bjornstad is looking at sex specific mechanisms that may lead to developing kidney disease related to diabetes, and Dr. Boyle is studying how obesity in pregnant women affects the physical development of offspring.

The Congresswoman also discussed how 21st Century Cures, a bill that she co-sponsored with US. Rep. Fred Upton (R-MI), and became law in December 2016, provides funding for health sciences research.



Left to right: Michael Bristow, MD, PhD; Whitney Bell-Haggard of the AHA; Jane Reusch, MD; Rep. Mike Coffman; Judy Regensteiner, PhD; and Rusty Montgomery, PhD

Researcher Spotlight

Rebecca Scalzo, PhD

On the importance of team science, women's health, and the impact of the CWHR



Rebecca is a junior faculty researcher at the Center for Women's Health Research and a long-time mentee of Dr. Jane Reusch, Associate Director of the CWHR and president of the American Diabetes Association. After completing her PhD at Colorado State University and through Dr. Reusch's strong mentorship, Rebecca landed at CU Anschutz in the Division of Endocrinology, Metabolism, and Diabetes, where she has focused over the past 3 years on studying the intersection of sex differences and the different muscle responses to exercise intervention when a person has diabetes. In her spare time Rebecca can be found outdoors hiking, running, and spending time with her family.

What would you say the impact has been for you working with the Center for Women's Health Research?

I was awarded a Junior Faculty Research Development Award to look into the sex differences in muscle in the context of diabetes. With that funding, I have generated data that suggests a potential reason for why women with diabetes experience poorer health outcomes compared with men with diabetes. I am now using these preliminary data to support my next funding opportunities. Additionally, once you're junior faculty, you're invited to participate in many different opportunities – training and networking events. At these events, I have met other CWHR faculty on campus who I share common research interests with such as Elizabeth Wellberg, PhD, Mike Rudolph, PhD, and

Kristen Boyle, PhD. My interactions with these faculty members as well as the entire CWHR team have helped me develop a network for collaboration and mentorship across campus.

What is the value of practicing team science?

In my opinion, I think team science is how we're going to make big advances in biomedical research. Two heads are better than one, so if we think about questions together, we can make greater steps forward. Everything works better when you can get into a group and share ideas; individuals bring their own strengths to a group which improves the outcome when you're working within a team. I think that most researchers are interested in being life-long learners and team science is a way to continue your education and stay engaged intellectually.

Why is it so important to study women's health?

Historically everything we've done in biomedical research has been focused on men. Because of this past practice, we don't fully understand what's happening with women and their physiology. For women to receive optimal health care we need to understand how diseases and treatments specifically impact women. The importance of women's health research needs to be communicated because it will drive funding to start answering these questions.

Welcome to our new Advisory Board Members

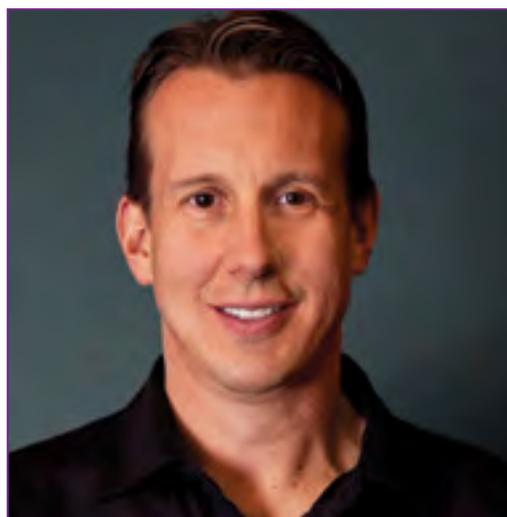
The CWHR welcomes the following Advisory Board members:



KATE BROWN
President, Boulder Organic Foods

Kate Brown is founder and President of Boulder Organic Foods, an organic, gluten free soup line that is distributed nationally. 10 years prior to starting Boulder Organic Foods, Kate served as a Foundation Board member at Family Hospice and was a psychotherapist.

Kate currently serves on the Board of Directors of Elevations Credit Union and Community Food Share and is a member of the CU Leeds Women's Council, the Boulder Economic Council, and the Credit Union Executive Society.



JOHN LEVISAY
CEO, Blueprint

John is the co-founder and CEO of Craftsby. He oversaw Craftsby's growth from 4 employees in 2011 to over 215 employees just four years later. In that time, Craftsby has gone from an idea on how to change education and create the ultimate destination for passionate enthusiasts, to a fast-growing media and technology company. In May 2017, NBCUniversal acquired a majority ownership of Craftsby, with John continuing in a leadership role as CEO of the newly branded Blueprint.

Prior to co-founding Craftsby, John held executive roles at eBay and servicemagic.com. He joined eBay in 1999, as head of Strategy & BD for eBay Motors, helping grow it into a \$14 billion a year global business. John later ran the Business, Photo, and Music categories on eBay and served as CEO of Kruse International, a 100-employee subsidiary of eBay Motors.

An integral part of the growth and expansion of the Center for Women's Health Research is its Community Advisory Board. CWHR Advisory Board members serve as ambassadors, counselors, influencers, connectors, and fundraisers and their work on behalf of the CWHR is invaluable.



NAN ODELL
**Senior Vice President and Senior Consultant,
Merrill Lynch**

Nan Odell entered the securities industry over 30 years ago after having had a career as a mortgage banker. She grew up on a ranch in northern Wyoming, attended Hastings College (Nebraska), and majored in music at Interlochen (Michigan).

In addition to her professional career, Nan is deeply committed to community service as a former member and past president of Denver Mile High Rotary Club, former member of the Foundation Board of Bonfils Blood Center, member of Denver Cherry Creek Rotary Club, Foundation Board member for Craig Hospital, and Medicine Cabinet Member for the Center for Women's Health Research. For fun Nan and her Maltese, Lula, are active participants in the Pet Therapy Program at Craig Hospital.



PATTI KLINGE
Principal, Klinge/McArthur, LLC

Patti Klinge is a principal of Klinge/McArthur LLC, a human resources consulting firm, and a licensed psychotherapist. Patti most recently retired from the position of Executive Vice President, Human Resources at AT&T Broadband, a communications company with \$10 billion in revenues and 50,000 employees. In this role, she was the senior officer leading all aspects of the Human Resources function. Patti served for two years as the Chair of the Board of Trustees of the Women's Foundation of Colorado and is a member of the Women's Forum of Colorado, Inc. She is also the co-chair of the Board of Directors for the Career Services Authority of the City and County of Denver. Additionally, she served as Board Chair and Interim CEO of Florence Crittenton Services and was Board Chair of the GLBT Community Center of Colorado.

Patti lives in Denver with her partner, Connie McArthur. She enjoys adventure travel with fun friends, along with biking, x-c skiing, hiking, and golf.

Corporate and Donor Spotlight

Arrow and Maureen & Alan Bird



The Bird Family

At first glance, Arrow Electronics, a Fortune 500 company based in Colorado, might appear to be an unlikely partner of the Center for Women's Health Research (CWHR) at the Anschutz Medical Campus. Founded in 1935 as a retail store located in lower Manhattan's "Radio Row", Arrow Electronics has developed into the world's largest distributor of electronic components and computer products. Over the past 83 years of Arrow's exponential growth, the quest for innovation has remained the largest driver of the company. Innovation is also at the core of Arrow's corporate social responsibility (CSR). As Arrow's Director of CSR Joe Verrengia stressed, "Arrow wants a partnership that is more than giving money away. We want to tell a joint story." For example, Arrow engineers have been integral in creating a solar suitcase to provide power to rural health clinics in underdeveloped countries and have also worked on developing a 3-D printer that is able to design habitable shelters for refugee camps and third world countries.



The CWHR is extremely grateful to have the opportunity to partner with Arrow and to benefit from the invaluable insights and support of CWHR Advisory Board member Maureen Bird.

Arrow's partnership with the CWHR began in 2015 soon after Maureen and Alan Bird moved to Colorado so that Alan could start a new position at Arrow. CWHR director Dr. Judy Regensteiner knew Maureen from her years as a successful executive at Bristol, Myers, Squibb (BMS). Maureen's career at BMS fueled her deep interest in and knowledge about cardiovascular and metabolic health, and Judy and the CWHR advisory board quickly realized that Maureen would be an ideal advisor, community connector, and contributor to the CWHR.

Arrow's headquarters in Centennial boasts a strong percentage of female employees in a male dominated industry. When Maureen shared the incredible work of some of the CWHR researchers, Alan jumped at the chance to create a "lunch and learn" lecture series for employees at Arrow. Since 2016, CWHR researchers give quarterly lunchtime talks at Arrow, which have proven to be in great demand. Topics ranging from sleep disruption and metabolism to diabetes prevention to menopause and cardiovascular health have informed and motivated attendees to make critical lifestyle changes. Additionally, Arrow and the Birds have been longtime sponsors of the CWHR's Annual Community Luncheon. Arrow employees look forward to hearing top experts in women's health and to receiving important health takeaways. As Alan pointed out, "We feel very fortunate to have this partnership with the CWHR. Arrow team members always stress that they walk away with important health information that they did not have before. The educational value for the employees is what it's all about." The CWHR is extremely grateful to have the opportunity to partner with Arrow and to benefit from the invaluable insights and support of CWHR Advisory Board member Maureen Bird.

Thank You to Our Donors | December 1, 2017– June 30, 2018

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In Memory of Janice Rippey
Evelyn & J. Neil McLagan

In Memory of Linda White
Charles White

Accolades | CWHR Faculty Researchers



Jane Reusch, MD

JANE REUSCH, MD, CWHR Associate Director was presented with the Banting Medal for Leadership and Service to honor her service as President, Medicine & Science of the American Diabetes Association. The Banting Medal is one of the highest awards of the American Diabetes Association and is awarded annually to honor highly meritorious career achievement.



Josiane Broussard, PhD

JOSIANE BROUSSARD, PHD, was awarded the Mayo Clinic Metabolomics Resource Core (MCMRC) Pilot and Feasibility Award for her project, the identification of metabolomic alterations in response to insufficient sleep. Additionally, Dr. Broussard received the Branco Weiss Fellowship Collaborative Grants Program to learn more about chronotherapy, an emerging area of biomedical research. Chronotherapy attempts to optimize the circadian timing of medical interventions in order to maximize health outcomes. This project will use both artificial and naturally occurring bacteria to explore the impact of circadian timing on immune function.



Kristen Demoruelle, MD

KRISTEN DEMORUELLE, MD, received a \$100,000 pilot grant through a U01 Autoimmunity Prevention Centers innovative pilot program for a new women's health related project. Dr. Demoruelle will be looking at rheumatoid arthritis related antibodies in blood, breast milk and genital tract samples of pregnant and postpartum women.



Kathleen Gavin, PhD

KATHLEEN GAVIN, PHD, has been selected as a Boettcher Foundation Webb-Waring Biomedical Research Early Career Investigator. Her project, "Cellular Composition of Adipose Tissue," will characterize the differences between fat cells that are produced from stem cells that originate in the fat tissue and those that originate in the bone marrow but end up in the fat tissue after being carried there in the bloodstream. Dr. Gavin's aim is to discover a biomarker to identify where fat cells come from, fat or bone marrow stem cells, so that their impact on health can be evaluated.



Tanya Halliday, PhD



Jen Jarvie, MD



Kerrie Moreau, PhD



Colleen Julian, PhD



Viral Shah, MD

TANYA HALLIDAY, PHD, was named a co-investigator for the project “A Mindfulness Intervention for Weight Loss Maintenance: A Pilot & Feasibility Study” (PI: Cornier). The objective of this study is to inform the design of a future full-scale, pragmatic trial to evaluate the efficacy of a mindfulness-based intervention on long-term weight loss maintenance in weight-reduced adults. Dr. Halliday was also invited to join the Editorial Board for Sports Medicine.

JEN JARVIE, MD, has been appointed the chief cardiology fellow for next year. Jen’s training began on a T32 training grant and she then entered into her formal clinical training. Her research focuses on the short and long term cardiovascular risk for women who have hypertensive disorders of pregnancy.

KERRIE MOREAU, PHD, has been promoted to Professor, Department of Medicine, Division of Geriatric Medicine.

COLLEEN JULIAN, PHD, was awarded a National Institutes of Health independent research award (R01) for her project, the “Epigenetic and Fetal Origins of Pulmonary Hypertension.” The overarching goal of this project is to determine whether intrauterine growth restriction increases susceptibility to hypoxia-induced pulmonary hypertension by altering the epigenetic regulation of genes belonging to the mTOR pathway.

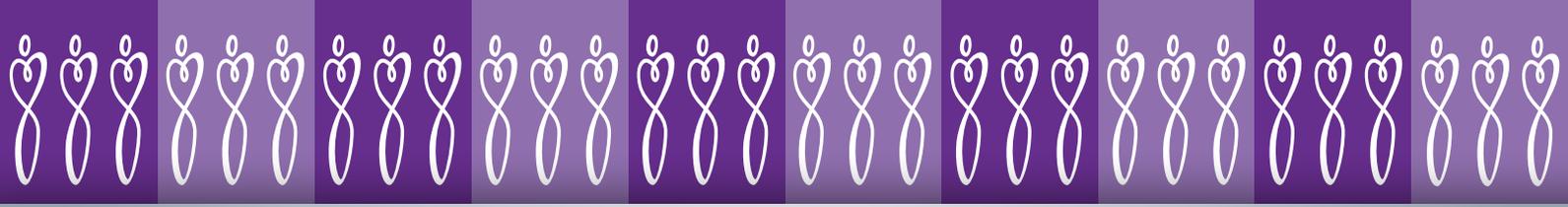
VIRAL SHAH, MD, has been appointed as co-chair of the macrovascular complication writing committee for the Type 1 Diabetes Exchange registry and has been named Associate Editor for the diabetes and metabolism section of the BMC Endocrine Disorder Journal.



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Save the Date

Center for Women's Health Research

2018 Annual Community Luncheon

Wednesday
October 31, 2018 | 11:30 a.m. - 1:30 p.m.
 Denver Center for the Performing Arts
 Seawell Ballroom



Moderated discussion with
Laura W. Bush

First Lady of the United States
 (2001-2009)

and

Marjorie Jenkins, MD

Chief Scientific Officer,
 Laura W. Bush Institute
 for Women's Health,
 Texas Tech University
 Health Sciences Center

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