

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

**2021 and 2022 Annual Report**



# 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 decade, 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. The Connors Center strives to change this paradigm with cutting edge research that expands sex-specific and sex-differentiating knowledge about novel interventions, conducts systems-based investigations, and establishes interdisciplinary collaborations for disease-based research in conditions 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.

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 2021 and 2022. We have the incredible opportunity to continue the critical work of translating novel and existing sex and gender scientific findings into new 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.

## **The Center's major accomplishments of 2021 and 2022 include:**

- Hosting the National Summit on the Health of Women
- Recruiting a Director of Psychosocial Stress, Diversity, and Health
- Celebrating our 15th annual Women's Health luncheon
- Launching a course at Harvard Medical School on sex- and gender-informed medicine
- Organizing virtual programs, including our 2021 Annual Research Symposium
- Returning to in-person events in 2022, including the 16th Women's Health luncheon and our 2022 Annual Research Symposium

As we enter a new year, the Connors Center will continue its mission of transforming the health of women through catalyzing sex- and gender-informed research.

A handwritten signature in black ink, appearing to read 'H. Joffe', written in a cursive style.

**Hadine Joffe, MD, MSc**

Executive Director

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

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

# Greetings from Brigham and Women's new President Robert S.D. Higgins, MD, MSHA



The 2021 – 2022 annual report from the Mary Horrigan Connors Center for Women's Health and Gender Biology exemplifies so many of the characteristics that make Brigham and Women's Hospital a world-class institution.

Our dedication to collaborating across all disciplines and roles in pursuit of cutting-edge innovation and outstanding clinical care is a hallmark of what we do. I'm extremely proud of our commitment, both here at the Brigham and across our Mass General Brigham system, to identify health disparities and address diversity, equity and inclusion in medicine.

I hope you enjoy reading about some of the incredible work of the Connors Center in this annual report. Their efforts to ensure we apply a sex and gender lens to clinical research and care in support of our mission is critical to achieving our vision of a healthier community and a healthier world. By conducting research that addresses how sex and gender differences influence health outcomes, we can continue to work toward a future where individuals – here in Boston and around the globe – receive equitable, high-quality care.

A handwritten signature in black ink, appearing to read "B Higgins". The signature is written in a cursive, flowing style.

**Robert S.D. Higgins, MD, MSHA**  
President  
Brigham and Women's Hospital  
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 Connor's Center and the annual Women's Health Luncheon. The Luncheon provides critical philanthropic support to the Connors Center, which helps continue the cutting-edge science that will improve the health of women. In 2021, the luncheon's keynote speaker was Mariel Hemingway, a mental health advocate, author, and Academy Award nominated actress. The event's fundraising brought the cumulative five-year giving total to \$2.6 million. In 2022, our luncheon returned to in-person and raised over \$700,000. Featured speakers included Co-founder and Managing Partner Oak HC/FT and First Lady of Connecticut Annie Lamont and University Professor of Social Policy, Law, and Women's Gender and Sexuality Studies at Brandeis University Anita Hill.

The event's fundraising brought the cumulative five-year giving total to \$2.6 million in 2021.

In addition to the Luncheon, members of the advisory board have helped establish and build key Connors Center programs including: **The Mary Ann Tynan Faculty Research Scientist Fund** supporting physicians and scientists improving the health of women; **the Gretchen S. Fish Fund for Women's Health Interdisciplinary Stress Program of Research (WHISPR)** advancing understanding of how physiologic and psychological stress impact women's health and disease; **the Martignetti Award in Women's Health** that provides distinguished scientists both time and resources to pursue new avenues of research; and **the Casey Toolin McAuliffe Memorial IGNITE Award** that



Mariel Hemingway, 2021



Annie Lamont, Hadine Joffe, Robert S.D. Higgins, and Anita Hill, 2022

provides junior investigators the resources needed to explore key questions in women's health. In addition, the recently established **Scott Schoen and Nancy Adams Research Fund in Women's Cardiovascular Disease** supports women's cardiovascular disease initiatives through a **Specialized Cardiac and Vascular Disease IGNITE Award** and a **First. In. Women Fellowship** that will develop the next generation of transformative researchers focused on therapeutic innovation for women with cardiovascular disease. **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.

# Leadership



**Hadine Joffe, MD, MSc**  
Executive Director



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



**JoAnn Manson, MD, MPH, DrPH**  
Scientific Advisor



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



**Deborah Bartz, MD, MPH**  
Director of Education



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



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



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



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

# Staff



**Aleta Wiley, MPH, MSc**  
Director of Research  
Program Management



**Natasha Minor, MPH**  
Assistant Director of  
Operations and Programming



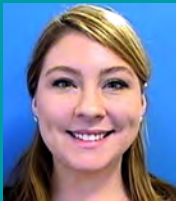
**Annie Walsh, BS**  
Project Manager



**Patricia Gallegos, MPH**  
Project Manager



**Jacqueline McCormick, BA**  
Program Coordinator



**Aisling Maher, BA**  
Senior Administrative  
Assistant



**Ancella Roy, MSc**  
Senior Research  
Coordinator



**Monica Bennett Fonseka, MS**  
Research Specialist



**Anna Joseph, BA**  
Research Assistant



**Ellexa Menezes, BA**  
Research Assistant



**Tianyu Luo, BS**  
Research Assistant

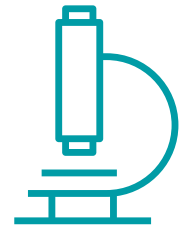


**Emily Sinrod, BS**  
Research Assistant



**Tiffany Tran, BA**  
Assistant Director  
of Finance

# Catalyzing Research



Connors Center research falls under two major pillars, the **First.In.Women (FiW) Precision Medicine Platform** and **Stress and Women’s Health Research**. In the first pillar, 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 second research pillar focuses on how different types of stress impact women’s physical and mental health and are processed by the brain.

## 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 in order 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.

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

In 2021 the inaugural First.In.Women fellow was announced, **Xiaowen “Wendy” Wang, MD**, a cardiovascular medicine fellow at Brigham and Women’s Hospital. Her research focuses on sex differences in characteristics, outcomes and treatment response with dapagliflozin across the range of ejection fraction in patients with heart failure.



Wendy Wang, MD

The 2022 First.In.Women fellow is **Maria Pabon, MD** whose research focuses on sex-differentiating and female-specific risk factors in patients with heart failure.



Maria Pabon, MD

## Statement on the ongoing COVID-19 pandemic

As we enter another year of life in the times of the COVID-19 pandemic, the Connors Center is continuously grateful for the strength of essential workers and the perseverance of the community. Like everyone else, The Connors Center has adjusted to this “new normal”, adapting regular programming to the increasingly familiar virtual format and upholding Brigham and Women’s hospital-wide measures to ensure a safe work environment. To this end, The Connors Center hosted a webinar highlighting the priority of applying a sex and gender lens to COVID-19 research (<https://www.youtube.com/watch?v=LPhI4npNPoY>) . As we move forward in this pandemic, we will stay committed to promoting this cause and ensuring representation of women in this work.



## IGNITE Research Awards

The IGNITE Awards are a component of FiW that advances our understanding of female-specific and sex-differentiated 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 2021 IGNITE awardees are: **Vesela Kovacheva, MD, PhD**, "Development of novel algorithm for prognostication and therapeutic decision support in pregnant patients with severe hypertension" and **Primavera Spagnolo, MD, PhD**, "Investigating demographic knowledge, attitudinal, and accessibility factors influencing health experiences and behaviors and clinical trial participation in U.S. women."



Vesela Kovacheva, MD, PhD



Primavera A Spagnolo, MD, PhD

## 2022 Casey Toolin McAuliffe IGNITE Award



Grace Huang, MD

**Grace Huang, MD**, Assistant Professor of Medicine, Brigham and Women's Hospital

"Effects of testosterone replacement on metabolic and inflammatory markers in women with chronic pain and Opioid-Induced Androgen Deficiency (opiad)"

This award is made possible through funding from Jennifer Toolin McAuliffe, our BWH Women's Health Advisory Board, and other generous donors to the Connors Center.

## 2021 Specialized Cardiac and Vascular IGNITE Award



Behnood Bikdeli, MD, MS

**Behnood Bikdeli, MD, MS**, Cardiovascular Medicine, Brigham and Women's Hospital

"Sex differences in presentation and disparities in treatment strategies and outcomes of elderly patients with pulmonary embolism"

## 2022 Specialized Cardiac and Vascular IGNITE Award



Marie Billaud, PhD

**Marie Billaud, PhD**, Lead Investigator and Member of Faculty, Brigham and Women's Hospital

"Understanding the influence of sex hormones in the pathophysiology of ascending aortic disease"

This award is made possible through funding from the Scott Schoen and Nancy Adams Research Fund in Women's Vascular Disease.

## 2022 Gayle Brinkenhoff Memorial IGNITE Award



Nita Amornsiripanitch, MD

**Nita Amornsiripanitch, MD**, Instructor in Radiology, Brigham and Women's Hospital

"Improving inequity in timely follow-up among underserved women utilizing mobile mammography van"

This award is made possible through funding from the Philanthropy Division of RevitaLash Cosmetics.



## 2022 Connors BWH-MGB Collaborative IGNITE Award

The Connors BWH-MGB Collaborative IGNITE Award is in conjunction with Mass General Brigham to fund Brigham and Women's investigators and their collaboration with an investigator from another MGB institution on a joint project.

The 2022 awardees are **Hadi Shafiee, PhD, and Shruthi Mahalingaiah, MD, MS** of Brigham and Women's Hospital, "A personalized smartphone-based assay for at-home ovulation prediction in women including those with polycystic ovarian syndrome," and **Lydia Pace, MD, MPH and Florian J. Fintelmann, MD** of Mass General Hospital, "Tackling sex-differentiating factors to improve lung cancer screening for women: Leveraging machine learning for risk stratification on low-dose chest computed tomography."



Hadi Shafiee, PhD



Shruthi Mahalingaiah,  
MD, MS



Lydia Pace, MD,  
MPH



Florian J.  
Fintelmann, MD

## 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 our understanding of sex and gender differences, especially for diseases or conditions that affect women exclusively, predominately, or differentially.

The current First Look awardees are **Ching-Wen Chang, PhD**, "A human trophoblast-derived placental model for studying the impact of SARS-CoV-2 infection on early pregnancy," **Kara McKinley, PhD**, "A new model for the study of endometriosis," and **Sallie Schneider, PhD**, "E2-PATH assay for assessment of breast cancer risk and treatment."

"The Connors Center funding came at a very crucial time for our lab when we were developing our artificial intelligence platform. This has allowed us to launch more than 20 projects which are currently in different stages of development."

— *Vesela Kovacheva, MD, PhD,*  
*2021 IGNITE Awardee*

## Stress Research

The second pillar of research focuses on Stress and Women's Health Research, and how systemic stress impacts the health of women. This includes accumulated lifetime stressors, environmental stress, and physiological stress. Two signature Connors Center programs that fall under this pillar include The Brigham/Harvard Center for Reproductive Outcomes of Stress and Aging (ROSA) that investigates neural processing of stress in postmenopausal women, and the 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 two 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. Findings will help reduce adverse health consequences of reproductive aging in menopausal women. The ROSA Center also has funding opportunities to expand its research focus. The ROSA Scholar program helps early-stage faculty or established investigators refocus 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 hopefully results in NIH K- or R-level funding. In addition, the ROSA Pilot program allows early-stage investigators to obtain preliminary data, facilitating applications for future NIH K- or R-level awards.

The ROSA Scholar is **Carrie Mahoney, PhD** "Orexins as mediators of the effects of low estradiol on fragmented sleep and stress responses," and the Associate Scholar is **Jennifer Stuart, ScD** "Preeclampsia, mental health conditions, and cardiovascular health across the life course."



Carrie Mahoney, PhD Jennifer Stuart, ScD

The ROSA Pilot Awardees are **Primavera Spagnolo, MD, PhD**, “Interaction between gonadal steroids and the endocannabinoid system as a novel mechanism underlying dysregulated stress response in aging women,” and **Rajae Talbi, PhD**, “Deciphering the role of Tac3POA neurons in the regulation of hot flushes in female mice.”



Primavera A Spagnolo, MD, PhD



Rajae Talbi, PhD

## 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 on the topic of how physiologic and psychological stress affect women’s health and disease.

Each WHISPR symposium includes a keynote speaker followed by short presentations from finalists who have applied for one-year pilot research awards on the topic of stress and women’s health. The 5th annual WHISPR symposium took place virtually on May 25, 2022, and featured keynote speaker **Karen Kim, MD**, Professor of Medicine and Vice Provost for Research at University of Chicago. She spoke on “Charting a path forward towards and inclusive research agenda: the Asian American research

paradox.” The 4th symposium took place virtually on March 30, 2021 and featured keynote speaker **Elissa Epel, PhD**, Professor and Vice Chair in the Department of Psychiatry at University of California, San Francisco. She spoke on “Psychological stress, cell aging, and the health of women.”

WHISPR research spans clinical, translational, population, and basic research studies that will investigate interactions of physiologic indicators of stress and stress exposures with women’s health and disease. WHISPR includes investigators from across BWH to develop cutting edge research and foster synergy in this interdisciplinary field.

The 2021 WHISPR awardees are **Jessica Busler, PhD**, “Testing a novel stress-GABA-obesity pathway in postmenopausal women,” and **Lydia Lynch, PhD**, “Sex differences in the neuroendocrine-immune response to stress.”



Jessica Busler, PhD



Lydia Lynch, PhD

The 2022 WHISPR awardees are **Lidia Minguéz-Alarcon, PhD, MPH**, “Self-reported perceived stress in relation to reproductive, cardiometabolic and perinatal outcomes among women in the EARTH study,” and **Jun Li, MD, PhD**, “Sex differences in depression-related metabolic dysregulation and risk of cardiometabolic disease.”



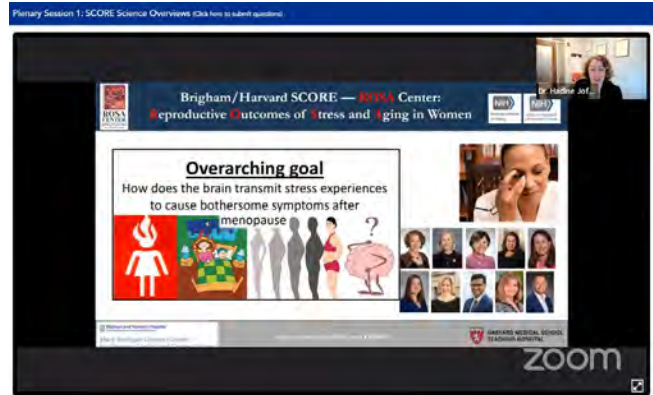
Lidia Minguéz-Alarcon, PhD, MPH



Jun Li, MD, PhD

## 2021 NIH Annual SCORE Meeting

In 2021 and 2022, ROSA Center investigators joined others from the National SCORE Consortium at the Annual SCORE Meeting, an event where the ROSA team presented innovative research and promoted current initiatives. Presenters included **Jessica Busler, PhD** (2021, 2022), **Lydia Lynch, PhD** (2021), **Carrie Mahoney** (2022), **Emily Oken** (2022), **Sidney Pereira, PhD** (2021, 2022), **Primavera Spagnolo** (2022), and **Jennifer Stuart, ScD** (2021).



## Psychosocial Stress, Diversity, and Health

In 2021, the Connors Center launched a new initiative on psychosocial stress, diversity, and health, which aims to establish research priorities of the Center related to physiologic and psychologic stress in women's health and disease with a focus on disparities and align these research activities with those of the ROSA Center and WHISPR.



Cindy Liu, PhD

In Spring of 2021, the Connors Center welcomed **Cindy Liu, PhD** as the Director of the Psychosocial Stress, Diversity, and Health initiative. Dr. Liu is also the Director of the Developmental Risk and

Cultural Resilience Laboratory at Brigham and Women's Hospital, an Assistant Professor of Pediatrics at Harvard Medical School, and has a joint appointment within the Departments of Pediatric Newborn Medicine and Psychiatry.

Dr. Liu's research is focused on culture and socio-emotional development and race and ethnic disparities related to maternal and child mental health. Her research program incorporates behavioral and physiological data collected from the laboratory to population level variables from large survey research.

A licensed clinical psychologist, Dr. Liu serves on the American Psychological Association Stress and Health Disparities Working Group as well as the Massachusetts Department of Mental Health Multicultural Advisory Committee. As Director of the Connors Center Psychosocial Stress, Diversity, and Health Initiative, Dr. Liu incorporates a psychosocial approach and a focus on disparities into stress-related research at the Connors Center.

In 2021, the Connors Center addressed the importance of stress and diversity research through the 2021 Annual Research Symposium, where keynote speaker **Karen Costenbader** gave a talk titled "Lupus disproportionately affects women and marginalized racial and ethnic groups in the U.S.: Why, and what can we do about it?" and at the 2022 WHISPR Symposium, where keynote speaker **Karen Kim, MD**, gave a talk titled "Charting a path forward towards an inclusive research agenda: the Asian American research paradox."



# Education and Training



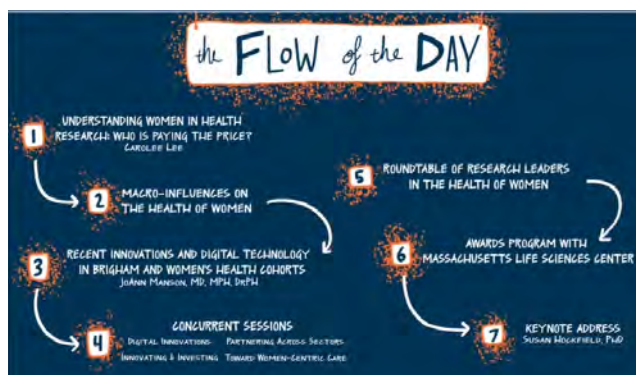
The Connors Center’s mission includes bolstering knowledge in the field of women’s health research through hosting educational events, programs, and symposia that convene academics, physicians, scientists, industry, and community partners. By integrating and applying knowledge of women’s health and sex- 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.

## National Summit on the Health of Women

On June 17th, 2021, the National Summit on the Health of Women was held virtually by the Connors Center. Over 500 people from 11 different countries registered, with more than 300 attending the event. Attendees from across the bioscience community, including academia, government (e.g. the National Institutes of Health; Food and Drug Administration), advocacy, and philanthropic sectors, actively participated in the half-day program that featured lively discussions from leaders in the field of women’s health research.



**Susan Hockfield, PhD**, MIT President Emerita, delivered the keynote address. Dr. Hockfield shared her professional journey to becoming the first woman and life scientist to lead MIT and discussed the importance of continuing to include women in science and academia. In her thought-provoking talk, Hockfield said, “Some



women have made it – they’ve found their way along little footpaths. We need to turn footpaths into superhighways. We need to make it possible for more women to get their ideas into real technologies that will change the world.”

**Marylou Sudders, MSW**, Secretary of Health and Human Services of Massachusetts introduced the plenary panel Macro-Influences on the Health of Women, which featured speakers from the FDA, NIH, and biopharma and was hosted by Connors Center Executive Director **Hadine Joffe, MD, MSc**. Panelists discussed the critical components of health that exist outside of the doctor-patient relationship and shared their insights and priorities in advancing the health of women through the lens of their respective organizations.

## National Summit on the Health of Women *continued*

**JoAnn Manson, MD, MPH, DrPH** spoke about several large-scale studies of women's health led or co-led by Brigham and Women's Hospital and highlighted how the inclusion of digital technology in clinical trials is advancing the health of women.

**Carolee Lee**, Founder and CEO of AccessCircles and WHAM!, discussed the economic impact and importance of including women in biomedical research.

Concurrent facilitated sessions were introduced by **Charlotte Owens, MD**, Head of R&D Center for Health Equity and Patient Affairs at Takeda, who discussed the importance of diversity, equity, inclusion and patient-centered approaches in biomedical research to advance the health of women. The breakout sessions showcased groundbreaking research and expertise in women's health.

Following the concurrent sessions, **Paul Anderson MD, PhD**, Sr. VP of Research and Education and Chief Academic Officer, introduced the Roundtable of Research Leaders in the Health of Women. This Roundtable was hosted by **Tanya Laidlaw, MD** and included panelists **Scott Solomon, MD**, **Cynthia Morton, PhD** and **Lindsey Baden, MD** who discussed how their groundbreaking research is advancing the health of women.

Massachusetts Senate President **Karen Spilka** highlighted Massachusetts' commitment to the life sciences enterprises and emphasized the importance of health equity in the Commonwealth. **Caroline Cunningham-Young**, Co-Chair of the Women's Health Advisory Board, joined Senate President Spilka to showcase some of the exciting research within the Connors Center by announcing respectively the three IGNITE pilot award recipients and the inaugural First Look Award, a pilot award program in partnership with the Massachusetts Life Sciences Center.

## ROSA Center Seminar Series

The 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 Brigham and Women's. The seminars feature leading investigators sharing their cutting-edge research on sex differences.

**ROSA CENTER**  
REPRODUCTIVE OUTCOMES OF STRESS & AGING  
**SEMINAR SERIES**  
Event  
A Connors Center Event

**"Eicosanoids As Immune-Inflammatory Mediators of Sex Differences in Health and in Disease"**  
12/12/22 | 12:00-1:00PM  
Susan Cheng, MD, MMSc, MPH  
Erika J. Glazer Chair in Women's Cardiovascular Health and Population Science  
Director of the Institute for Research on Healthy Aging  
Director of Public Health Research in the Smidt Heart Institute, Cedars-Sinai

Emily Lau, MD, MPH  
Instructor in Medicine, Harvard Medical School  
Assistant in Medicine, Massachusetts General Hospital  
Director of Research, MGH Corrigan Women's Heart Health Program

HARVARD MEDICAL SCHOOL  
TECHNICAL HOSPITAL

The Brigham/Harvard Center for Reproductive Outcomes of Stress and Aging (ROSA) is an NIH-funded center program that has assembled a collaborative network of leading investigators across the Brigham and Women's Hospital and Harvard Medical School. The ROSA center is one of three Specialized Centers of Research Excellence (SCORE) on Sex Differences nationwide. To learn more, visit <http://www.reproductiveoutcomes.org>. This center is supported by NIH, Research Grant R01AG052222, funded by The National Institutes of Health (NIH) and Director of Research (Women's Health) (DPRH).

## Medical Education Initiative

**Deborah Bartz, MD, MPH**, Director of Education, is leading efforts to incorporate sex- and gender-informed medical education into Harvard Medical School curricula. In collaboration with **JoAnn Manson, MD, MPH, DrPH**, Scientific Advisor, and **Janet Rich-Edwards, ScD, MPH**, Director of Lifecourse Epidemiology, Dr. Bartz has launched a cross-campus course for students transitioning from the classroom into their core clerkships, engaging clinicians to apply a sex and gender lens from the onset of their medical school training. The program will help build a workforce with the knowledge and skills to transform and advance sex- and gender-informed medical care and research. Dr. Bartz is involved in student teaching, advising, and curriculum development for this next generation of trainees in women's health research and clinical care.

The course integrates LGBTQ+ health with women's health and sex and gender diversity, an exciting and unprecedented range that will help shed light on the importance of teaching sex and gender-informed medicine. In Dr. Manson's words, "Given that sex and gender factors are

## Harvard Medical School Course Content at-a-Glance

|  | Monday                                | Tuesday  | Wednesday                        | Thursday   | Friday  |
|--|---------------------------------------|--|----------------------------------|--|---|
| <b>Week 1:</b><br>Methodology                      | <b>Course Introduction (COVID-19)</b> | <b>Clinic:</b> SGIM Clinical Care                              | <b>Research Methods Primer 1</b> | <b>Clinic:</b> SGIM Programmatic Leadership                        | <b>Research Methods Primer 2</b>                  |
| <b>Week 2:</b><br>Organ System Biology             | <b>Genetics</b>                       | <b>Clinic:</b> Breast Oncology, Intersex Care                  | <b>Hormones</b>                  | <b>Clinic:</b> Multidisciplinary Gender and Medical Affirming Care | <b>Immunology</b>                                 |
| <b>Week 3:</b><br>Interdisciplinary Health         | <b>Mental Health</b>                  | <b>Clinic:</b> Team-based care for eating disorders; PTSD Care | <b>CVD</b>                       | <b>Clinic:</b> Toxic Stress and Trauma: Healing and Recovery       | <b>Reproductive Health, Pharma</b>                |
| <b>Week 4:</b><br>Health systems and organizations | <b>Health System</b>                  | <b>Clinic:</b> PPFA, Fenway Health as Health Systems           | <b>Health Policy</b>             | Student Final Project Presentations                                | <b>Professional &amp; Sex and Gender identity</b> |

tremendously important in health, in patient care, and in research, it’s surprising how little attention they receive.” The team hopes that other medical schools may adapt their course materials and provide more opportunities for students to gain the latest understanding about differences in outcomes and variations in disease risk among sex and gender groups.

Hopefully being ahead of the curve will lead to others catching up and offering courses of this nature.

– Deborah Bartz, MD

### Annual Research Symposium

On December 6, 2021, the Connors Center held its 2021 Annual Research Symposium, entitled “Sex, gender and race: intentional inclusion of representative populations in medical research.” The event was co-sponsored by Brigham and Women’s Center for Diversity and Inclusion. **Karen Costenbader, MD, MPH**, of Brigham and Women’s Division of Rheumatology, Inflammation, and Immunity gave the keynote address, “Lupus disproportionately affects women and marginalized racial and ethnic groups in the U.S.: Why, and what can we do about it?” Additional speakers presented on new programs and research such as the Harvard

Medical School course on Sex and Gender Informed Medicine and data on enrollment of women in clinical trials at MGB.

The 2022 Connors Center Annual Research Symposium was held at Brigham and Women’s Hospital on Tuesday, November 29th, 2022 in conjunction with the Brigham/Harvard Reproductive Outcomes of Stress & Aging (ROSA) Center, an NIH Specialized Center of Research Excellence on Sex Differences. Over 100 attendees from the Connors Center, BWH, MGB System, and external community gathered for the first in-person event hosted by the Connors Center since 2019. **Daniel Grossman, MD** delivered the keynote address entitled “All hands on deck: strategies to maintain access to reproductive healthcare post-Roe.” Other speakers included investigators and trainees from the ROSA Center and recipients of Connors Center awards and Fellowships.

### 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.

# 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 Faculty Research Scientist Fund

The Mary Ann Tynan Faculty Research Scientist 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 2020 – 2022 Tynan awardees are **Cindy Liu, PhD** whose research focus is on the impact of stress and mental health of women and their families, and **Primavera Spagnolo, MD, PhD**, who studies sex-differences in stress- and trauma-related disorders and female-specific factors influencing health-related behaviors.



Cindy Liu, PhD



Primavera A Spagnolo, MD, PhD

## Global Women’s Health Fellowship

The Global Women’s Health Fellowship Award supports critical research advancing 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.

The 2021 Global Women’s Health Fellowship awardees are **Isioma Okolo, MBChB, MRCOG, DTMH**, whose research focus is on clinical decision-making around mode of delivery in Uganda, **Kavita Ranganathan, MD**, who studies the impact of out-of-pocket expenditures on social determinants of health among women presenting with trauma in India, and **Chiamaka Onwuzurike, MD, MPH** whose work focuses on patient-reported experiences of mistreatment during childbirth in the United States.



Isioma Okolo, MBChB, MRCOG, DTMH



Kavita Ranganathan, MD



Chiamaka Onwuzurike, MD, MPH



### Global Women's Health Fellowship *continued*

The 2022 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 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 Directors **Drs. Polina Teslyar** and **Margo Nathan**.

The 2020 – 2021 Women's Mental Health fellow is **Jennifer Okwerekwu, MD, MS**.

The 2021 – 2022 fellow is **Gali Hashmonay, MD**.



Jennifer Okwerekwu, MD, MS



Gali Hashmonay, MD

The 2022 – 2023 fellow is **Marlee Madora, MD**, and the 2022 – 2024 fellow is **Natalie Feldman, MD**.



Marlee Madora, MD



Natalie Feldman, MD

### Complex Family Planning Fellowship

The two-year Family Planning Fellowship provides obstetrician-gynecologists across the country with an opportunity to build on their clinical skills in abortion and family planning while developing research expertise. Fellows are trained and mentored by Fellowship Director **Dr. Alisa Goldberg**, Associate Fellowship Director **Dr. Kari Braaten**, and faculty members **Drs. Deborah Bartz** and **Elizabeth Janiak**.

The 2021 – 2022 Complex Family Planning fellows are **Steffanie Wright, MD, MPH** and **Lauren Sobel, DO, MPH**.



Steffanie Wright, MD, MPH



Lauren Sobel, DO, MPH

# Center Publications, Honors, and Awards



## Internal Brigham and Women's Coverage

The Brigham Bulletin published a Q&A with Annual Research Symposium Keynote Speaker, **Karen Costenbader, MD, MPH**. Connors Center Executive Director **Hadine Joffe, MD, MSc**, was featured in a video on the Mass General Brigham YouTube page on perimenopause and perimenopausal depression. 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.



## Notable Publications

<https://connorscenter.bwh.harvard.edu/news-events/recent-publications/>

## Press Coverage of Center

**Hadine Joffe, MD, MSc**, was a guest on *Becker's Hospital Review* podcast. She was also featured in *Good Housekeeping* and *Short Wave NPR* to discuss the menopause transition, and in a *Washington Post* article on sleep and hormones. **JoAnn Manson, MD, MPH, DrPH**, was featured in *A Woman's Health* to discuss the role of vitamin D in your well-being. **Jennifer Okwerekwu, MD, MS**, wrote an article in *Stat* on racism as a risk factor for perinatal depression. **Michelle O'Donoghue, MD, MPH**, wrote a commentary in *Medscape* on gender inequities in cardiology. **Hadine Joffe, MD, MSc**, and **Katherine Burdick, PhD**, were featured in a *Wall Street Journal* article on women's midlife moodswings.

## Awards and Promotions

**JoAnn Manson, MD, MPH, DrPH**, received a Research Achievement Award from the American Heart Association. Dr. Manson also received the 2021 James D. Bruce Memorial Award for Distinguished Contributions in Preventive Medicine from the American College of Physicians. **Lydia Lynch, PhD**, received the Innovation Discovery Grant from Mass General Brigham. **Deborah Bartz, MD, MPH**, received the William K. Rashbaum, MD Abortion Provider Award from the Physicians for Reproductive Health. **Pamela Mahon, PhD**, received a Pillar Award from Brigham and Women's. **Cindy Liu, PhD**, received the Annual Excellence in Research Award from Brigham and Women's Department of Psychiatry. **Primavera Spagnolo, MD, PhD**, received the McGraw Family Opioid Innovator Award from Brigham and Women's. **Hadine Joffe, MD, MSc**, was awarded the Vivian Pinn Award for Outstanding Research in Women's Health.

“What we must do is commit ourselves to some future that can include each other and to work toward that future with the particular strengths of our individual identities. And in order for us to do this, we must allow each other our differences at the same time as we recognize our sameness.”

– *Audre Lorde*



**Brigham and Women's Hospital**  
Founding Member, Mass General Brigham

## **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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