51st Meeting of the NIH Advisory Committee on Research on Women’s Health

Janine A. Clayton, M.D.
NIH Associate Director for Research on Women’s Health
Director, Office of Research on Women's Health
National Institutes of Health

October 20, 2020 – Director’s Report
Celebrating
30 Years
Amb. Connie Morella on ORWH’s founding

“As we celebrate the 30th anniversary of the NIH ORWH, ‘the gift that keeps on giving,’ we acknowledge that with all its accomplishments we haven’t finished. We will monitor the progress in policies, research, programs, and career development. No longer are we considered ‘little men’; rather, we are proud, healthy women. Onward and upward!”

In recognition of ACRWH’s contributions
ACRWH Advisors Past and Present
I could not be prouder of all the Office of Research on Women’s Health has done for women’s health, and I am honored to be a part of its foundational history.

Former Senator Barbara A. Mikulski (D-MD)
New in Science
SABV in action: Sex differences in gene expression are ubiquitous
COVID-19 is changing academia, research, workplace

- Laid bare gender inequities generally
- But women in academia, especially WOC, face more severe versions of longstanding gender gaps that already cause universities to lose women faculty
- Interruption to research can hamper ability to gain tenure
  o Increased gender gap in publication
  o Women first authorship dropped from 35.9% in December to 20.2% in April
  o Last authorship, from 26.1% to 19.3%
- Devastating impact on early-career investigators
- Women’s departures will affect direction of research in fundamental ways – and for years

McKinsey report predicts 1 in 3 women will leave workforce

Former BIRCWH scholar leads hospital COVID-19 response

Karen M. Freund, M.D., M.P.H.; Professor of Medicine, Tufts University School of Medicine

CTSA Collaborative Innovation Award

• Breast Cancer Disparities
• Evidence-based strategies to coordinate breast cancer care within and across six Boston hospitals

Leads Tufts Medical Center COVID-19 response
A watershed moment that brought gender equity to medical science.

Former Senator Olympia J. Snowe (R-ME)
What’s New at NIH and ORWH
Three new women NIH IC directors brings total to 10

<table>
<thead>
<tr>
<th>Name</th>
<th>Institute/Program</th>
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<tr>
<td>Michael Chiang, MD</td>
<td>NEI</td>
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<tr>
<td>Lindsey Criswell, MD, MPH, DSc</td>
<td>NIAMS</td>
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<td>Rena D’Souza, DDS, MS, PhD</td>
<td>NIDCR</td>
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<td>Rick Woychik, PhD</td>
<td>NIEHS Nat. Toxicology Program</td>
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<td>Shannon Zenk, PhD, MPH, RN, FAAN</td>
<td>NINR</td>
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10 out of 27 IC directors are women
On the move at ORWH

Elizabeth Spencer, B.S.N.
- ORWH Deputy Director
- Named Senior Advisor for Workforce Development in DPCPSI

Samia Noursi, Ph.D.
- Associate Director for Science Policy, Planning, & Analysis
- Appointed ORWH Executive Secretary
NIH survey reveals workplace experiences

Employees, contractors, fellows, and trainees as part of the NIH Anti-Harassment Program – to end the culture of sexual harassment in science

- 36,228 surveyed, 44% response rate
- Results for previous 12 months

1 in 5 experienced sexual harassment
Half experienced incivility
10%, bullying

NIH workplace survey chronicles harassment

Figure 5. Association Between Sexual Harassment and Incivility in the Past 12 Months

Among respondents not experiencing sexual harassment in the past 12 months...

41.6%

Experienced Any Incivility

Among respondents experiencing sexual harassment in the past 12 months...

85.1%

Experienced Any Incivility

Figure 9. Respondent Job Satisfaction (MOAQ-JSS Average Score, Cutoff of 5)

Respondents experiencing sexual harassment

71.6% Better Job Satisfaction (Score 5 or More)

28.5% Poorer Job Satisfaction (Score Less than 5)

Respondents not experiencing sexual harassment

87.3% Better Job Satisfaction (Score 5 or More)

12.6% Poorer Job Satisfaction (Score Less than 5)

New programs support women during critical life events

Percentage of Women Scientists in Academic STEM Levels

- **Degree MD/PhD**: ~50%
- **Postdoc/Residency**: ~45%
- **Tenure Track* (Asst. & Assoc. Professor)**: 40-30%
- **Full Professor**: ~20%

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Promoting Career Continuity for K Awardees

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Promoting Career Continuity for K Awardees NOT-OD-20-054
Promoting Career Continuity for RPG Awardees NOT-OD-20-055

NIH Challenge Prize to recognize, disseminate transformative institutional approaches

One of 4 concepts developed out of the Working Group on Women in Biomedical Careers

Aligns with

• NASEM consensus study
• NIH ACD WG on Changing the Culture to End Sexual Harassment recommendations
• Other NIH policy changes & programs to enhance participation of UR populations

“Some would say progress is being made and we need to let the current tends take care of this inequity..., but that would take decades and that’s not sufficient. NIH is determined to do our part to produce a discontinuity in those curves of representation of women and other underrepresented groups in science.”

Francis S. Collins, M.D., Ph.D., Dir., NIH
NASEM Symposium, Addressing the Underrepresentation of Women in STEMM March 19, 2020

https://www.herox.com/NIHGenderDiversityPrize
NIH Challenge Prize to recognize, disseminate transformative institutional approaches

**Goal:** Recognize structures, systems, projects and processes that have enhanced gender diversity within an institution
- Submission platform is live!
- Announcement on challenge.gov

**Prize:**
- $50,000 to up to 10 institutions and possibly honorable mentions
- May include invitation to present approaches at ORWH symposium

**Application deadline:** April 16, 2021

https://www.herox.com/NIHGenderDiversityPrize
ORWH expands e-learning – new courses educate biomedical community on sex & gender

- **Bench to Bedside: Integrating Sex & Gender to Improve Human Health**
  - Immunology | CVD | Pulmonary Disease | Neurology | Endocrinology | Mental Health (Fall 2020)
  - Close to 4000 visitors since March
  - 445 users in September – more than 500 unique visitors in August
  - Immunology is the most popular

- **Coming Soon!**
  - Sex as a Biological Variable Primer
  - Introduction to the Scientific Basis of Sex- and Gender-Related Differences

https://bit.ly/ORWHonline
September webinar introduces Neurology module

Farida Sohrabji, Ph.D.
Regents Professor and Interim Department Head, Department of Neuroscience and Experimental Therapeutics
Director, Women’s Health in Neuroscience Program
Texas A&M College of Medicine

• Addressed urgency of considering sex and gender in neurological health and 3 conditions covered in the e-learning module: ischemic stroke, Parkinson’s disease, and epilepsy
• 377 participants

https://orwh.od.nih.gov/career-development-education/e-learning/bench-bedside
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https://bit.ly/ORWHonline
CoEPEs’ new and improved website!

The Centers of Excellence in Pain Education program is an online resource for the development, evaluation, and distribution of pain management curricula material for medical, dental, nursing, pharmacy and other schools

https://coepes.nih.gov/
HHS initiatives target hypertension and maternal health

National Women’s Blood Pressure Awareness Week, October 11-17
- Increase awareness of blood pressure control for women of reproductive age
- Encourages women to regularly take, track, and share BP numbers with providers
- Incorporate heart healthy behaviors into daily life

Million Hearts® Hypertension Control Challenge

PRGLAC Update: Sec. Azar has acknowledged receipt of Implementation Plan – posted online www.nichd.nih.gov/about/advisory/PRGLAC

Photo by Amanda Mills, USCDCP

https://www.womenshealth.gov/nwbpaw
At that time our bipartisan, bicameral foursome learned of the omission of women in clinical trials and protocols. ... The Office, established in 1990, has made all the difference! Let’s continue.

Former Rep. Connie Morella (R-MD)
COVID-19 Update
NIH roadmap for COVID-19 research – including pregnancy-related impacts

NIH Wide Strategic Plan for COVID-19 Research

July 2020

ORWH leverages the collective strength of ICOs to accelerate sex and gender research on COVID-19’s impacts on women’s health

01 Develop and prioritize initiatives for future research

02 Provide strategies for incorporating SABV and NIH inclusion policy into COVID-19

03 Develop COVID-19 women’s health research priorities

04 Systematically collect and curate relevant information on the current COVID-19 landscape

05 Promote collaboration to accelerate the impacts of research

ORWH catalyzes scientific synergy across NIH and recently established CCRWH COVID-19 Working Group

- Perform portfolio analysis (e.g., new initiatives, scan of FOAs, etc.)
- Identify gaps in our portfolios
- Setting the priorities
- Accelerating research

CCRWH COVID-19 WG co-chairs
Nina Schor, NINDS
Marrah Lachowicz-Scroggins, NHLBI
Rajeev K. Agarwal, ORWH
NIH is moving at an unprecedented rate to develop testing, serology, and technology to combat COVID-19

**ACTIV Accelerating COVID-19 Therapeutic Interventions and Vaccines | Public-private collaboration to pursue 4 fast-track areas:**
- Forum to identify preclinical treatments
- Accelerate testing of the most promising vaccines and treatments
- Improve clinical trial capacity and effectiveness
- Accelerate the evaluation of vaccine

**The Rapid Acceleration of Diagnostics (RADx) Program seeks to improve COVID-19 testing**

Tech: Speed development of point-of-care tests; improve laboratory tests ($500 million).

UP: Identify disparities in Underserved Populations and mitigate factors associated with poor outcomes ($500 million).

Radical: Support new, non-traditional approaches to testing and non-traditional applications of current methods ($200 million).

ATP: Scale up existing Advanced Technology Platforms to increase testing capacity with rapid turnaround ($230 million).

[https://www.nih.gov/research-training/medical-research-initiatives/activ](https://www.nih.gov/research-training/medical-research-initiatives/activ)
[https://www.nih.gov/research-training/medical-research-initiatives/radx](https://www.nih.gov/research-training/medical-research-initiatives/radx)
What’s behind men’s poorer outcomes?

**Nature: Sex differences in immune responses explain disease outcomes**

- Men had **higher levels of proinflammatory innate immune chemokines and cytokines** (IL-8, IL-18, and CCL5) – which correlated with higher non-classical monocytes.
- In contrast, **women mounted more robust T cell activation** during infection – including older women.
- Conversely, elevated levels of innate immune cytokines in women associated with worse disease progression, but **not** in men.
- Suggests **potential immunological underpinning** of the distinct mechanisms of disease progression between sexes.
- Provides potential basis for **sex-dependent approaches** to prognosis, prevention, care, and therapy.

Distinct immune responses predict symptom severity in men and women

Males and females with moderate COVID-19 symptoms have different immune profiles:

- **Males**
  - Higher plasma levels of innate immune cytokines IL-8 and IL-18
  - Robust induction of non-classical monocytes

- **Females**
  - Robust T cell activation is sustained in old age

Case deterioration is associated with distinct immune processes between sexes

- **Males**: Decreases in proportions of T cells that are activated (CD38+HLA-DR+), differentiated (PD-1+TIM-3+)
- **Females**: Increases in cytokines/chemokines (TNFSF10, CCL5, IL-15)

Scientific Collaborations

- Maternal Health
- Inclusion
- Sex and gender
NIH’s robust response to maternal health disparities

**IMPROVE**
- NIH Maternal Mortality Task Force
  - NICHD–OD–ORWH*
    - CVD
    - Infection/immunity
    - Mental health
    - ~$7 Million

**IDeA States**
- Institutional Development Award States program
  - Administrative supplements to expand research and research capability
  - ~$4.8 Million

**R01 | NIHMD**
- Addressing Racial Disparities in MMM
  - Intersection of domains and levels of influence
  - NIHMD-ORWH
    - SMM disparities

**U3**
- FY2017–20
  - >50 awards
    - Sickle cell disease
    - Fibroid growth
    - Biologic & social determinants of severe maternal morbidity

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*Creating Navigating Wellness Maternal Health “Well Mama” Module and distributable tool kit with a focus on WOC in urban settings*
NIH’s robust response to maternal health disparities

Supporting Women’s Health Research in Underserved States: NIGMS Collaborates with ORWH to Facilitate Trans-NIH Effort Through the Institutional Development Award (IDeA) Program

Release Date: 10/9/2020

Contact:
NIGMS Communications and Public Liaison Branch
301-496-7301

The National Institute of General Medical Sciences (NIGMS), together with the Office of Research on Women’s Health (ORWH) and seven other institutes of the National Institutes of Health (NIH), provided funding to scientists across the country to expand their research on women’s health. This initiative, which supports trans-NIH efforts to address high rates of maternal mortality and morbidity, funded 19 administrative supplements in response to NOT-GM-20-017, Notice of Special Interest (NOSI): Administrative Supplements for Research on Women’s Health in the IDeA States.
NIH’s robust response to maternal health disparities

**IMPROVE**
- NIH Maternal Mortality Task Force
  - **NICHD–OD–ORWH**
    - CVD
    - Infection/immunity
    - Mental health
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*Creating Navigating Wellness Maternal Health “Well Mama” Module and distributable tool kit with a focus on WOC in urban settings

ORWH’s robust response includes education and resources

Maternal health workshops


ORWH inclusion initiatives produce better science


- Monica Webb Hooper, PhD | Deputy Director, National Institute on Minority Health and Health Disparities

- Research!America: “Is there an area of science that deserves more attention than it receives?” https://raforum.vfairs.com/
  - Answer? “Inclusion and study of SABV”

- NIH Inclusion Across the Lifespan-II Workshop, Sep. 2 – over 1000 registrants!

- 2020-21 NIH Introduction to the Principles and Practice of Clinical Research (IPPCR) course | https://ocr.od.nih.gov/courses/ippcr.html
  - Dr. Noursi and I presented on NIH inclusion policy
  - Reached ~8000 around the world
  - Free, self-paced, online – runs through Aug. 1, 2021


- Diverse Women in Clinical Trials collaboration with FDA OWH | https://www.fda.gov/consumers/womens-health-topics/women-clinical-trials
Thirty years later, the goal of knowing as much about women’s health as men’s gets closer every year. Power on!

Former Rep. Pat Schroeder (D-CO)
Research Investments
ORWH Budget History & FY20 Extramural Award Profile

**FY20: $45,458,253**

### ORWH FY2020 Extramural Award by Program (as % of Extramural Budget)

- **SCORE** (35%)
- **BIRCWH** (29%)
- **SRP** (16%)
- **Career Concept** (5%)
- **R01** (3%)
- **U3 Admin. Supp.** (5%)
- **Sex/Gender Admin Supp** (7%)  

Source: NIH IMPAC II FY2020 frozen data.

Note: ORWH total investments = $31,867,666. Funding portfolio excludes Contract R&D and IAA awards.
Connecting
ORWH Interprofessional Education: Courses and Resources on Sex and Gender and Women’s Health

Sex and Gender Health Education 2020 Summit

Presenter
Chyren Hunter, Ph.D.
Basic and Translational Programs
ORWH

Advancing Sex and Gender-Based Research: Transitions over the Life Course for Understanding Young Women’s Risk for Affective Psychopathology

2020 American Academy of Child and Adolescent Psychiatry (AACAP) 2020 Annual Meeting

Presenter
Rebecca DelCarmen-Wiggins, Ph.D.
Basic and Translational Programs
ORWH
ORWH’s stress message reaches >300,000

General public newsletter distributed to community health clinics, senior centers, libraries, schools, and individuals across the country

Health Capsule

Manage Stress and Build Resilience

Send us your comments...

It’s hard to avoid stress. Work, money, current events, and the basics of everyday life are just a few of the things that can cause stress. Long term, or chronic, stress is linked to several health conditions like heart disease, high blood pressure, diabetes, depression, and anxiety.

It’s important to learn how to manage stress so it doesn’t overwhelm you. The first step is to recognize your body’s signals. These could include headaches, poor concentration, or feeling on edge. Once you identify these signs, work to counter their effects. Some people benefit from deep breathing, going for a walk, or writing down their thoughts.

Whatever works for you, make taking care of yourself part of your daily routine. Work in time to exercise, eat healthy foods, and get good quality sleep. This will help make you more resilient to life’s stresses.

Experts also recommend staying socially connected. Being in touch with family and friends can combat stress and depression. Video chats and other technology make staying in touch easier than ever.

If you can, also try to see problems a different way. Experts call this “reframing.” Stick in traffic? It may be an opportunity to enjoy some music or catch up on a podcast. Practice reframing the situation and you’ll likely get better at it over time.

Finally, if stress is affecting your well-being talk to a health professional. They can help guide you through times of severe stress. Find more tips.
ORWH Staff Publications


Clayton JA and Stratton P. The role of gynecologists in screening older women for ocular surface disease symptoms. *Menopause*. 2020. DOI: 10.1097/GME.0000000000001627


Facebook Lives on careers reach tens of thousands

ORWH’s Four Programs

Sadhanna Jackson, MD | Feb 2019
Faustine Williams, MD | Aug 2019
Panel | March 4, 2020
Panel | August 5, 2020
https://www.facebook.com/NIHORWH/videos/656271685007682

More than 30,000 Reached!

Join NIH Women of Color Research Network
https://womeninscience.nih.gov/women-of-color/
ORWH 30th Anniversary
Virtual Meeting Series:
Advancing the Health of
Women Through Science
December 14-16, 2020

Connect With Us

@JanineClaytonMD       NIH.gov/women
@NIH_ORWH             NIHORWH
In Focus Quarterly bit.ly/ORWHInFocus