

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



Vision and Mission



Eileen and Jack Connors

The mission of the Mary Horrigan Connors Center for Women's Health and Gender Biology is to **ignite change in the health of women through catalyzing research, bolstering knowledge, and transforming training for the next generation of leaders in medicine.**

There has been significant progress in women's health research during the past few decades, in part due to research at the Connors Center at Brigham and Women's Hospital. However, the extent to which diseases, drugs, devices, and other therapeutic innovations may impact women and men differently is still unknown for a wide range of health conditions. As such, the Connors Center strives to change this paradigm with cutting edge research that expands sex-specific and sex-differentiating knowledge about novel interventions, and interdisciplinary research collaborations on conditions and diseases that are exclusive, predominate, or differential in women. The Connors Center aims to encourage the global research community to imbue all medical research with a sex and gender lens, with the ultimate goal of advancing the health of every woman.

To help carry out its mission, the Connors Center seeks to train new leaders in women's health research and provide critical seed funding to early-career investigators. In addition, Center faculty advance sex- and gender-informed curricula and other educational resources for physicians and scientists-in-training and continue to be leading advocates for policy changes that will improve healthcare for women in Boston and around the world.

Connors Center Members

There are over 100 Connors Center Members belonging to multiple departments, divisions, and institutions across Brigham and Women's Hospital, Mass General Brigham, and beyond. These members build a community with other researchers at the hospital and affiliated institutions through collaboration on research initiatives, participation in Connors Center events and other activities and programs organized at the Connors Center.

Greetings from Connors Center Executive Director, Hadine Joffe, MD, MSc



I am so proud to showcase the accomplishments of the Mary Horrigan Connors Center for Women's Health and Gender Biology at Brigham and Women's Hospital in 2023. We have the incredible opportunity to continue the critical work of translating novel and existing sex- and gender-informed scientific findings into new sex- and gender-informed treatments, policy changes, and clinical innovations. Our work would not be possible without the generous support of Jack and Eileen Connors, the Women's Health Advisory Board, and our other generous donors.

2023 has been a momentous year for women's health research with the 30th anniversary of the NIH Revitalization Act, which established guidelines for the inclusion of women in clinical research, and the creation of the first-ever White House Initiative on Women's Health Research. The Center continues to champion its mission of transforming the health of women through catalyzing sex- and gender-informed research.

Our major accomplishments of 2023 include:

- The return of hosting in-person events such as our Annual Research Symposium and WHISPR Symposium
- Recruiting Laura Holsen, PhD, as our Director of Research Training
- Celebrating a record-setting Women's Health Luncheon
- Launching our Community Engagement Research Program

As we move forward into a new year, the Center remains steadfast in its pursuit of advancing research on women's health.



Hadine Joffe, MD, MSc

Executive Director

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

Interim Chair, Department of Psychiatry, Brigham and Women's Hospital

Paula A. Johnson Professor of Psychiatry in the Field of Women's Health, Harvard Medical School

Greetings from Brigham and Women's Interim President Giles Boland, MD



The work of the Mary Horrigan Connors Center for Women's Health and Gender Biology is a wonderful testament to many of the things that we at Brigham and Women's Hospital and Mass General Brigham value highly: a commitment to collaborating across disciplines in pursuit of innovation, excellence in research and clinical care, and relentless pursuit of diversity, equity and inclusion in medicine.

The 2023 annual report highlights the critical work of the Connors Center as a research hub that advances a sex- and gender-informed approach to medicine and research. You will read about their impressive efforts to conduct research that addresses how sex and gender influence health outcomes, their training and support of early-career investigators in the field, and their dissemination of information about sex and gender influences on science and medicine to the broader community.

I hope you enjoy the opportunity to learn more about the incredible work of the Connors Center. They are a leading force advancing research in the health of women and I am extremely proud of their commitment to research, clinical care and promoting health equity for all.

A handwritten signature in black ink, appearing to read 'G. Boland'.

Giles Boland, MD

Interim President, Brigham and Women's Hospital
President, Brigham and Women's Physicians Organization
Executive Vice President, Mass General Brigham

With Gratitude to the Women's Health Advisory Board

The generosity and advocacy from the Women's Health Advisory Board is an integral part of the success of the Connors Center and the annual Women's Health Luncheon. The Luncheon provides critical philanthropic support to the Connors Center, which helps sustain the cutting-edge science that is improving the health of women. In 2023, the luncheon's theme was "Reproductive Health: Advocacy | Education | Equity", and the event featured supermodel and founder of the nonprofit **Every Mother Counts** Christy Turlington Burns, MPH, as the keynote speaker. Alisa Goldberg, MD, MPH, director of the Brigham's Division of Family Planning and the Complex Family Planning Fellowship, and Nawal Nour, MD, MPH, Chair of the Department of Obstetrics and Gynecology, also spoke, sharing information about their work in reproductive health. The luncheon raised almost \$950,000 — a new record.

In addition to the Luncheon, members of the advisory board have helped establish and build key Connors Center programs including: **The Mary Ann Tynan Fellowship in Women's Health** supports physicians and scientists improving the health of women; **the Gretchen S. Fish Fund for Women's Health Interdisciplinary Stress Program of Research (WHISPR)** advances understanding of how physiologic and psychological stress impact women's health and diseases; **the Martignetti Award in Women's Health** provides distinguished scientists both time and resources to pursue new avenues of sex- and gender-informed research; and **the Casey Toolin McAuliffe Memorial IGNITE Award** provides early-stage investigators the resources needed to explore key questions in women's health. In addition, **the Scott Schoen and Nancy Adams Research Fund in Women's Cardiovascular**



Left to right: Alisa Goldberg, MD, MPH, Hadine Joffe, MD, MSc, Christy Turlington Burns, MPH, Nawal Nour, MD, MPH

Disease supports women's cardiovascular disease initiatives through a **Specialized Cardiac and Vascular Disease IGNITE Award** and a **First. In.Women Fellowship** that help develop the next generation of transformative researchers focused on therapeutic innovation for women with cardiovascular disease. **The Hale Fund for Women's Health** supports the Connors Center's work in understanding how exposure to stress impacts cardiovascular and brain health in women, and **The Lisa L. Leiden Fund for Excellence in Women's Health** provides support for accelerating research and educational activities aimed at improving the patient-care experience for women and the well-being of nursing staff. A philanthropic gift from **Kendra Wilde** helps support Dr. Cindy Liu's research examining the effects of the COVID pandemic on women during the perinatal period, while the discovery of novel diagnostic tools for ovarian cancer is being supported by a philanthropic gift from **Pam Miles**. Finally, **two anonymous donors** have provided generous seed funding to support the Connors Center's work on research in stress and mental health in women and families in communities impacted by inequalities in healthcare.

Leadership



Hadine Joffe, MD, MSc
Executive Director



Primavera A Spagnolo, MD, PhD, Associate Director
Scientific Director of First.In.Women Precision Medicine Platform



Laura Holsen, PhD
Director of Research Training



Cindy Liu, PhD
Director of Psychosocial Stress, Diversity, and Health



Deborah Bartz, MD, MPH
Director of Education



JoAnn Manson, MD, MPH, DrPH
Scientific Advisor



Lydia Pace, MD, MPH
Director of Women's Health Policy and Advocacy,
Director of Global Women's Health Fellowship



Leena Mittal, MD
Director of the Women's Mental Health Fellowship



Janet Rich-Edwards, ScD, MPH
Director of Lifecourse Epidemiology



Alisa Goldberg, MD, MPH
Director of the Fellowship in Complex Family Planning

Staff



Aleta Wiley, MPH, MSc
Director of Research Program Management



Natasha Minor, MPH
Assistant Director of Operations and Programming



Annie Walsh, BS
Project Manager



Patricia Gallegos, MPH
Project Manager



Jacqueline McCormick, BA
Program Coordinator



Aisling Maher, BA
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Monica Bennett Fonseka, MS
Research Specialist



Doruntina Fida, MPH
Research Coordinator



Julie Wilson, BA
Research Assistant



Hannah Kim, BA
Research Assistant



Emily Sinrod, BS
Research Assistant



Tiffany Tran, BA
Assistant Director of Finance

Catalyzing Research



Connors Center research falls under two major thematic pillars, the **First.In.Women (FiW) Precision Medicine Platform** and **Stress and Women's Health Research**. FiW's translational research structure helps fund and promote research at Brigham and Women's focusing on treatments of all diseases that affect the health of women. Through the FiW platform, the Connors Center educates, informs, and engages a range of stakeholders to ensure novel therapeutics are optimally understood in both women and men. The stress research pillar focuses on how distinct types of stress impact women's physical and mental health.

First.In.Women Precision Medicine Platform (FiW)

FiW advances inclusion of women in the development and use of new drugs, devices, and digital therapeutics to uncover sex-differentiating knowledge about recently developed treatments. FiW's goal is to transform therapeutics for diseases that are exclusive, predominate, or differential in women. Through FiW, Connors Center faculty conducts clinical trial research on therapeutics, consults and advises researchers on incorporating sex-specific knowledge in study design and treatment development, hosts educational fellowship programs to promote advancement in the field, and maintains sex and gender databases to support clinical trial investigators.

The Women's Health Source Survey

Led by **Dr. Spagnolo**, the Women's Health Source Survey was launched nationally in January 2023, with the aim to assess the health needs and behaviors of women living in the United States, and to solicit their views on clinical research and clinical trials participation. The survey closed in

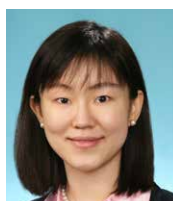
May 2023 after receiving over 5,000 responses. The Connors team has been analyzing the survey data with the support of the Survey and Data Management Core. A paper describing the initial findings of the Women's Health Source Survey is projected to be published in 2024.

Scott Schoen and Nancy Adams First.In.Women Cardiovascular Fellowship

In 2023, two First.In.Women Cardiovascular Fellows continued their work with Connors Center support: **Xiaowen "Wendy" Wang, MD**, completed her Fellowship project focused on sex

differences in characteristics, outcomes and treatment response to a heart failure medication across the range of ejection fraction in patients with heart failure in December 2023.

Maria Pabon, MD, continues to work on her research focused on sex-differentiating and female-specific reproductive risk factors in patients with heart failure, with a focus on racial/ethnic minorities.



Wendy Wang, MD



Maria Pabon, MD

IGNITE Research Awards

The IGNITE Awards are a key component of FiW that advances the Center's understanding of female-specific and sex-differentiating mechanisms of diseases and effects on novel therapeutics. The awards are one-year, \$50,000 grants to investigators at Brigham and Women's Hospital and are funded by generous donors at the annual Women's Health Luncheon. IGNITE investigators leverage FiW to shape the scientific focus of the study, utilize Connors Center and FiW resources, and assess milestones, deliverables, and project goals to make sure emerging clinical translation remains aligned with the FiW mission. The IGNITE program includes several types of awards: The IGNITE Research Awards, The Casey Toolin McAuliffe Memorial IGNITE award, the Cardiac and Vascular IGNITE award, the Gayle Brinkenhoff Memorial IGNITE award, and the Connors BWH-MGB Collaborative IGNITE awards.

The 2023 IGNITE Research awardees are: **Pamela Mahon, PhD** and **Shadab Rahman, PhD, MPH**, *Sleep-related treatment targets for depression in midlife women*.



Pamela Mahon,
PhD



Shadab Rahman,
PhD, MPH

2023 Casey Toolin McAuliffe IGNITE Award

The 2023 Casey Toolin McAuliffe IGNITE awardees are **Paula Emanuela Voinescu, MD, PhD** and **Regan Lemley, MD, MS**, *Improving outcomes in women with epilepsy during pregnancy using diet-related interventions*.

The Casey Toolin McAuliffe IGNITE award is



Paula Emanuela
Voinescu, MD, PhD



Regan Lemley,
MD, MS

made possible through funding from Women's Health Advisory Co-Chair Jennifer Toolin McAuliffe.

2023 Specialized Cardiac and Vascular IGNITE Award

The Specialized Cardiac and Vascular IGNITE award supports innovative early-phase, proof-of-concept investigations on sex- and gender-differences in cardiac and vascular diseases, including studies on disease mechanisms, biomarkers, diagnostics and therapeutics.

The 2023 Specialized Cardiac and Vascular IGNITE awardees are: **Farhad Nezami, PhD** and **Iman Aganj, PhD** (see callout box on next page), *Leveraging AI tools for prediction of cardiac remodeling to enhance diagnosis and therapy in women with severe aortic stenosis*. This award is made possible through funding from the Scott Schoen and Nancy Adams Research Fund in Women's Vascular Disease.

2023 Gayle Brinkenhoff Memorial IGNITE Award



Zuzana Tatarova,
PhD

The Gayle Brinkenhoff IGNITE Award for Cancer Research supports innovative proof-of-concept investigations related to breast cancer.

The 2023 Gayle Brinkenhoff IGNITE Awardee is **Zuzana**

Tatarova, PhD, *Computational analysis of breast cancer neighborhood for biomarker and effective immunotherapy discovery*. This Award is made possible through funding from the Philanthropy Division of RevitaLash Cosmetics.

“Communities, countries and ultimately the world are only as strong as the health of their women”

— *Michelle Obama*

MGB Collaborative Sex and Gender Research Initiative

In 2023, the Connors Center expanded its role in leading collaborative sex- and gender-informed research across the MGB system. Over the course of 2024, we look forward to growing this initiative in partnership with all MGB institutions. Building on the success of the first two Connors BWH-MGB Collaborative IGNITE Awards distributed in 2022, a third collaborative award was distributed this past year. This award supports a Brigham and Women’s investigator and their collaboration with an investigator from another MGB institution on a joint project.



Farhad Nezami, PhD



Iman Aganj, PhD

The 2023 awardees are **Farhad Nezami, PhD**, from Brigham and Women’s Hospital, and **Iman Aganj, PhD**, from Massachusetts General Hospital who received funding to support their project *Leveraging AI tools for prediction of cardiac remodeling to enhance diagnosis and therapy in women with severe aortic stenosis*. This award is funded as both a Collaborative and Cardiovascular IGNITE Award and as such, this award is funded jointly and equally by the MGB Office of the Chief Medical Officer and the Scott Schoen and Nancy Adams Research Fund in Women’s Vascular Disease.

Massachusetts Life Sciences Center First Look Awards

The First Look Awards are a collaboration between the Massachusetts Life Sciences Center (MLSC) and the Mary Horrigan Connors Center for Women's Health and Gender Biology. This grant program aims to support translational research at Massachusetts research institutions that furthers understanding of sex and gender differences, especially for diseases or conditions that affect women exclusively, predominately, or differentially. Five awards were granted in 2023 to investigators at institutions across Massachusetts, including Brigham and Women's Hospital, Mass General Hospital and Tufts University.

First Look Awards

The 2023 First Look awardees are **Zareen Farukhi, MD, MPH**, *Association of menopausal state, sex and incident CVD events with HDL cholesterol, particle subfractions, and function*, **Krishna Aragam, MD, MS**, *Assessing genetic risk for peripartum cardiomyopathy*, **David Pepin, PhD**, *Targeting AMHR2 in cancer-associated mesothelial cells as a treatment for ovarian cancer*, **Nisha Iyer, PhD, MS**, *Human stem cell derived sensory neurons for modeling female reproductive tract pain*, **Juan Gnecco, PhD**, *Mapping the mediators of inflammation across the human menstrual cycle*.

WHAM! Edge Award



Leilah Grant, PhD

Leilah Grant, PhD is the recipient of a WHAM! Edge Award from Women's Health Access Matters (WHAM!) in support of her ongoing study *Time-restricted eating as a novel dietary intervention for cardiovascular disease*

prevention in at-risk perimenopausal women. Funding from WHAM! has allowed Dr. Grant to carry out this important work and analyses are scheduled to be complete in early 2024.

In addition to funding research, WHAM! works to increase awareness of and funding for women's health research by accelerating scientific discovery in women's health in four primary disease verticals – autoimmune disease, brain health, heart health and cancer. WHAM! commissioned the RAND Corporation to conduct a data driven study, The WHAM! Report, which quantifies the economic opportunity for investing in women's health, looking across diseases that impact women differently and differentially.

Funding for Ovarian Cancer Research

In Fall 2023, **Naoko Sasamoto, MD, PhD** and **Kathryn Terry, ScD** received funding from Women's Health Advisory Board Member Pam Miles for their research project *Discovery of new blood-based biomarkers to improve ovarian cancer survival*. This research effort focuses on identifying prognostic biomarkers at time of diagnosis utilizing an innovative biomarker discovery platform, which will help providers design personalized treatment strategies for women with ovarian cancer. Results from this study will open new research avenues to discover novel therapeutics targets and blood biomarkers that would identify patients who may most benefit from new treatments that specifically target ovarian cancer.



Naoko Sasamoto,
MD, PhD



Kathryn Terry, ScD

Stress Research



The second pillar of research focuses on Stress and Women's Health Research, and how different kind of stressors — environmental, psychological, and physiological stress — impact the health of women. Two signature Connors Center programs under this pillar include: The NIH-funded Brigham/Harvard Center for Reproductive Outcomes of Stress and Aging (ROSA) that investigates how the brain processes stress in postmenopausal women, and the philanthropically-funded Women's Health Interdisciplinary Stress Program of Research (WHISPR) that examines the effect of stress on the health of women and convenes a community of stress investigators at Brigham and Women's Hospital.

Brigham/Harvard Center for Reproductive Outcomes of Stress and Aging (ROSA Center)



The ROSA Center is funded by the National Institutes of Health and assembles a network of leading investigators across BWH and Harvard Medical School (HMS). Connors Center investigators received the NIH Specialized Center of Research Excellence

(SCORE) U54 grant for a five-year, multi-project investigation of neural processing of stress and adverse health outcomes in aging women.

The Center is led by **Hadine Joffe, MD, MSc**, Principal Investigator, and **JoAnn Manson, MD, MPH, DrPH**, Leadership Administrative Core Co-Leader. In addition, investigators from across BWH and HMS lead three major research projects and three additional cores (sleep resource, leadership, career enhancement). Additional project and core leaders include **Jorge Chavarro, MD, ScM, ScD**; **Ursula Kaiser, MD**; **Elizabeth Klerman, MD, PhD**; **Pamela Mahon, PhD**; **Victor Navarro, PhD**; **Kathryn Rexrode, MD, MPH**; **Janet Rich-Edwards, ScD, MPH**, and **Emily Oken, MD, MPH**.

ROSA investigators study the role of stress and its neural mechanisms in reproductive aging health outcomes that are associated with a higher risk of cardiovascular disease and dementia in aging women. As the Center approaches the fifth year of this five-year grant, ROSA researchers are publishing findings from the work including articles in *Menopause*, *Journal of the Endocrine Society*, and *Sleep Health*. These findings will help reduce adverse health consequences of reproductive aging in menopausal women. In the upcoming year, the Connors Center anticipates submitting a renewal grant to extend the research funding and scientific output of the ongoing investigations.

The ROSA Center also has secured additional funding opportunities to expand its research capability. The ROSA Scholar program supports early-stage investigators to focus their careers on sex-differences and women's health translational research, providing them with the necessary tools to become leading researchers in the field with a mentored research project that ideally will result in NIH K- or R-level funding. In addition, the ROSA Pilot Award program distributes 2-year awards that allow early-stage investigators to obtain preliminary data, facilitating applications for future NIH K- or R-level awards.

The 2023 ROSA Scholar is **Izzuddin Aris, PhD**



Izzuddin Aris, PhD

Neighborhood vulnerability and menopause and cardiovascular health in midlife women in Project Viva.

Announced in 2023, the 2022 ROSA Pilot Awardees were **Jessica Busler,**

PhD, *Understanding neural mechanisms of obesity in women: the role of oxidative stress and relationship to emotional health*, **Leilah Grant, PhD**, *Time-restricted eating as a novel dietary intervention to improve sleep, mood and cardiovascular health in perimenopausal women*, and **Alexandra Purdue-Smithe, PhD**, *Reproductive risk factors for subjective cognitive decline in women*.



Jessica Busler, PhD



Leilah Grant, PhD



Alexandra Purdue-Smithe, PhD

The 2023 ROSA Pilot Awardees are **Holly Crowe, PhD, MPH**, *Migraine phenotypes and vasomotor symptoms across the menopausal transition*, **Delphine Franssen, PhD**, *MKRN3 action on vasomotor symptoms in a menopausal mouse model*, **Encarnación Torres Jiménez, PhD**, *Deciphering the thermoregulatory response to estrogen decline during menopausal transition triggering vasomotor symptoms*, and **Matthew Weaver, PhD**, *Does sleep mediate relationships between environmental exposures and stress, mood, and wellbeing?*



Holly Crowe, PhD, MPH



Delphine Franssen, PhD



Encarnación Torres Jiménez, PhD



Matthew Weaver, PhD

NIH Diversity Supplement



Diana Soria-Contreras, MD

As part of the ROSA Center, **Dr. Diana Soria-Contreras**, Postdoctoral Research Fellow at Harvard TH Chan School of Public Health, received supplemental funding from the NIH to support her research into *Climate-related factors*

and health during the menopausal transition. Dr. Soria will study how climate-related factors such as greenness and ambient temperature impact menopausal symptoms. She is mentored by **Jorge Chavarro**, co-Leader of one of the research projects in the ROSA Center with additional mentorship from the Sleep Resource Core.

The Women's Health Interdisciplinary Stress Program of Research (WHISPR)

The Women's Health Interdisciplinary Stress Program of Research (WHISPR) is funded by the Gretchen S. Fish Fund for Women's Health and Stress Research. WHISPR advances our understanding of the relationship between physiologic and psychological stress and women's health and disease. Since its inception

in 2018, the program has continued supporting pilot projects, facilitating collaborations between investigators, and hosting an annual scientific symposium. WHISPR research spans clinical, translational, population, and basic research studies that investigate interactions of physiologic indicators of stress and stress exposures with women's health and disease. WHISPR funds investigators from across BWH to develop cutting edge research and foster synergy in this interdisciplinary field.

The 2023 WHISPR awardees are **Irene Gonsalvez, MD**, *Role of oxytocin in stress response and mood disturbance in menopausal women*, and **Shanlin Ke, PhD**, *Revealing the interaction between posttraumatic stress disorder and the gut microbiome in older women*.



Irene Gonsalvez, MD Shanlin Ke, PhD

Lisa L. Leiden Fund for Excellence in Women's Health Research



Annie Lewis-O'Connor, PhD, NP-BC, MPH, FAAN

The Lisa L. Leiden Fund for Excellence in Women's Health has facilitated a new partnership with **Annie Lewis-O'Connor, PhD, NP-BC, MPH, FAAN**, founder and director of the Brigham's Coordinated Approach to Resilience and Empowerment (CARE) Clinic. Through this partnership, Drs. Joffe and Lewis-O'Connor will accelerate research and educational activities aimed at improving care for women and the well-being of nursing staff. These goals will

be realized by a better understanding of factors that influence the patient-care experience, with a particular focus on exposure to traumatic events, emotional and physical pain, and other stressful life experiences more common in women. Not only can these exposures impact patient health outcomes but may also have profound effects on the well-being of healthcare providers. The Leiden Fund for Excellence in Women's Health Research funds three inter-related initiatives:

Building a Learning Collaborative to Address Stress Among Healthcare Providers



Andrea MacDonald, RN, BSN

Led by Dr. Lewis-O'Connor, this project aims to create and foster a 'Learning Collaborative' dedicated to mitigating stress and promoting wellness among women and nurses. Dr. Lewis-O'Connor will work with **Andrea MacDonald, RN, BSN**, of the

Emergency Department at BWH, and Drs. Liu and Spagnolo from the Connors Center, to establish the first program addressing stress and trauma exposure among Brigham nurses working in the emergency department.

Studying Stress, Well-being, Resilience, and Social Support During Motherhood



Cindy Liu, PhD

Research led by **Cindy Liu, PhD**, is following mental health outcomes among pregnant individuals and new mothers during the COVID-19 pandemic. This work aims to capture the range of mental health

experiences during motherhood to better identify interventions for improving family well-being. The study has enrolled over 2,000 women across the United States.

Improving Clinical Care for Women with Functional Neurological/Conversion Disorder



Primavera Spagnolo, MD, PhD

Primavera Spagnolo, MD, PhD, is working with Dr. Lewis-O'Connor to incorporate trauma-informed care in the management of functional neurological/conversion disorder, a female-predominant and highly disabling condition.

Together, they are preparing a manuscript on trauma-informed approaches for the disorder, organizing a talk on this topic at the Brigham, and designing an online course for care providers.

2023 NIH Annual SCORE Meeting

ROSA Center investigators joined others from the National NIH SCORE Consortium at the 2023 Annual SCORE Meeting, a scientific program where the ROSA team presented their innovative research and promoted the Center's exciting initiatives. **Victor Navarro, PhD** gave an oral presentation on *the Role of KNDy neurons in the generation of VMS*, and **Leilah Grant, PhD** presented *A pilot trial of time-restricted eating in peri- and postmenopausal women* and also presented a poster on the same research.

Jessica Busler, PhD and **Izzuddin Aris, PhD** also presented posters on *VMS symptoms, depression symptoms and adipokines in midlife women and associations of neighborhood vulnerability with menopause symptoms* and *Timing of onset at midlife in project viva* respectively.



Left to right: Hadine Joffe, MD, MSc; Victor Navarro, PhD; Jessica Busler, PhD; Leilah Grant, PhD; Janet Rich-Edwards, ScD, MPH; Kathryn Rexrode, MD, MPH; Izzuddin Aris, PhD

Education and Training



The Connors Center's mission includes bolstering knowledge in the field of women's health research through hosting educational events, programs, and symposia that convene physicians, scientists, industry, and community partners. By integrating and applying knowledge of women's health and sex- and gender-differences to care delivery, the Connors Center aims to transform training and develop a generation of women's health research trainees through fellowships and training programs.

The Connors Center leads the way at BWH as a major resource for junior faculty, championing early-career clinician-investigators through its robust programs that focus on pilot funding, research training, and educational activities. **Over the past 7 years, the Connors Center has raised over \$8 million in philanthropic funds, 45% (\$3.6 million) of which has been distributed to over 80 early career investigators across 20 departments and divisions through a series of pilot award and fellowship programs.** Paired with these funding opportunities is active training and mentorship on funded projects and careers, as well as educational symposia through which the awardees/fellows and their work are showcased across the academic community.

Director of Research Training Laura Holsen, PhD



Laura Holsen, PhD

In early 2023, **Dr. Laura Holsen** was named the inaugural Director of Research Training at the Connors Center. Dr. Holsen holds joint appointments at BWH as Research Psychologist in the

Department of Psychiatry and Psychologist in the Division of Women's Health, Department of Medicine, and Associate Professor of Psychiatry at Harvard Medical School. Dr. Holsen is a clinical neuroscientist working at the intersection of appetite, weight change, and brain, with a goal of additionally incorporating into these domains aspects related to women's health and sex differences.

In her role as Director of Research Training for the Connors Center, Dr. Holsen works to expand the career development efforts and sponsorship of trainees and pilot award recipients within the Center. She leads this training mission and provides formal oversight of junior faculty and trainees, while strengthening the support network for early-career investigators. Dr. Holsen oversees all pilot award, application and review processes, and work-in-progress meetings for the Center's pilot award programs and monitors awardee metrics and outcomes. She leads the efforts to stimulate, incubate and cultivate career paths of junior faculty focused on sex/gender medicine, further developing the workforce. These efforts leverage strengths of the Connors Center toward career growth, larger NIH/external grant funding, national/international presentations, publishing scientific papers and other important career milestones for junior faculty at BWH/HMS.

ROSA Center Seminar Series

The NIH-funded Brigham/Harvard Reproductive Outcomes of Stress and Aging Center (ROSA) hosts a monthly Seminar Series through its Career Enhancement Core, based in the Division of Women's Health at BWH. The seminars feature leading investigators who share their cutting-edge research on sex differences.

Career Development Workshop

In Spring 2023, Connors Center leadership **Hadine Joffe, MD, MSc, Janet Rich-Edwards, ScD, MPH, and Laura Holsen, PhD**, hosted a career development workshop with special guest, **Judy Regensteiner, PhD**, Director of the Ludeman Family Center for Women's Health Research at the University of Colorado School of Medicine. The workshop focused on how to build a career focused on sex and gender research. The team discussed resources, mentorship, and building a network focused on sex and gender research. Attendees included grant awardees and fellows involved in Connors Center programs.



Left to right: Hadine Joffe, MD, MSc, Laura Holsen, PhD, Judy Regensteiner, PhD, Janet Rich-Edwards, ScD, MPH

HMS Medical Education Initiative

Led by Connors Center Director of Education **Deborah Bartz, MD, MPH** in collaboration with experts throughout MGB and Fenway Health, the Medical Education Initiative promotes efforts to incorporate sex- and gender-informed medical education into Harvard Medical School curricula, beginning with a cross-campus course for junior and senior medical students. Co-taught by Brigham and Women's Hospital physician Dr. Bartz and Massachusetts General Hospital physician **Alex Keuroghlian, MD, MPH**, the course aims to engage clinicians to apply a sex/gender lens early in their training to build a workforce with the knowledge and skills to transform and advance sex- and gender-informed medical care and research. Dr. Bartz plays an integral role in student teaching, advising and curriculum development for the next generation of trainees in women's health research and clinical care.



Left to right: Alex Keuroghlian, MD, MPH, Deborah Bartz, MD, MPH

Annual Research Symposium

The 6th Annual Connors Center Research Symposium was held at Brigham and Women's Hospital on November 30th, 2023 in conjunction with the Brigham/Harvard Reproductive Outcomes of Stress & Aging (ROSA) Center.

Over 150 registered from the MGB system, Connors Center network, Greater Boston community, and beyond. Participants gathered in-person and virtually to celebrate the important work being done by Connors Center



Elizabeth Garner, MD, PhD

investigators. **Elizabeth Garner, MD, MPH**, Chief Scientific Officer at Ferring Pharmaceuticals and the current President of the American Medical Women's Association (AMWA) delivered the keynote address titled

Revolutionizing women's health: uniting stakeholders to bridge the gaps in therapeutic investment and innovation. Other speakers included Connors Centers awardees and fellows, Tyman Research scientists, and ROSA Center awardees and associate scientists.

Work-in-Progress Meetings

The Connors Center organizes and holds Work-in-Progress Meetings for all Awardees. These meetings involve content experts both within and beyond the MGB system who provide feedback on Awardees' progress regarding their projects and advice on how to navigate obstacles they may face. The one-hour meetings serve to support Awardees as well as connect them to experts in their field.



LEADERS Committee and Summit

The National Leaders Empowering the Advancement of Diversity in Education, Research and Science (LEADERS) Organization seeks to reduce gender disparities that persist in health care by increasing the number of endowed chairs in women's health across all fields of academic internal medicine and related disciplines.

As member of the steering committee of this esteemed group of colleagues in the field of women's health and sex-differences research, Dr. Joffe spoke on a panel at the 2023 Summit in Jacksonville, FL.



The Connors Center is looking forward to hosting 2024 LEADERS in Boston.

Commitment to Diversity, Equity, and Inclusion

The Connors Center is dedicated to advancing diversity and equity in our communities. This includes increasing diversity at all levels, creating a space and culture of respect and inclusion, and recognizing and eliminating inequities for all. As such, our educational and training programs and grants have supported and continue to support investigators from diverse backgrounds, and we strongly encourage and support the role of diversity, equity, and access in all research conducted and supported by the Connors Center.

Fellowships



With both clinical and research fellowships, the Connors Center equips a new generation of leaders in women's health with critical-seed funding. These fellowships showcase commitment to the discovery, dissemination, and integration of knowledge on women's health and sex- and gender-based differences and the application of this knowledge to care delivery.

Mary Ann Tynan Fund

The Mary Ann Tynan Fund is endowed in the name of Mary Ann Tynan, the third woman elected partner at Wellington Management Company. It is awarded to physicians and scientists at Brigham and Women's who are driven to improve the health of women.

The current Tynan Research Scientists are **Behnood Bikdeli, MD, MS** whose research focus is the assessment of sex differences in presentation, treatment strategies, outcomes, and response to therapies in thrombotic diseases, and **Leilah Grant, PhD**, whose focus is the effects of sleep and circadian physiology on metabolic and endocrine health and wellbeing. Both outstanding investigators focus on the health of postmenopausal women.



Behnood Bikdeli,
MD, MS



Leilah Grant, PhD

We strongly encourage and actively support the role of diversity, equity, and access in all research supported by the Connors Center.

Global Women's Health Fellowship

The Global Women's Health Fellowship Award supports critical research that advances the health of women worldwide, elevating the visibility of the field of global women's health. The fellowship trains clinicians, research fellows, and early-career clinical investigators for successful careers that use innovative and meaningful research to transform the health and well-being of women around the globe. In addition, fellows conduct clinical and field research based on robust quantitative and analytical research skills and obtain fundamental knowledge and understanding of global health issues that uniquely impact the health of women within the context of social, cultural, and political environments.



Lydia Pace, MD, MPH

The Global Women's Health Fellowship is directed by **Lydia Pace, MD, MPH**. The 2023 Global Women's Health Fellowship awardees are **Rohini Dutta, MBBS**, who focuses on the education of pregnant

women with prenatal indication for cesarean section through periodic short message service (SMS) and interactive voice response (IVR) system in Uganda, and **Rose Olson, MD**, whose research focus is on the development of a peer support program to reduce severity of ongoing

sexual violence symptoms amongst survivors in Sierra Leone.



Rohini Dutta, MBBS



Rose Olson, MD

Women's Mental Health Fellowship

The Women's Mental Health (WMH) Fellowship in the Department of Psychiatry at Brigham and Women's trains expert clinicians in the psychiatric care of women and in the assessment and treatment of psychiatric symptoms linked with female reproductive transitions. The fellows are mentored and trained by Fellowship Director Dr. Leena Mittal and Associate Fellowship Director Dr. Polina Teslyar.

The WMH Fellows are **Marlee Madora, MD**, (2022–2023), **Sara Kashani, MD**, (2023–2024) and **Natalie Feldman, MD**, (2022–2024).



Marlee Madora, MD



Sara Kashani, MD



Natalie Feldman, MD

Complex Family Planning Fellowship

The two-year Complex Family Planning Fellowship provides obstetrician-gynecologist residency graduates with an opportunity to build on their clinical skills in complex abortion and family planning while developing research expertise. The Fellowship is accredited by the Accreditation Council for Graduate Medical Education (ACGME) and the Fellowship is offered at 33 leading universities across the

United States. Fellows are trained and mentored by Fellowship Director **Dr. Alisa Goldberg**, Associate Fellowship Director Dr. Kari Braaten, and faculty members Drs. Deborah Bartz, Kathryn Fay and Elizabeth Janiak.



Alisa Goldberg, MD, MPH

The Complex Family Planning Fellows are **Olivia Thornton, MD** (2022–2024) and **Kendra Harris, MD** (2023–2025).

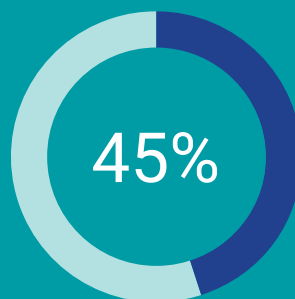


Olivia Thornton, MD



Kendra Harris, MD

Over the past 7 years, the Connors Center has raised
\$8 million in philanthropic funds.



\$3.6 million has been distributed to over **80 early career investigators** across 20 departments and divisions through a series of pilot award and fellowship programs.

Center Publications, Honors, and Awards



Internal Brigham and Women's Media Coverage

The Brigham Magazine's published an issue focused on "Care for Every Body" and included multiple articles about the Connors Center activities. One of the feature articles focused on women's health and spotlighted the Connors Center, while another article focused on reproductive justice, which includes interviews with **Deborah Bartz, MD, MPH** and **Alisa Goldberg, MD, MPH**. Connors Center leadership and members **Leilah Grant, PhD, JoAnn Manson, MD, MPH, DrPH, Michelle O'Donoghue, MD, MPH, Shadab Rahman, PhD, Kathryn Rexrode, MD, MPH, Janet Rich-Edwards, ScD, MPH, and Xiaowen "Wendy" Wang, MD** were also featured in the issue.



Left to right: Kathryn Rexrode, MD, MPH, JoAnn Manson, MD, MPH, DrPH, Hadine Joffe, MD, MSc, Summer 2023 Brigham Magazine Feature



Scan the QR code or click this [LINK](#) to read the issue.

The Center is grateful for the efforts of Brigham and Women's Office of Strategic Communications, whose team works closely with ours to share Connors Center news and updates across the hospital and Mass General Brigham system.

Publications from Connors Center Leadership and Members

Center Leadership and Members regularly publish their research findings in high impact journals.



Scan the QR code or click this [LINK](#) for a list of publications from 2023.

Press Coverage of Center

Research by Connors Center leadership and members is frequently covered in the popular press such as *The New York Times*, *The Washington Post*, *ABC News* and *Today*.



Scan the QR code or click this [LINK](#) for a list of featured press coverage from 2023.

Awards and Promotions

JoAnn E. Manson, MD, DrPH, MACP received a 'Women in Science Award' as a "Pioneer in Women's Health and Preventive Medicine" from the P23 Molecular Diagnostics Lab and was named a Highly Sited Researcher by Clarivate along with **Cindy Liu, PhD** and **Susan Redline, MD, MPH**. **Vesela Kovacheva, MD, PhD**, was featured at the 2023 World Medical Innovation Forum as one of the "Disruptive Dozen". **Lydia Lynch, PhD** was selected for The Mark Foundation for Cancer Research's 2023 Emerging Leader Award. **Nita Amornsiripanitch, MD** received the MGB Pillar of Excellence award in the category of "Collaborating Across Systems". **Hadine Joffe, MD, MSc** was named an Exceptional Woman in Medicine by Castle Connolly and an Executive Leadership in Academic Medicine (ELAM) Fellow. **Ursula Kaiser, MD** was named the inaugural incumbent of The George W. Thorn, MD, Distinguished Chair

in Endocrinology. **Hanni Stoklosa, MD, MPH**, received the Massachusetts Medical Society's Henry Ingersoll Bowditch Award. **Behnood Bikdeli, MD, MS** was named the New England Journal of Medicine Journal Watch Cardiology Associate Editor. **Rohini Dutta, MBBS** was named a 40 Under 40 Public Health Catalyst Award recipient by the Boston Congress of Public Health. **Primavera Spagnolo, MD, PhD** received the Excellence in Research Award from the Brigham and Women's Psychiatry Department. **Michelle O'Donoghue, MD, MPH** was named the inaugural incumbent of McGillicuddy-Logue Distinguished Chair in Cardiology.

"I raise up my voice — not so that I can shout, but so that those without a voice can be heard. ... We cannot all succeed when half of us are held back."

— *Malala Yousafzai*

Female education activist, Nobel Peace Prize laureate

Brigham and Women's Hospital

Mary Horrigan Connors Center for Womens Health and Gender Biology

To learn more about how to support the Connors Center:

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