

# 50th 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

**April 21, 2020 – Director's Report**



**OFFICE OF RESEARCH  
ON WOMEN'S HEALTH**

*Advancing the Health of  
Women Through Science*

 /NIHORWH

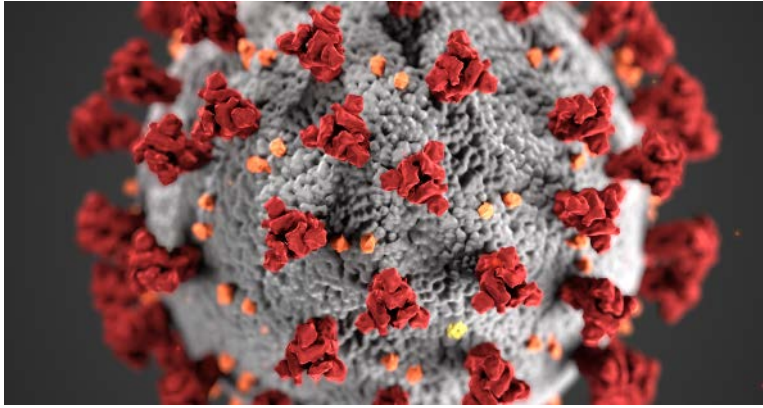
 @NIH\_ORWH

 [nih.gov/women](https://nih.gov/women)

**#ResearchForWomen**



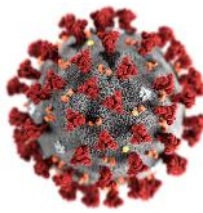
 National Institutes of Health  
Office of Research on Women's Health



# Spotlight

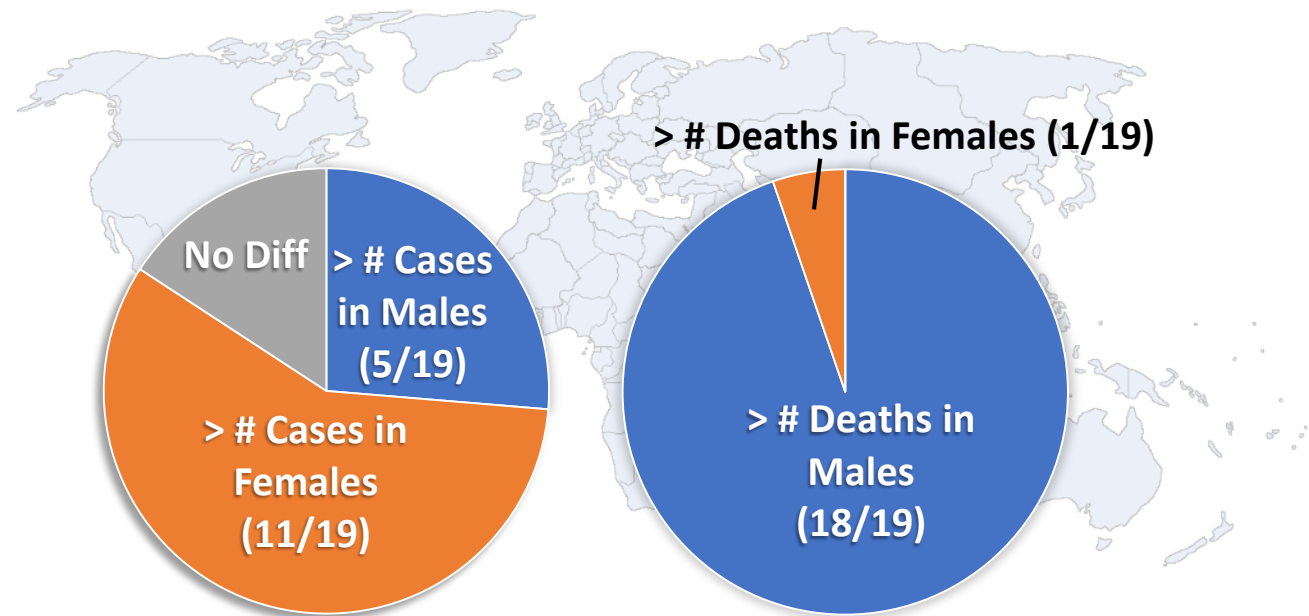
Bottom: Photo by Dexter Chatuluka on Unsplash

# COVID-19 is affecting us all yet early evidence suggests sex differences in mortality



210 countries reporting cases/deaths

- Only 19 reporting sex-disaggregated data



More men are dying of COVID-19 than women

<https://globalhealth5050.org/covid19/#1586263312717-c89130f0-8676>

<https://www.worldometers.info/coronavirus/> Updated 4/14/2020

Possible explanations:

- Women have more robust innate & adaptive immune responses<sup>1</sup>
- Toll-like receptor responses differ by sex<sup>2</sup>
- TMPRSS2 protease activity is androgen responsive<sup>3</sup>
- Genetic variants of TMPRSS2 possible disease modulators<sup>4</sup>

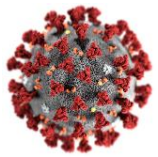
<sup>1</sup>Klein et al. 2016. *Nat Rev Immunol.* 16(10): 626-638.

<sup>2</sup>Khan et al. 2010. *Hum Immunol.* 71(4): 372-376.

<sup>3</sup>Lin et al. 1999. *Cancer Res.* 59(17): 4180-4184.

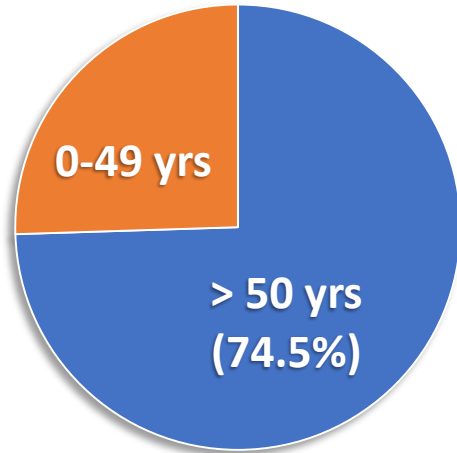
<sup>4</sup>Asselta et al. 2020. *MedRxiv.* (Preprint)

<https://doi.org/10.1101/2020.03.30.20047878>

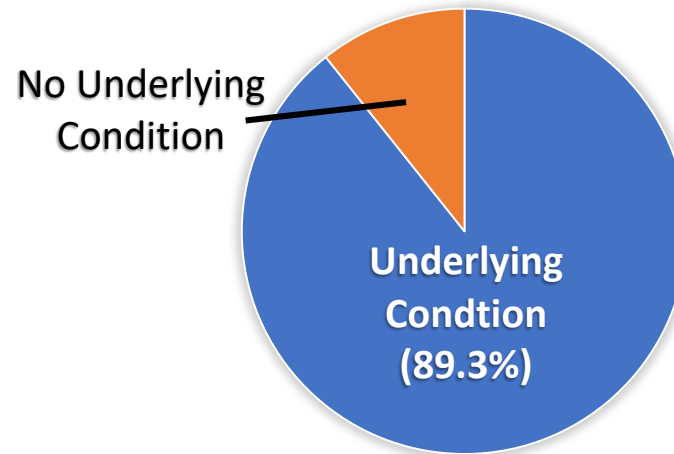


# Vulnerable populations in US are bearing disproportionate share of COVID-19 burden

Hospitalization Rates by Age



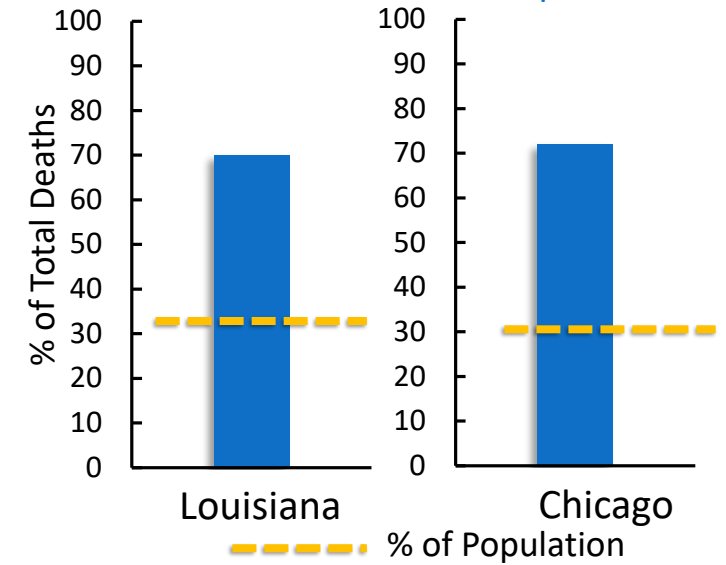
Underlying Conditions Among Hospitalized



## Most Common Underlying Conditions:

Hypertension	49.7%
Obesity	48.3%
Chronic Lung Disease	34.6%
Diabetes Mellitus	28.3%
CVD	27.8%

African American Deaths | COVID-19



## Deaths involving COVID-19, pneumonia, and influenza reported to NCHS by sex, U.S. Week ending 2/1/2020 to 4/11/2020 (As of 4/17)

Sex	COVID-19 Deaths (U07.1) <sup>1</sup>	Deaths from All Causes <sup>2</sup>
Total deaths	13,130	582,565
Male	7,823	300,021
Female	5,307	282,524
Unknown	0	20

NOTE: Number of deaths reported in this table are the total number of deaths received and coded as of the date of analysis and do not represent all deaths that occurred in that period.

<sup>1</sup>Data during this period are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction, age, and cause of death.

<sup>2</sup>Deaths with confirmed or presumed COVID-19, coded to ICD-10 code U07.1.

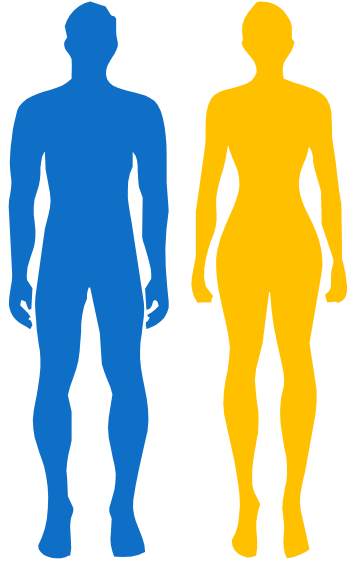
<sup>3</sup>Pneumonia death counts exclude pneumonia deaths involving influenza.

<sup>4</sup>Influenza death counts include deaths with pneumonia or COVID-19 also listed as a cause of death.

# Patterns in other pandemics suggest a gender impact on health outcomes



More likely to have underlying respiratory disease-related vulnerabilities due to smoking prevalence



Incur economic impacts as caregiving roles are often unpaid



Increased domestic violence & abuse



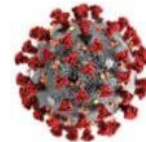
Increased psychological trauma of being primarily responsible for the ill

Chattu et al. 2020. *Reprod Health*, 17(1), 43. [doi:10.1186/s12978-020-0899-y](https://doi.org/10.1186/s12978-020-0899-y); Chen et al. 2020. *The Lancet*; 395 (10223): 507-513, [https://doi.org/10.1016/S0140-6736\(20\)30211-7](https://doi.org/10.1016/S0140-6736(20)30211-7); Liu et al. 2020. *Psychiatry Research*, (in press). <https://doi.org/10.1016/j.psychres.2020.112921>; Sloand et al. 2015. *J of Health Care Poor Underserved*, 26(4), 1377-1390. [doi:10.1353/hpu.2015.0133](https://doi.org/10.1353/hpu.2015.0133).

## Lancet Gender and COVID-19 Working Group

### Importance of governments and global health institutions to:

- Consider the sex and gender effects of COVID-19
- Incorporate voices of women on front line of response and those most affected into preparedness and response policies/practices

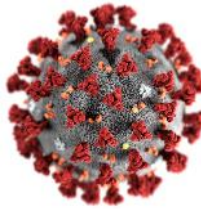


"Recognising the extent to which disease outbreaks **affect women and men differently** is a **fundamental step to understanding** the primary and secondary effects of a health emergency on different individuals and communities, and for **creating effective, equitable policies and interventions.**"

Lancet Gender and COVID-19 Working Group

Wenham et al. 2020. *Lancet* 39: 10227: 846-848. [https://doi.org/10.1016/S0140-6736\(20\)30526-2](https://doi.org/10.1016/S0140-6736(20)30526-2).

# NIH is working hard to combat COVID-19 and inform public



43 Funding Opportunities  
Published


Research on the 2019 Novel Coronavirus and the Behavioral and Social Sciences. ([NOT-OD-20-097](#))

Investigators are encouraged to look at the downstream health impacts of various mitigation efforts including differences in risk and resiliency based on **gender, race and ethnicity, socioeconomic status, and other social determinants of health.**

Investigators are strongly encouraged to include a range of groups and include medically **underserved** regions and **vulnerable populations** such as:

- pregnant women
- the homeless
- prison populations
- people with disabilities

Updated 4/14/2020

 [Click Here to Subscribe to COVID-19 Updates from NIH](#)

<https://www.nih.gov/health-information/coronavirus>



April 2020

Full Text



## Open Mike [COVID-19 Funding and Funding Opportunities](#)

By [Mike Lauer](#)

As you can imagine, NIH is devoting significant resources to COVID-19. To get funding as quickly as possible to the research community, we are using Urgent and Emergency competing revisions and administrative supplements to existing grant awards. When responding to these types of funding opportunities, it is important that you understand how they work. [Continue reading ->](#)

## [Supporting Yourself and Your Trainees During the Coronavirus Pandemic – Online Workshops](#)

Guest blog by [Dr. Sharon Milgram](#)

On April 14, the NIH Office of Intramural Training and Education is hosting a workshop on Supporting Yourself and Your Trainees During the Coronavirus Pandemic that is open to all. In this workshop we will provide PIs, program leaders and research group heads with insights and strategies for supporting themselves, their trainees and staff during this difficult time. [Continue reading ->](#)

<https://nexus.od.nih.gov/all/category/blog/open-mike/>

## New NIH Resource from OPA

Welcome to the COVID-19 Portfolio

The *iSearch* COVID-19 portfolio is NIH's comprehensive, curated source for publications related to COVID-19. This portfolio includes articles from PubMed and pre-prints from arXiv, medRxiv, bioRxiv, and ChemRxiv. The portfolio is updated daily with the latest available data.

We welcome any questions or suggestions via the feedback button at the bottom of this page. Your feedback will support our ongoing efforts to align our tools with the needs of the community.

 Launch

<https://icite.od.nih.gov/covid19/search/>

# Converging on public health problem with coherent coordination

## HHS MMM Activities:

- Including multiple federal partners



Maternal Mortality Task Force  
OD – NICHD – ORWH



- Data Related Activities



NICHD Efforts

Eunice Kennedy Shriver  
National Institute of  
Child Health and  
Human Development

- Workshop Series



- AIM Bundles



## ORWH Efforts:

- MMM Web Portal & Booklet
- >4000 portal views

PRGLAC



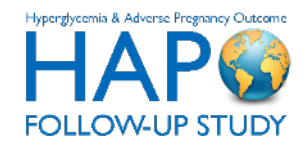
- Pregnancy Exposure Registries



Pregnancy and Maternal Conditions  
That Increase Risk of Morbidity and  
Mortality Workshop

May 19-20, 2020

NICHD - ORWH - NHLBI - ICs



# Heart health across the life course message heard across NIH and Capitol Hill




**OFFICE OF RESEARCH ON WOMEN'S HEALTH**  
*Advancing the Health of Women Through Science*

**American Heart Month:  
A Focus on Women's Health**

**Gary H. Gibbons, M.D.**  
Director  
National Heart, Lung, and Blood Institute

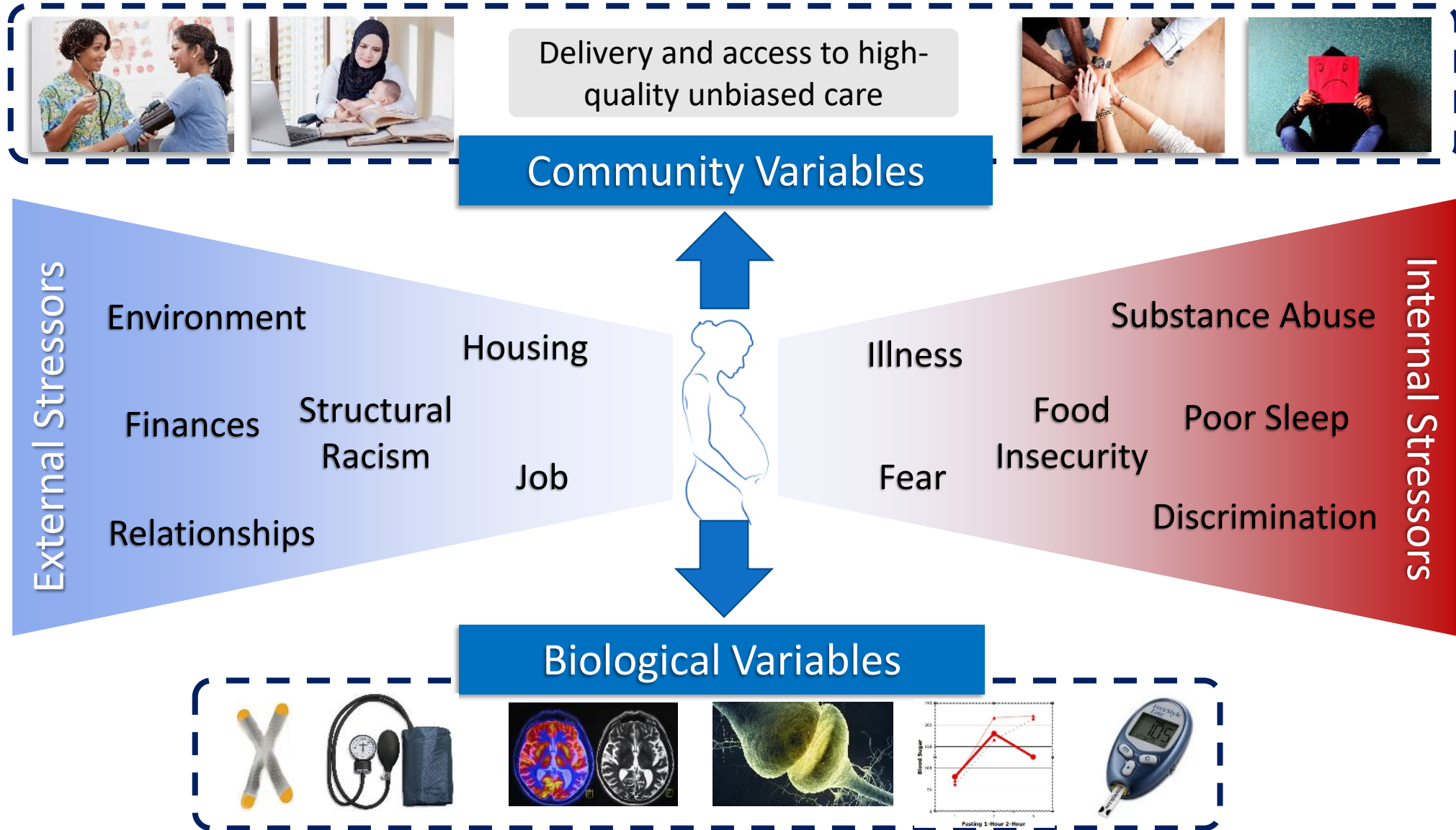
AHA/WomenHeart/NHLBI Briefing  
March 5, 2020



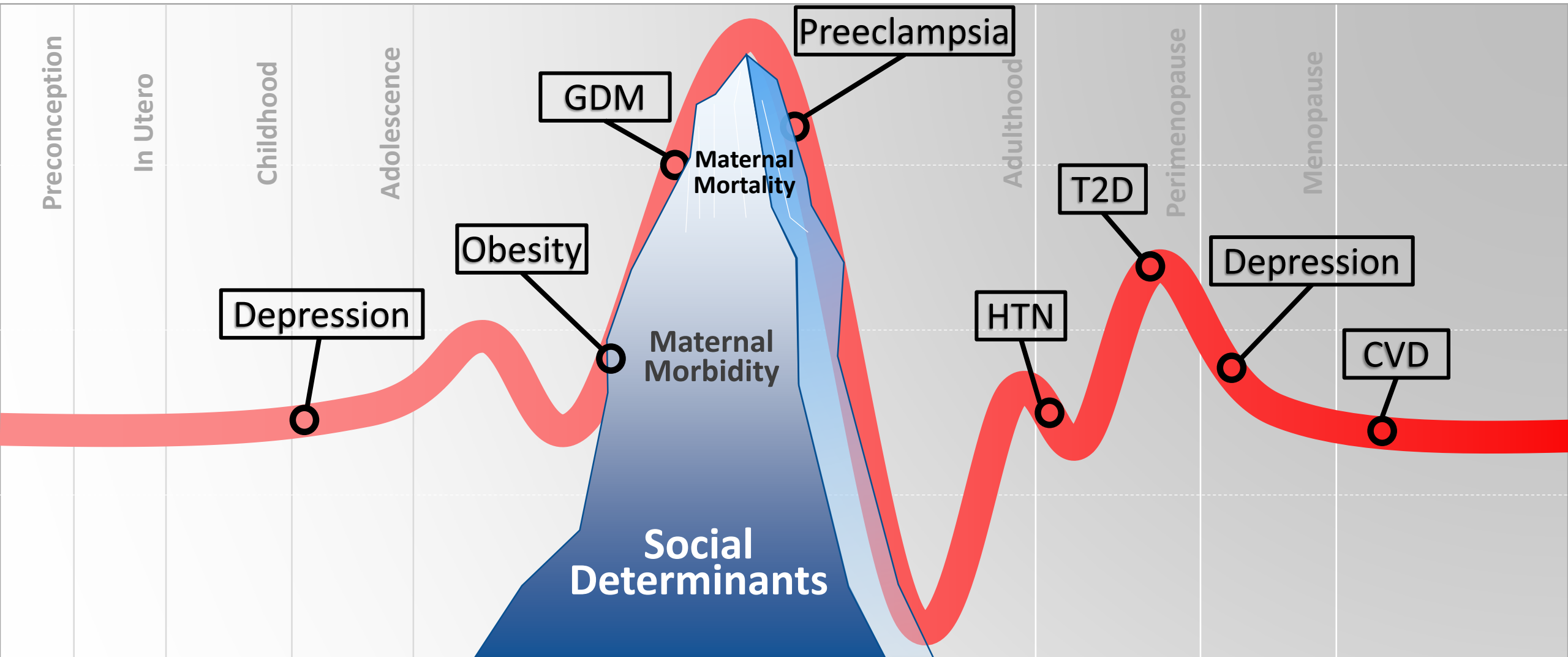
**Maternal Mortality: What Do We Know and How is the NIH Addressing It?**  
NHLBI Council, Feb. 11



# Measuring impact of biologic and social determinants of health to predict maternal risk/resilience



# Pregnancy is a stress test, and we are failing our mothers



# Maternal mortality data reveal racial & ethnic disparities – NIH is funding research to address them

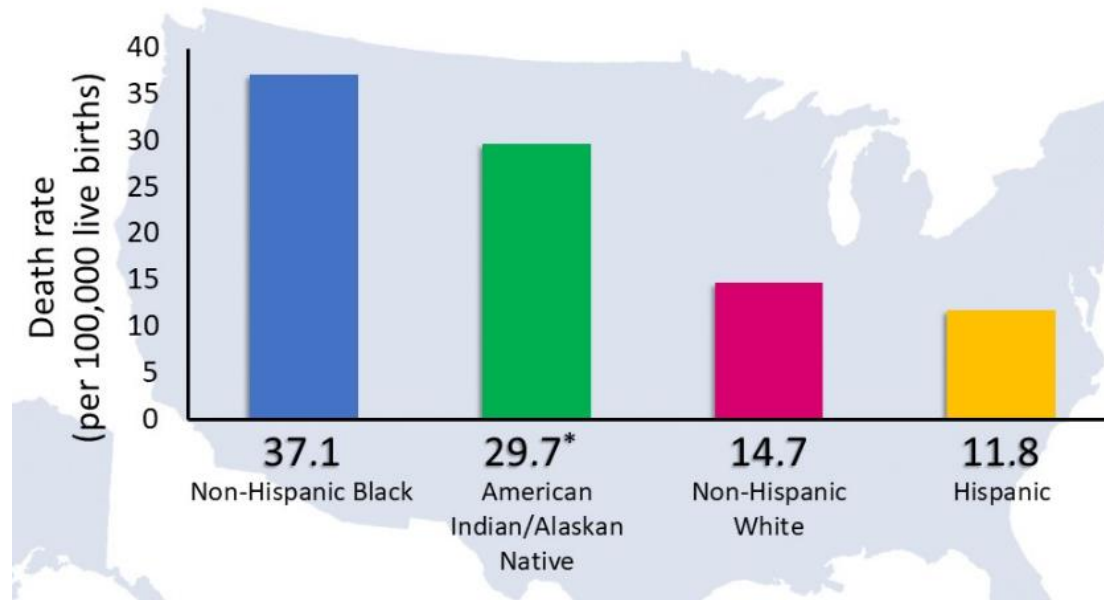
Women of Understudied,  
Underrepresented, and  
Underreported Populations



FY2017-19 | 49 awards

21 in FY19 (\$4.7M) w/ 10 ICOs –  
maternal health awards include

- Insulin resistance, neonatal adiposity, race/ethnicity
- Sickle cell disease & maternal morbidity
- Fibroid growth in African American women



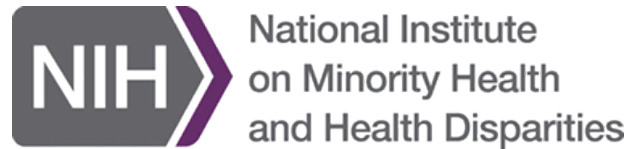
ACTIVE & HEALTHY | APRIL 2020

Graph adapted from National Vital Statistics Reports, 2020, 69(2).

\*To Include AI/AN Data from Morbidity and Mortality Weekly Report, Sept. 2019, 68(75): 762-765.

<https://grants.nih.gov/grants/guide/rfa-files/RFA-MD-20-008.html>

# Maternal mortality data reveal racial & ethnic disparities – NIH is funding research to address them



## Addressing Racial Disparities in MMM (R01 Clinical Trial Optional)

RFA-MD-20-008

**APPLICATIONS DUE MAY 29, 2020**



ACTIVE & HEALTHY | APRIL 2020

**US has the highest maternal death rate of any developed nation. California is trying...** | 04.16 CNN

**Black Maternal Health: Amplify Conversation and Act** | ORWH Dir.'s Message, 04.08

Women of Understudied,  
Underrepresented, and  
Underreported Populations



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# What's New at NIH and ORWH

# ORWH expands e-learning – new courses educate biomedical community on sex & gender

## Bench to Bedside:

Integrating Sex & Gender to Improve Human Health



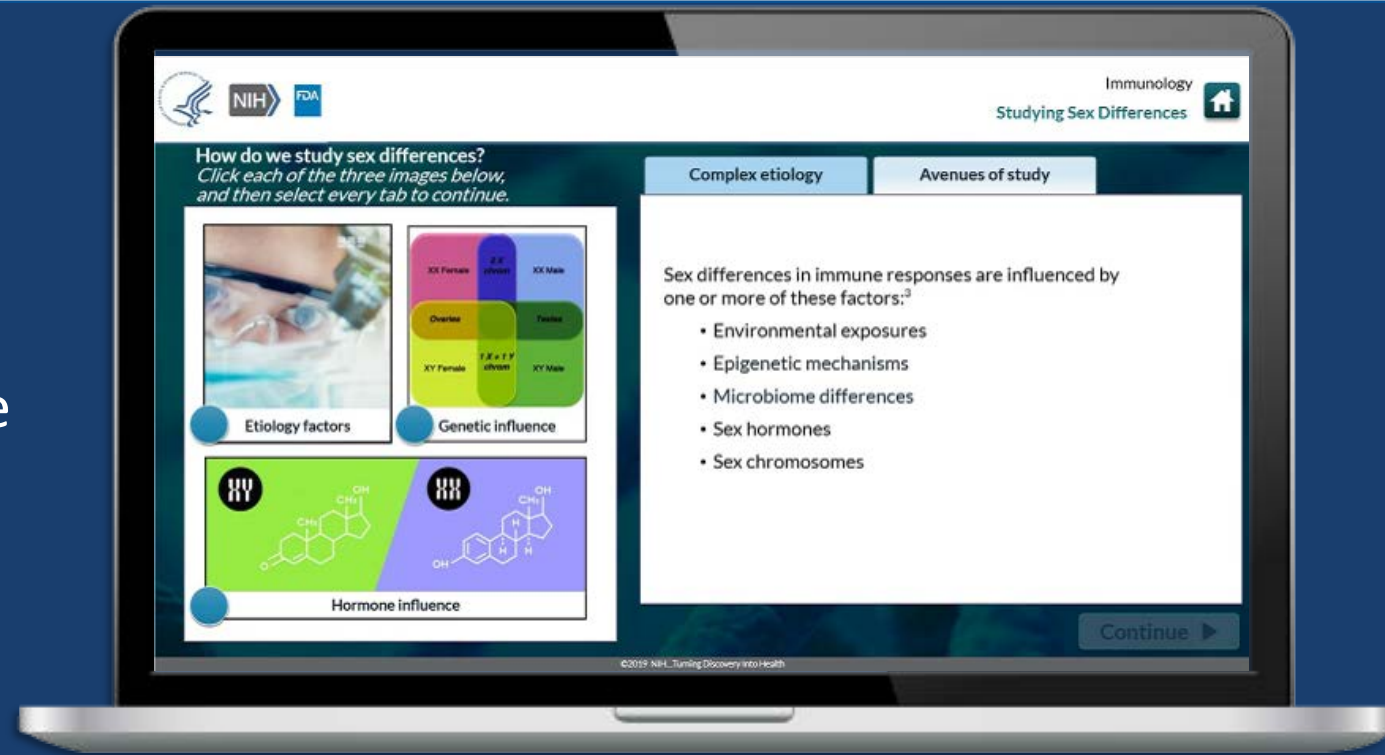
Module 1 - Immunology

Module 2 - Cardiovascular Disease

Module 3 - Pulmonary Disease

Coming This Fall!

Neurology | Endocrinology | Mental Health



<https://bit.ly/ORWHonline>





**NORA D. VOLKOW, M.D.**

National Institute on  
Drug Abuse



**PATRICIA FLATLEY  
BRENNAN, R.N., PH.D.**

National Library of Medicine



**HELENE LANGEVIN, M.D.**

National Center for  
Complementary and  
Integrative Health



**ANDREA T. NORRIS**

Center for Information  
Technology



**SANTA TUMMINIA, PH.D**

National Eye Institute\*



**TARA A. SCHWETZ, PH.D.**

National Institute of Nursing  
Research\*



**DEBARA L. TUCCI, M.D.,  
M.S., M.B.A.**

National Institute on Deafness  
and Other Communication  
Disorders



**DIANA W. BIANCHI, M.D.**

Eunice Kennedy Shriver  
National Institute of Child  
Health and Human  
Development



**NONI BYRNES, PH.D.**

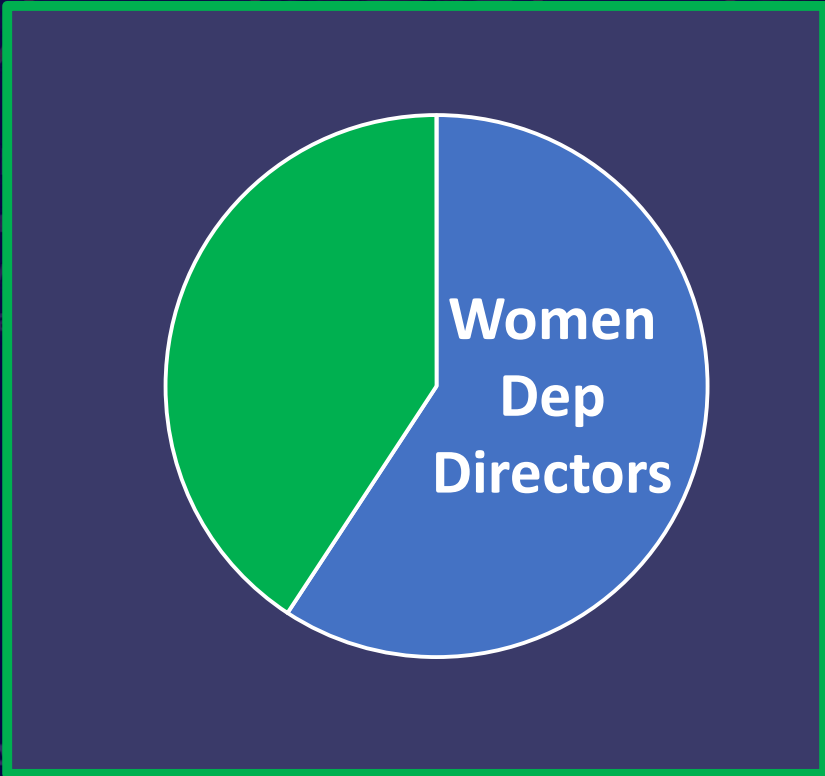
Center for Scientific Review

# LEADING THE WAY

\*Acting



**16 of 27 ICs have women deputy directors!**  
*An increase of 3 since Fall 2019*



# LEADING THE WAY

\*Acting



**Welcome to  
the ORWH  
Careers Team**



**Xenia T. Tigno, PhD, MS(Epi)**

Associate Director for Careers



**Lisa Begg, Dr.PH, RN  
Health Scientist  
Administrator**



**Melissa Ghim, PhD  
Health Scientist  
Administrator**



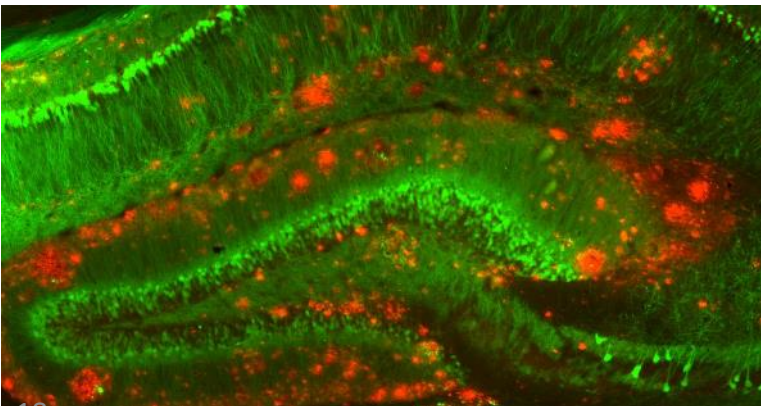
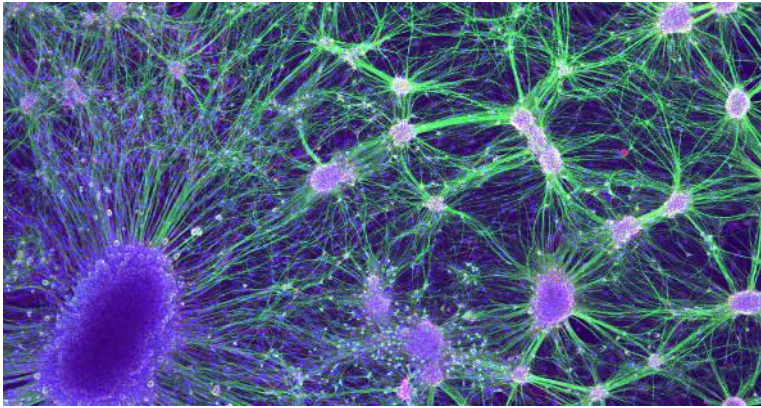
**Lynn Morin, MA  
Health Scientist  
Administrator**



**Caroline Goon, MBA  
Scientific Consultant in  
Career Development**



**Samantha-Rae  
Dickenson, PhD  
Scientific Consultant in  
Career Development**



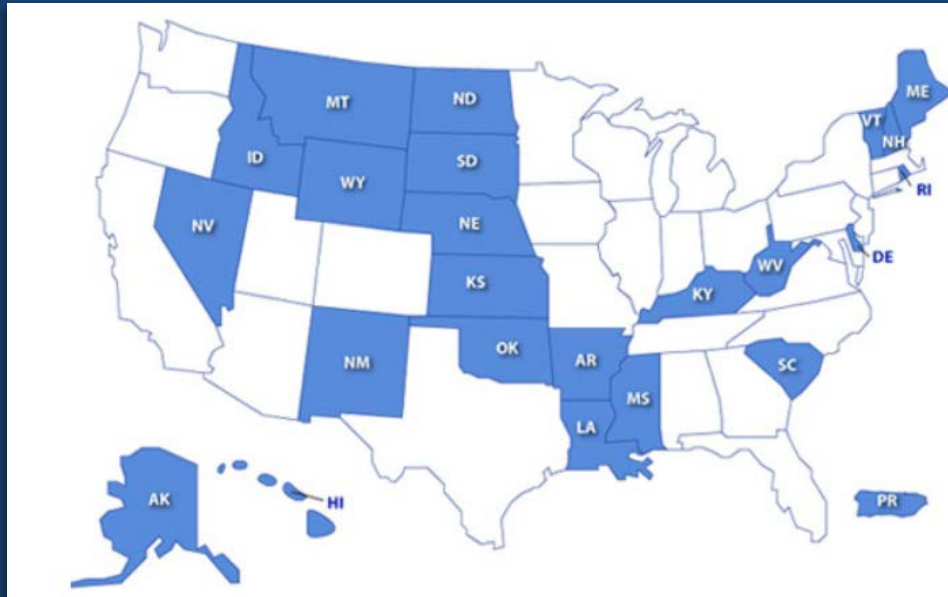
# Scientific Collaborations

# ORWH & NIGMS partner to address women's health across US IDeA States Program – maternal and infant MM focus

Institutional Development Award States  
Women's Health Research Supplement

[NOT-GM-20-017](#)

Due April 30, 2020



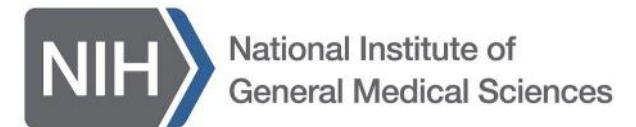
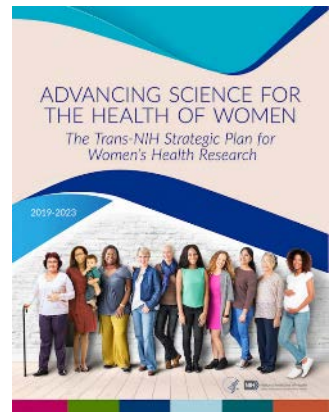
## NIGMS

Zuzana Justinova, M.D., Ph.D.  
[zuzana.justinova@nih.gov](mailto:zuzana.justinova@nih.gov)

## ORWH

Regine A. Douthard, M.D., M.P.H.  
[douthardr@mail.nih.gov](mailto:douthardr@mail.nih.gov)

- Based on idea from NIGMS Deputy Director, Dr. Judith Greenberg, via CCRWH\*
- Address at least 1 strategic goal of Trans-NIH Strategic Plan for WHR



## SCORE Research Highlights

**JHU** | Role of sex steroids in vaccine-induced immune responses (Potluri et al. 2019. NPJ Vaccines)

**Mayo** | Vascular risk factors for Alzheimer's disease (Miller et al. 2020. J. Neuroendocrinol.)

**UCLA** | Effects of sex chromosomes and hormones on CAD (AlSiraj et al. 2019. Nat. Commun.)

**MUSC** | Effect of oxytocin on cocaine cue reactivity (Joseph et al. 2020. Psychopharmacology)

## SCORE Career Enhancement Core

**U Colorado** | Integrating sex & gender considerations in research: educating scientific workforce (Regensteiner et al. 2019. *Lancet Diabetes Endocrinol.*)

**UCLA** | SABV Video Library offers videos of lectures on sex and gender differences in physiology and disease (<https://bit.ly/2VmEHLR>)

**Mayo** | Created hub for SABV education & dissemination involving grant-writing workshops, curriculum dev. & SABV symposia

**Emory** | Established schedule of mentoring & training programs for pilot investigators, inc. motivational interviewing, improv acting techniques for conflict management, and team science training



## Specialized Centers of Research Excellence on Sex Differences



# NIAAA study finds sex difference in drinking and harms

Men accounted for 76.4% of alcohol-related deaths – however, women’s death rate was more than double men’s

Largest annual increase – among NH White women

Women appear to be at greater risk for:

- Alcohol-related CVD
- Liver disease
- Alcohol use disorder
- Comorbid depression, anxiety disorders



“alcohol-related”: an alcohol-induced cause was listed as underlying cause or contributing cause of death

White AM et al. Alcohol Clin Exp Res 44: 1: 178-187 [doi.org/10.1111/acer.14239](https://doi.org/10.1111/acer.14239)

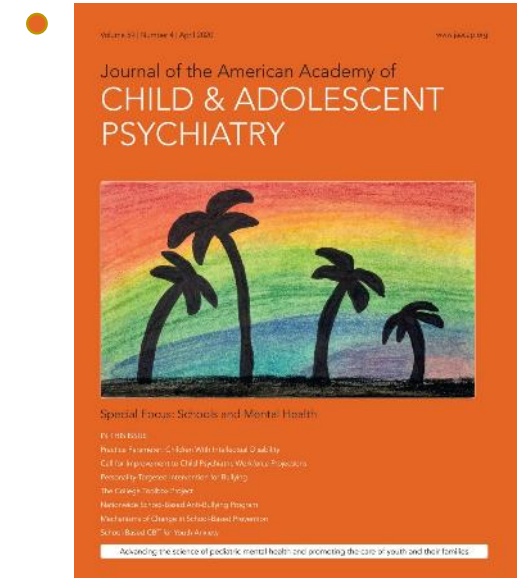
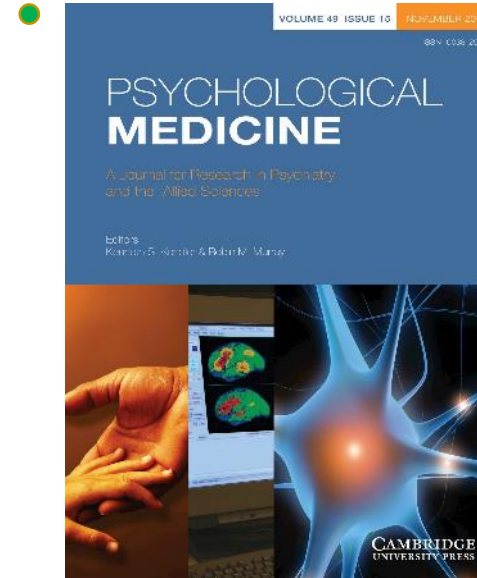
## 1999–2017

"Although the vast majority of alcohol-related deaths occurred among men..., the death rate tied to alcohol for women increased by much more – 85% versus less than 40% for males."

U.S. News

# SABV in action! ABCD research finds sex effects

- Sex-based analyses revealed sex differences in predictors of BMI. Boys who had stimulant medication had lower BMI. Social problems and reward responsiveness exhibited particularly strong positive associations with BMI in girls. *Psych Med J*
- Maternal depressive history remained significant predictor of brain volume (right putamen and right accumbens) in boys (smaller volumes) but not in girls. *J Am Acad Child Psy*
- Boys exhibited higher rates of suicidal ideation and non-suicidal self-injury, but no sex differences found in prevalence of attempts. *JAMA Netw Open*



Adolescent Brain Cognitive Development®  
Teen Brains. Today's Science. Brighter Future.

Renewed  
for 7 years!

Gray, et al. 2019. *Psychological Medicine*, 1-9. doi:10.1017/S0033291719001545  
Pagliaccio et al. 2019. *J AM ACAD CHILD PSY*. doi.org/10.1016/j.jaac.2019.09.032  
DeVillle et al. 2020. *JAMA Netw Open*. 2020;3(2):e1920956. doi:10.1001/jamanetworkopen.2019.20956

# Progress on SABV

## R01 – Intersection of Sex & Gender Influences on Health & Disease

- Applications to ([RFA-OD-19-029](#)) recently reviewed by CSR
- Next application due dates are **25 Nov 2020** and **26 Nov 2021**

## Sex and Gender Admin. Supp. ([NOT-OD-20-049](#))-FY20 25 ICOs

- Next application due date is **25 Jan 2021**
- Program is under evaluation – PI survey to be launched soon

## Sex as a Biological Variable: 5-Year Progress Report

- Arnegard, Whitten, Hunter, Clayton (2020)  
[DOI: 10.1089/jwh.2019.8247](#)

JOURNAL OF  
**Women's Health**

## Ongoing

- **Summer '20 In Focus Quarterly** to focus on SABV
- **SABV Primer** – online course to be launched in 3<sup>rd</sup> quarter of 2020
- **Pilot SABV checklist** to evaluate SABV Policy compliance – to be validated



**EVALUATION**  
**TOOL**  
**GOALS**

## ORWH seeks reliable tool to assess SABV in grant apps

- Statistically reliable **assessment tool** to:
  - Assess SABV in grant applications
  - Identify relevant reviewer comments in summary statements
- Test analysis tool on select applications and corresponding summary statements
- Assess inter-rater reliability of tool
- Evaluate tool's utility, validity and limitations
- Refine tool for large scale analysis





# Circulation

An American Heart Association Journal

Multisponsor trials were more likely to recruit women, especially those involving the National Institutes of Health ..., perhaps illustrating the success of the **National Institutes of Health's Office of Research on Women's Health's** initiatives in drawing attention to the issue of appropriate representation of women in trials.

*Circulation* | 2020

Jin et al. 2020. *Circulation* 141:540–548. DOI: 10.1161/CIRCULATIONAHA.119.043594



*Updated*

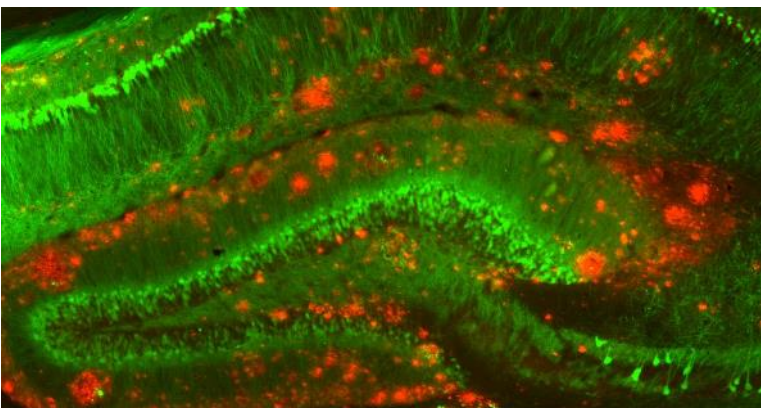
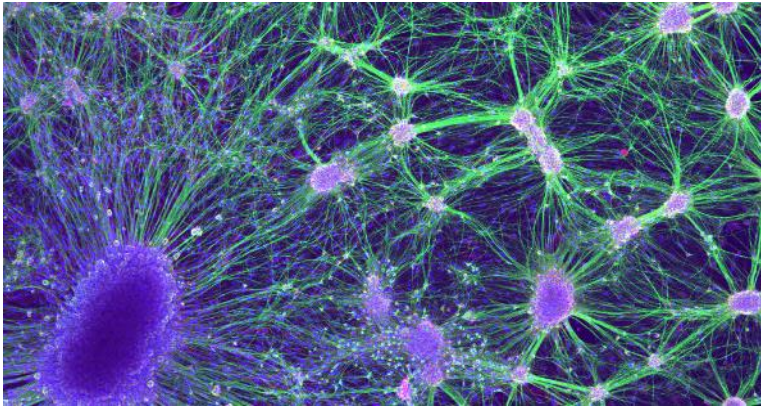
# NIH Inclusion Outreach Toolkit

How to Engage, Recruit, and  
Retain Women in Clinical  
Research



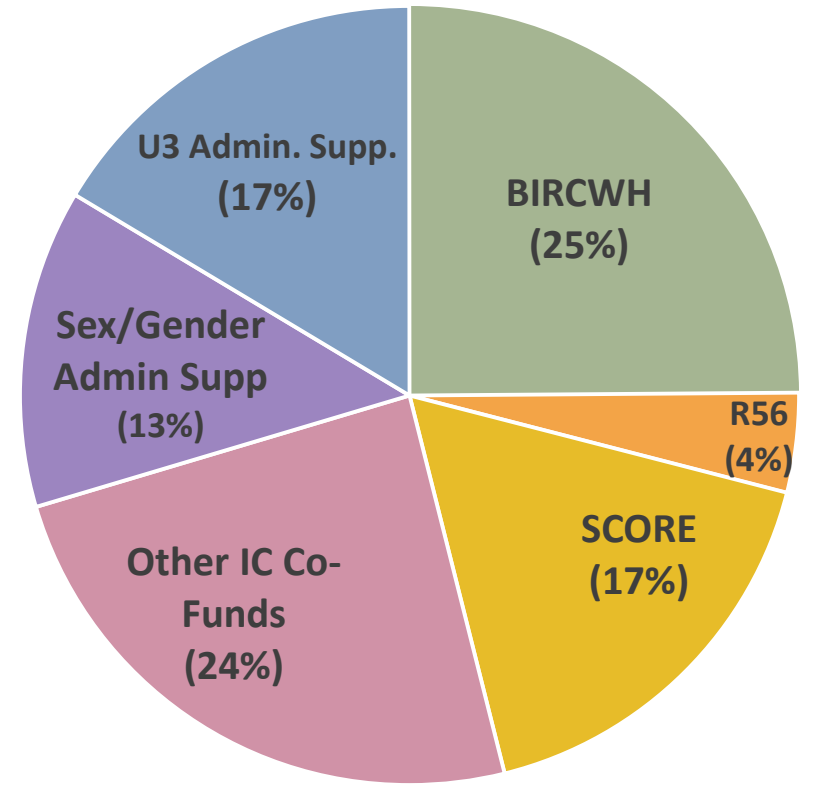
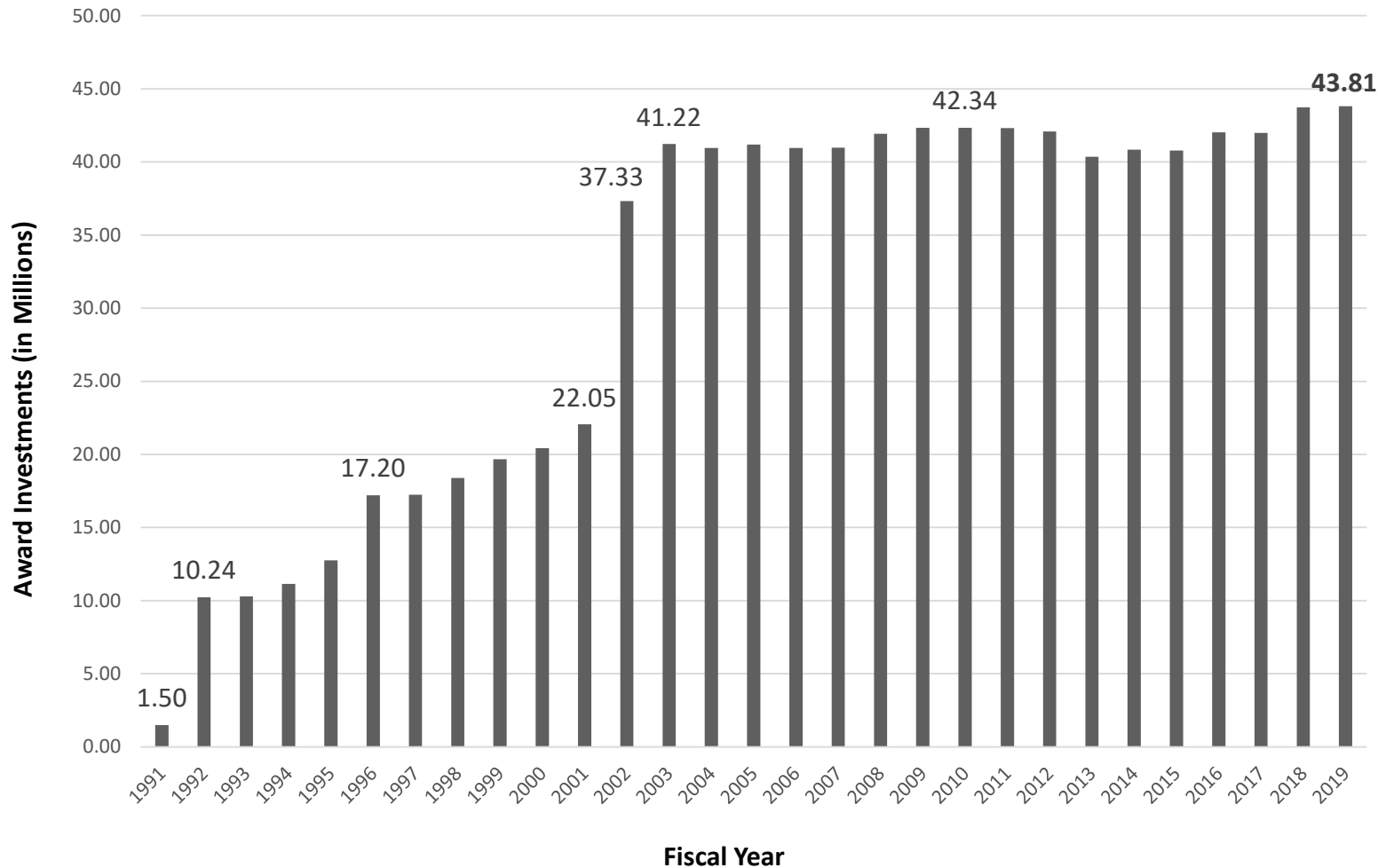
[orwh.od.nih.gov/toolkit](https://orwh.od.nih.gov/toolkit)





## FY 2019 Research Investments

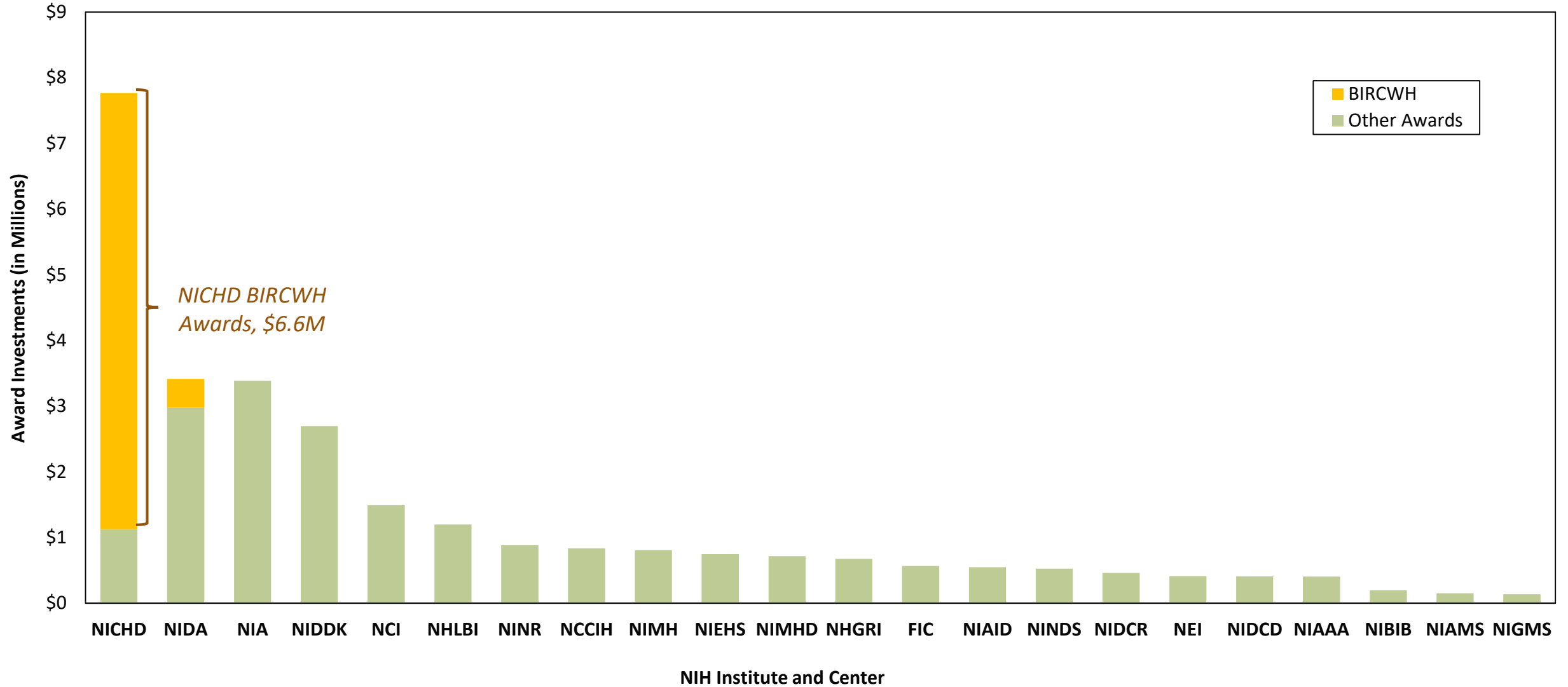
# ORWH Budget History & FY19 Extramural Award Profile



**ORWH FY2019 Extramural Award by Program  
(as % of Extramural Budget)**

Source: NIH IMPAC II FY2019 frozen data.  
Note: ORWH total investments = \$28,446,687. Funding portfolio excludes Contract R&D and IAA awards.

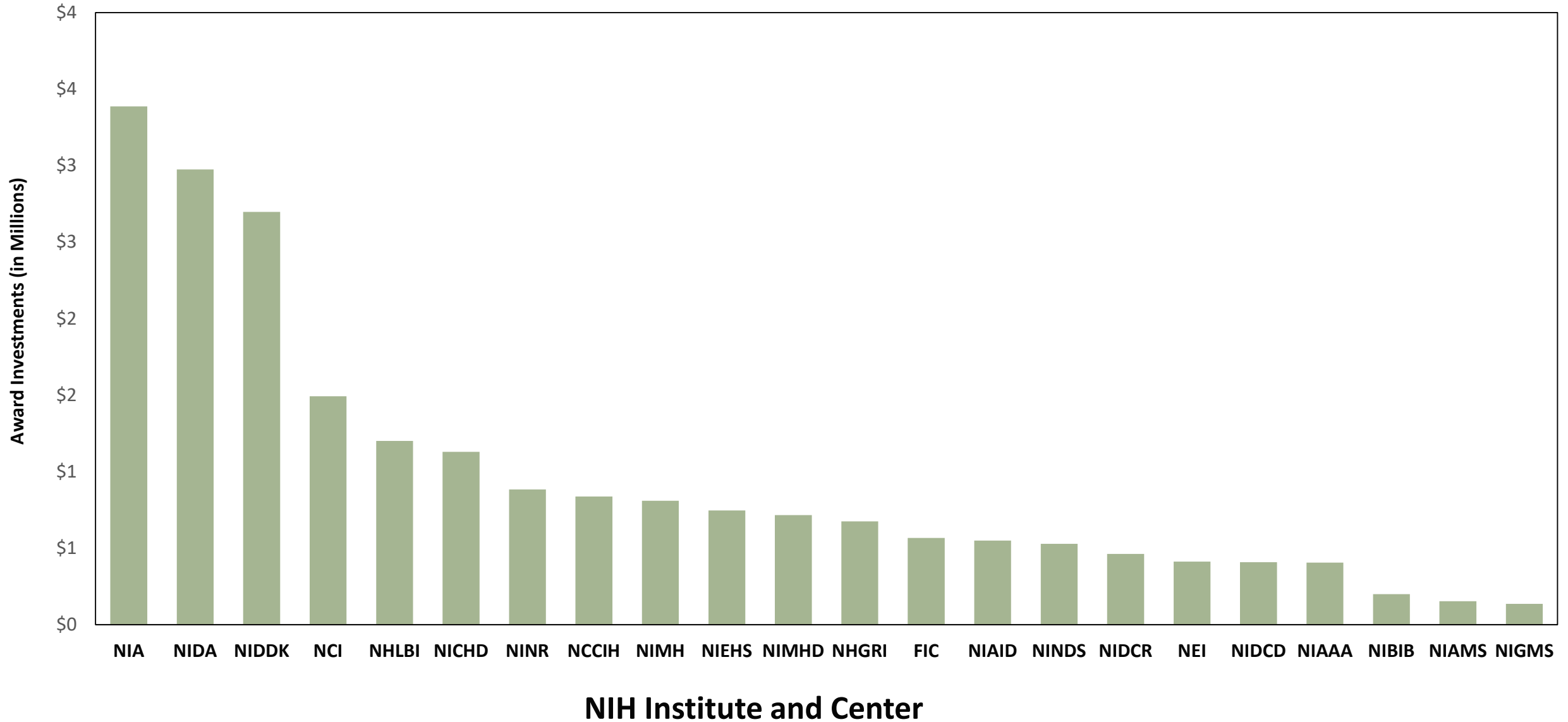
# ORWH FY2019 Extramural Award Investments by IC (includes BIRCWH funding)



Source: NIH IMPAC II FY2019 frozen data.

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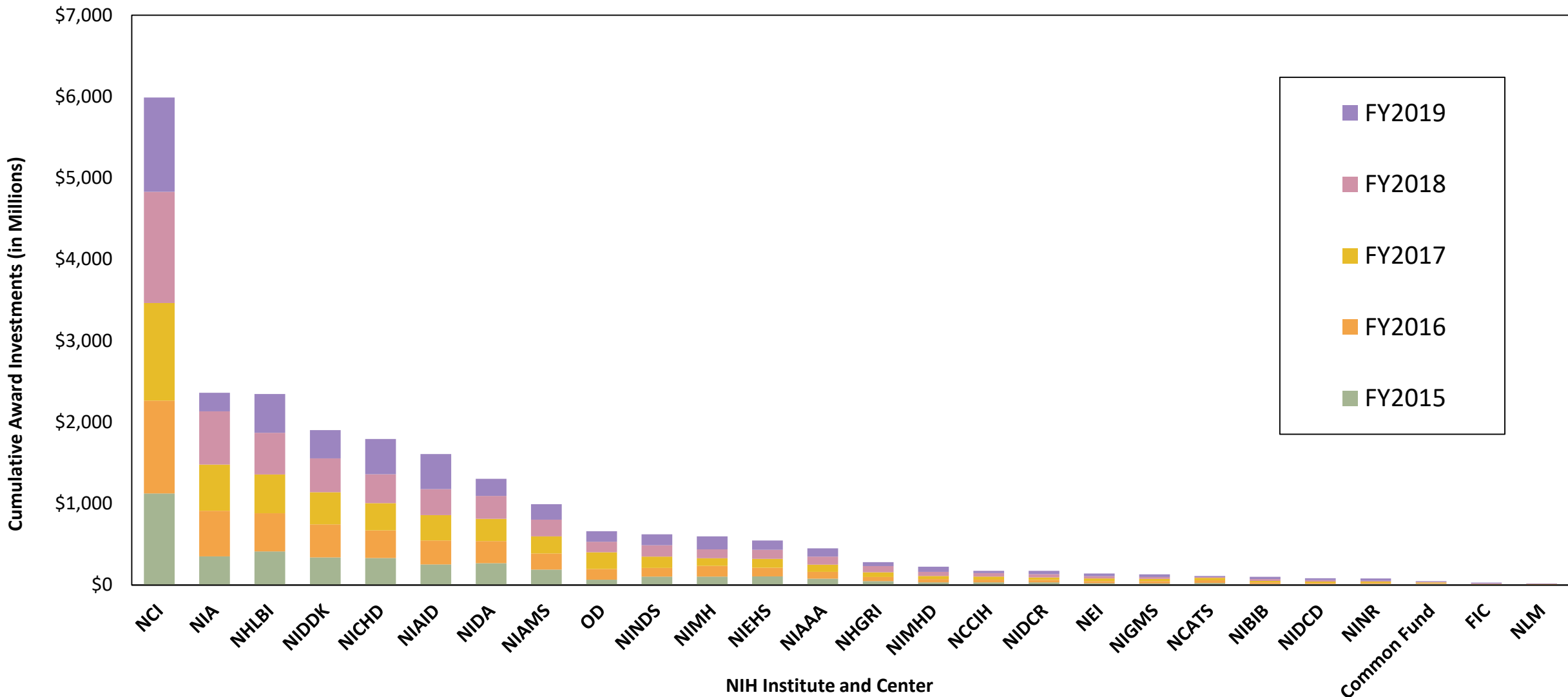
Note: ORWH total investments = \$21,368,335. Funding portfolio excludes BIRCWH program investments, Contract R&D, and IAA awards.

## ORWH Extramural Award Investments by Research Program in FY2019

Program	ORWH Investments	# of Co-Funding ICs	List of Co-Funding ICs
BIRCWH*	\$7,078,352	2	NICHD; NIDA
SCORE	\$4,853,731	3	NIA; NIDA; NIDDK
R56	\$1,177,091	4	NCI; NHLBI; NIMH; NINR
Sex/Gender Admin. Supp.	\$3,759,059	16	NCCIH; NCI; NEI; NHLBI; NIA; NIAAA; NIAI; NIAMS; NICHD; NIDA; NIDCR; NIDDK; NIEHS; NIMH; NINDS; NINR
U3 Admin Supp.	\$4,666,751	10	NCCIH; NCI; NHLBI; NIA; NICHD; NIDCD; NIDDK; NIEHS; NIMH; NIMHD
Other IC Co-Funds	\$6,911,703	18	FIC; NCCIH; NCI; NEI; NHGRI; NHLBI; NIA; NIAAA; NIAID; NIAMS; NIBIB; NICHD; NIDA; NIDDK; NIGMS; NIMH; NINDS; NINR

\* In FY2019, NIAID co-funded BIRCWH with an additional amount of \$375,000. NIAAA, NCI, and NIDCR also supported BIRCWH.

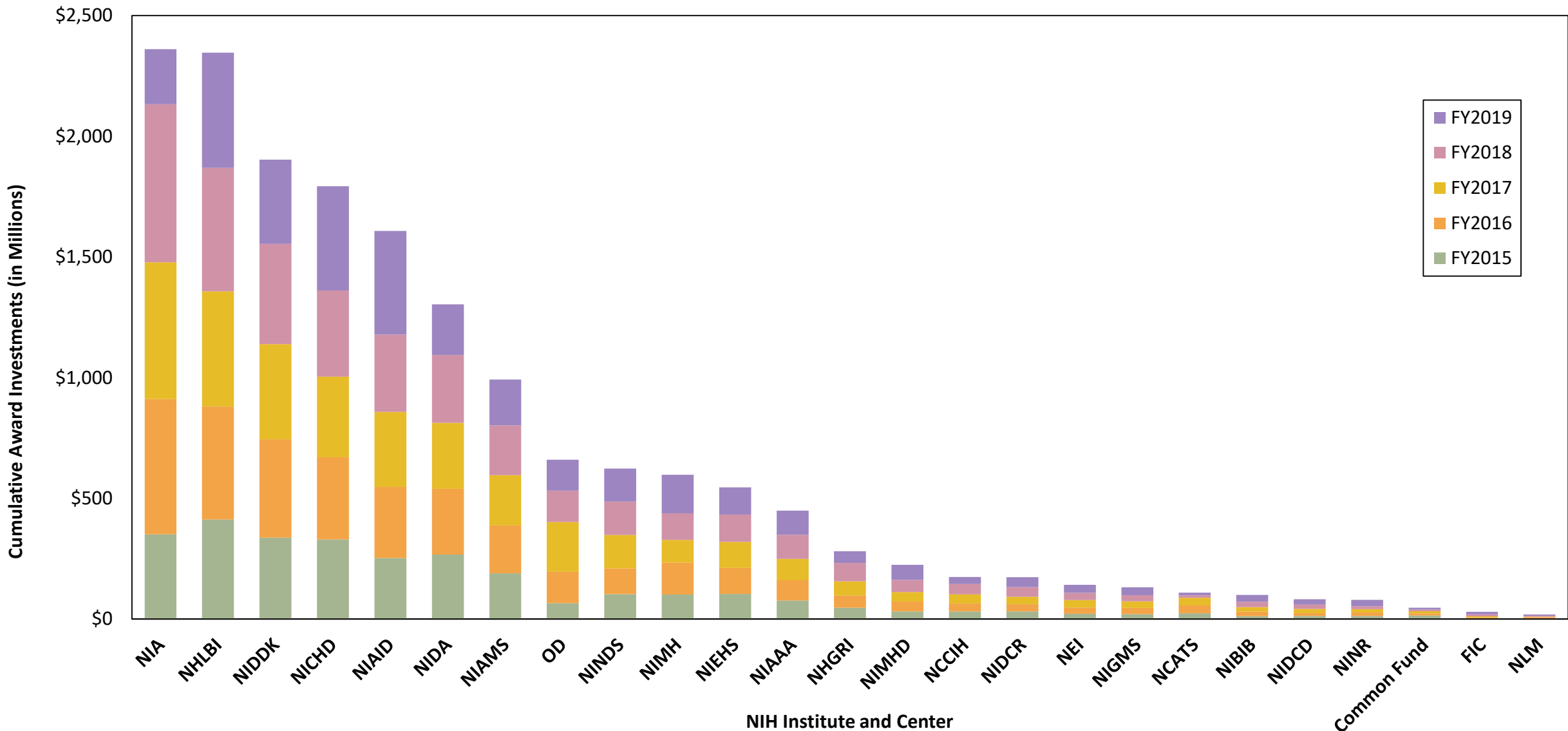
# FY2015 to FY2019 NIH-Wide Investments on Women's Health Research, by IC and FY



Source: NIH RePORT, accessed at <https://Report.nih.gov>  
 Note: NIDDK FY2018-FY2019 investments include Type 1 Diabetes funds.



# FY2015 to FY2019 NIH-Wide Investments on Women's Health Research, by IC and FY (Excludes NCI)



Source: NIH RePORT, accessed at <https://Report.nih.gov>  
 Note: NIDDK FY2018-FY2019 investments include Type 1 Diabetes funds.



# OFFICE OF RESEARCH ON WOMEN'S HEALTH

*Advancing the Health of  
Women Through Science*

**Looking Back, Looking Forward on  
Careers**

# NIH created several programs directly targeting the barriers experienced by women in science

1992

Supplements to Promote **Reentry** Into Biomedical & Behavioral Research Careers



2007

NIH funds research on **causal factors and interventions**

14 Grants

\$16.8M/4 years

>120 Publications

2013-2014

Scientific Workforce Diversity Office

**Building Infrastructure to Lead Diversity**



2018-2019

NOT-OD-20-011

Pathway to Independence (K99/R00) Award eligibility extension for childbirth

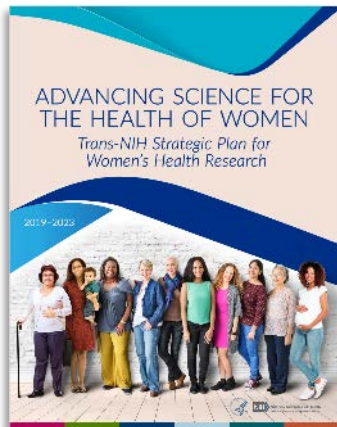
▪ Early Stage Investigator (ESI) status extension for childbirth

# NIH has made progress through a broad range of policies, programs, and practices

## Trans-NIH Strategic Plan: Goal 4



**Promote training and careers** to advance science for the health of women



 NIH Strategic Plans and Visions

<https://report.nih.gov/strategicplans>

 **National Institutes of Health**  
Office of Research on Women's Health

<https://orwh.od.nih.gov>

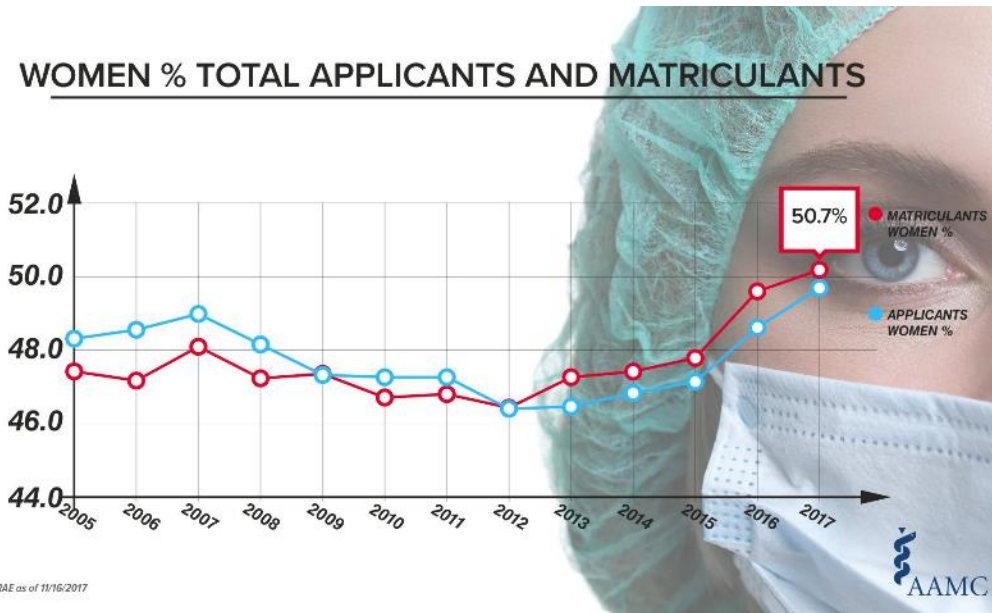
## Goal 4 Objectives

- 4.1** Enhance knowledge of sex and gender influences on health and disease among scientists, clinicians, and other health professionals to accelerate translation of knowledge into practice.
- 4.2** Develop next generation of researchers to advance science on the health of women.
- 4.3** Enhance and develop programs to recruit, support, retain, and advance women at all stages of their research careers...
- 4.4** Promote and support policies, mentoring and networks, collaborations, and infrastructure to retain and advance women in their careers.
- 4.5** Promote and disseminate research on barriers to retention and advancement of women in biomedical careers and on interventions to improve retention and advancement.

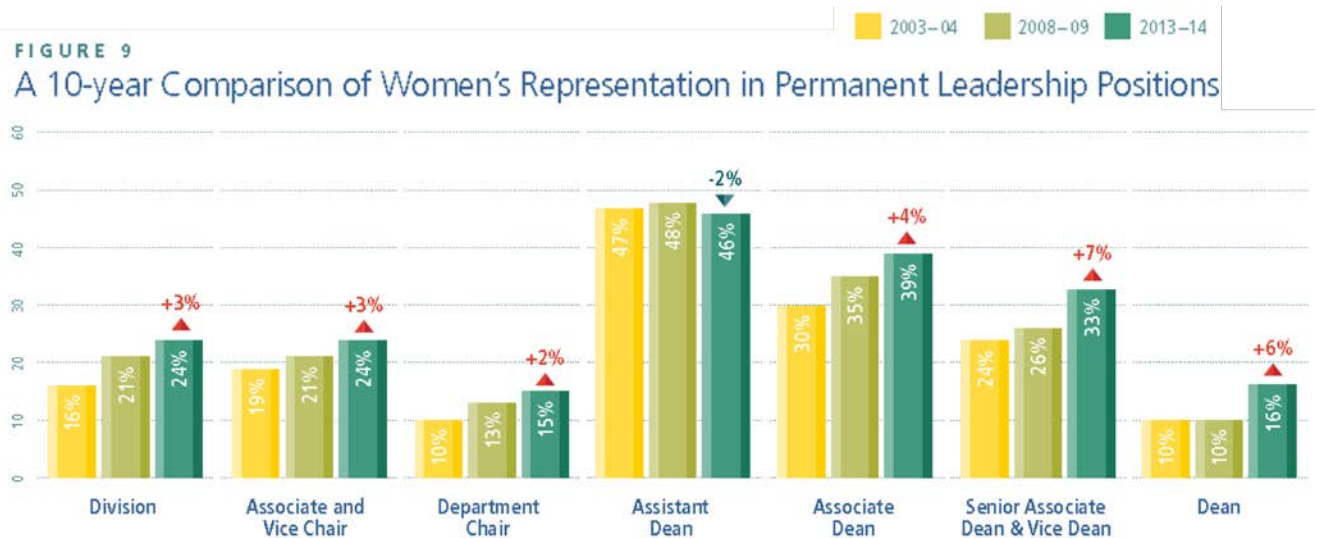
# Impressive gains, but not impressive enough

## Medical Schools

### Medical School Enrollment



### Medical School Administration

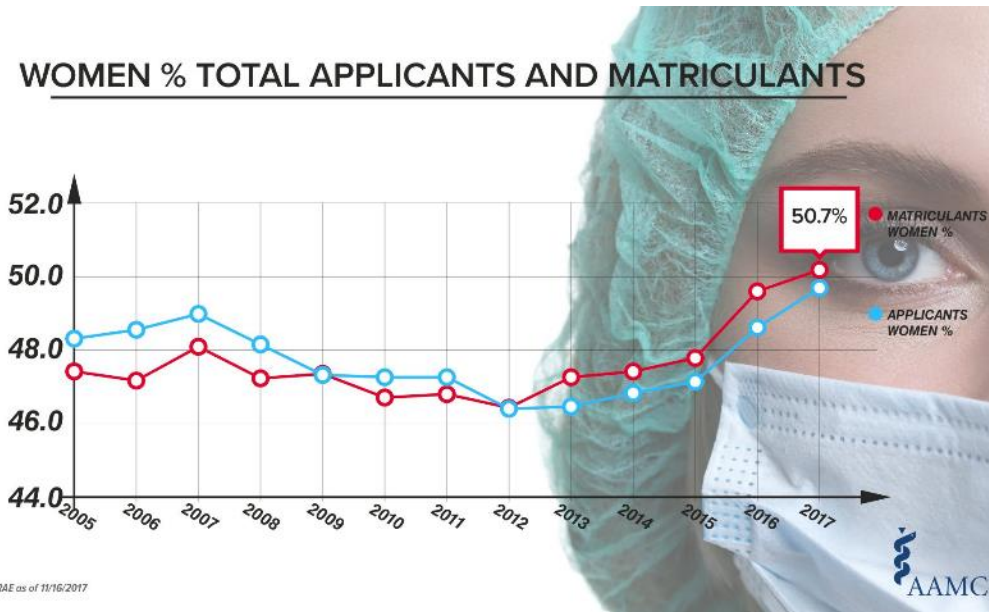


Source: State of Women in Academic Medicine Report, 2013-2014

# Impressive gains, but not impressive enough

Medical Schools

## Medical School Enrollment



## Department Chair Salaries

Women earned \$0.88 for every \$1 received by men

- After adjusting for term length, specialty, inflation, title and regional COL differences, the **salary difference by sex was \$67,517**.
- Among chairs who served for over 10 years, men were paid significantly more than women (\$127,411 [95% CI, \$55,028-\$199,793];  $P < .01$ )

Mensah et al. 2020. *JAMA Internal Medicine*.  
Published online. <https://jamanetwork.com/>

# Notice of NIH's Interest in Diversity **emphasizes** “women”

- 2020 Guide Notice\* supersedes 2018 diversity language, which stated

NIH encourages institutions to diversify their student and faculty populations to enhance the participation of individuals from groups **that are underrepresented in the biomedical, clinical, behavioral and social sciences...** – including “individuals from disadvantaged backgrounds”\*\*

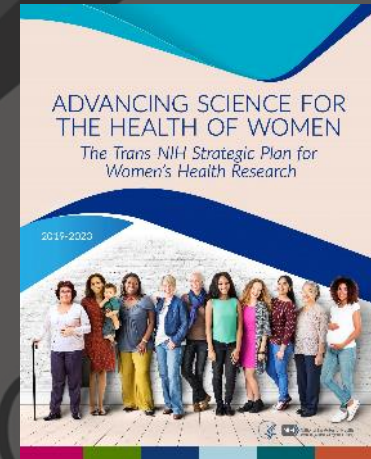
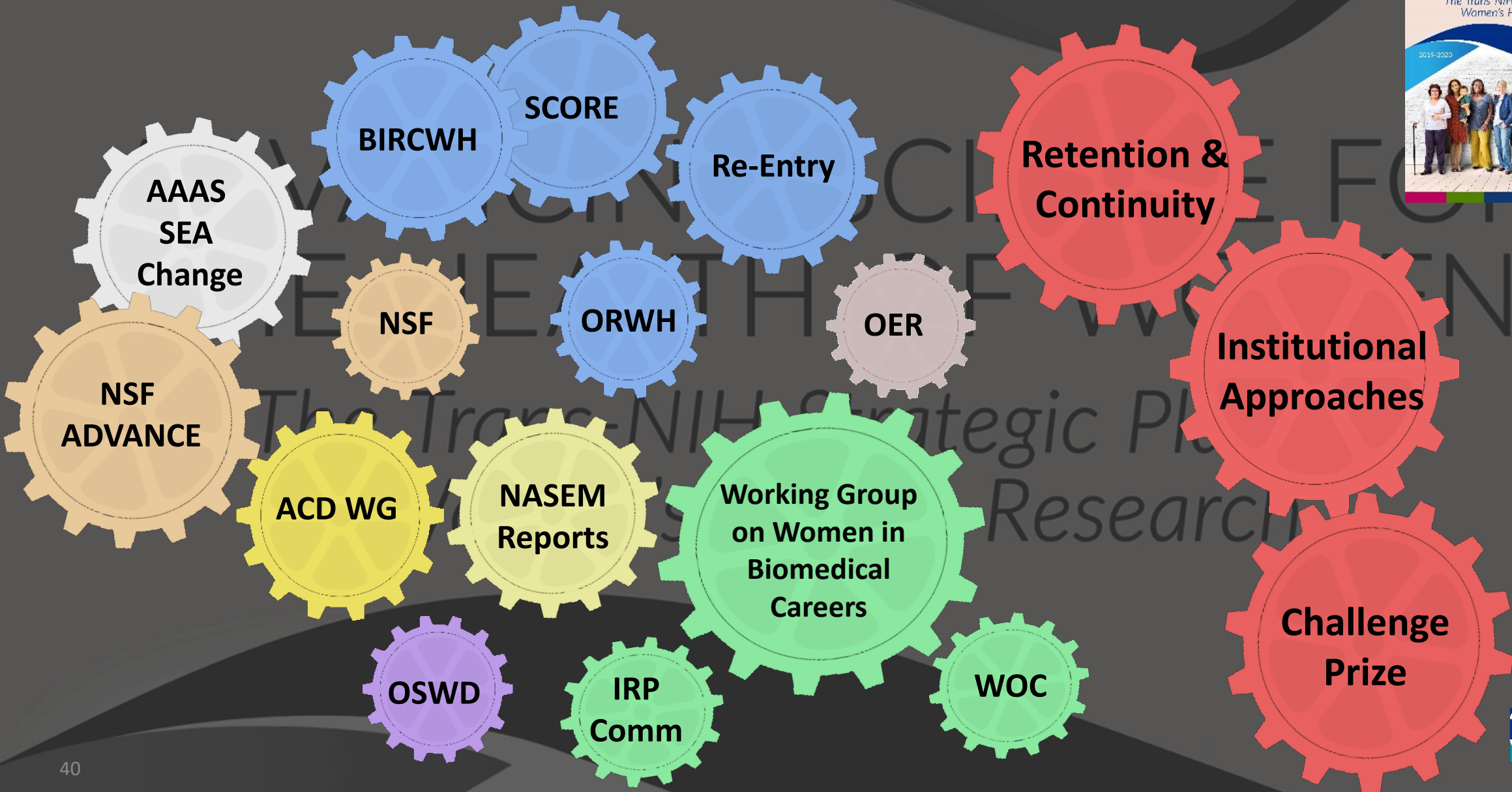
- 2020 notice clarifies definition of “disadvantaged background,” and also **emphasizes...**

*NIH encourages institutions to consider **women** for faculty-level, diversity-targeted programs to address faculty recruitment, appointment, retention or advancement.*

\* NOT-OD-20-031

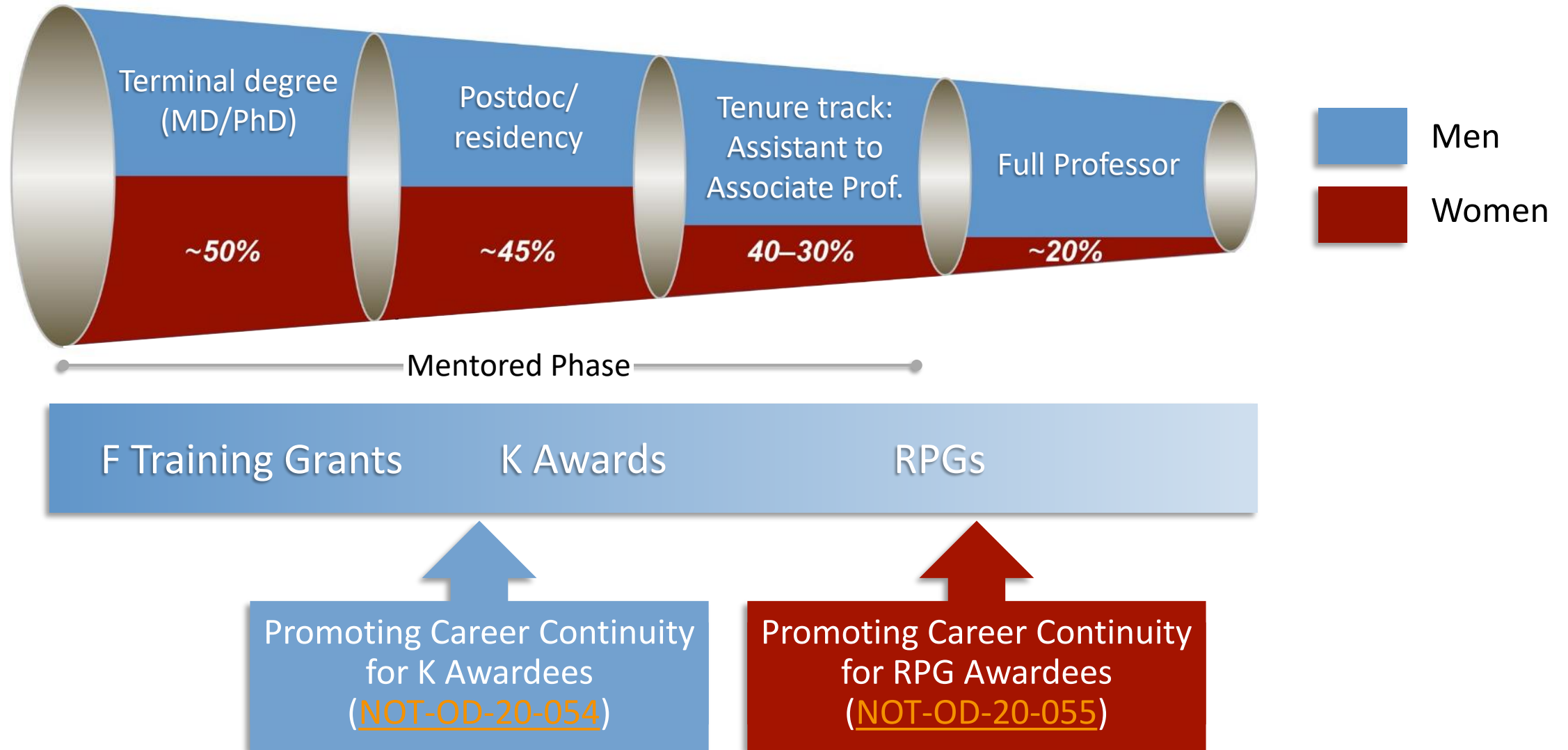
\*\* NOT-OD-18-210

# Conceptual overview of Careers landscape





# New programs were launched to support women during critical life events





**Judith G. Regensteiner, Ph.D.**  
Ruth L. Kirschstein Memorial Lecturer



## 20 years of advancing interdisciplinary research and biomedical careers

### Dec. 2019 Meeting Topics

- Next-Generation Data & WH
- Body Composition & Cardiometabolic Health in Transgender Youth
- Inflammatory Response to Acute Psych. Stress & Risk of Major Adverse CV Events in Patients with CHD: Sex Differences
- Association Between Testosterone & Asthma and Eosinophils in M/Fs



Building Interdisciplinary  
Research Careers in  
Women's Health



**BIRCWH Meeting**  
20<sup>th</sup> Anniversary  
Dec. 14, 2020



# One of Our Own Making History

**Jessica Shantha, MD**  
BIRCWH Scholar  
Emory

- Rising star in the study of eye disease in Ebola survivors
- With Emory team, studied prevalence/treatment of uveitis in Sierra Leone
- Lead author of study that found that post-Ebola cataract surgery can safely restore vision
- Team in 2019 won NIH grant to continue study



# Elsevier report reveals gender impacts on the researcher journey

**Incremental improvements in women's representation in publications, grants, and patent applications.**

Median ratio of women to men among authors **increased across all countries and subjects**

- Ratio is lowest in physical sciences, highest in life & health sciences subjects (close to parity in most)

More last authors and corresponding authors are men

Among first authors, average Field-Weighted Citation Impact for men is higher – and men have a longer publication history

Men have more co-authors, with gap widening over time

Women authors collaborate more with women; men, more with men

“Our biases and institutional structures have helped produce a work force that is far from representative. The National Academies study defines a number of promising practices to change all that.”

*The National  
Academies of*

SCIENCES  
ENGINEERING  
MEDICINE



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

<https://www.nationalacademies.org/event/03-19-2020/symposium-on-addressing-the-underrepresentation-of-women-in-stemm>

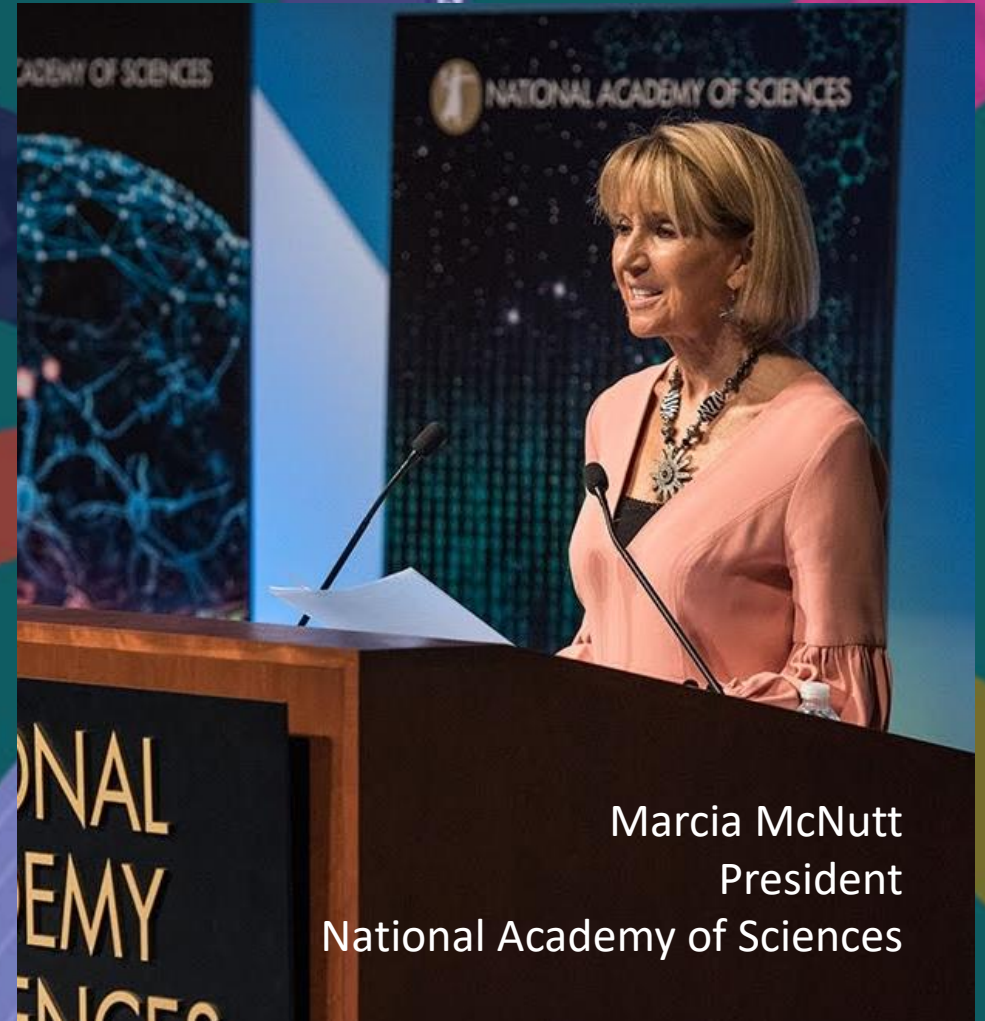
“Some would say progress is being made and we need to let the current trends take care of this inequity..., but that would take decades and that’s not sufficient. NIH is determined to do our part to produce a discontinuity in those curves of representation of women and other underrepresented groups in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

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

*The National  
Academies of*

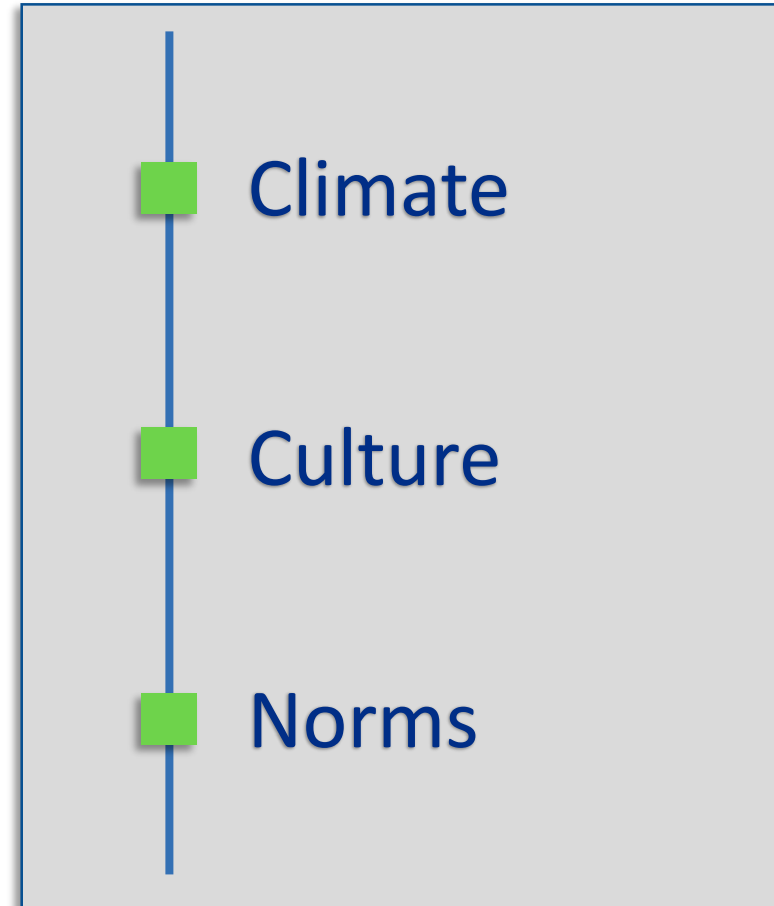
SCIENCES  
ENGINEERING  
MEDICINE

“The gender gaps that have characterized most U.S. STEMM fields for the past 50 years merit attention because such gaps exact both explicit and opportunity costs for the nation’s scientific enterprise. Multiple components of STEMM fields demonstrably benefit from gender diversity.”



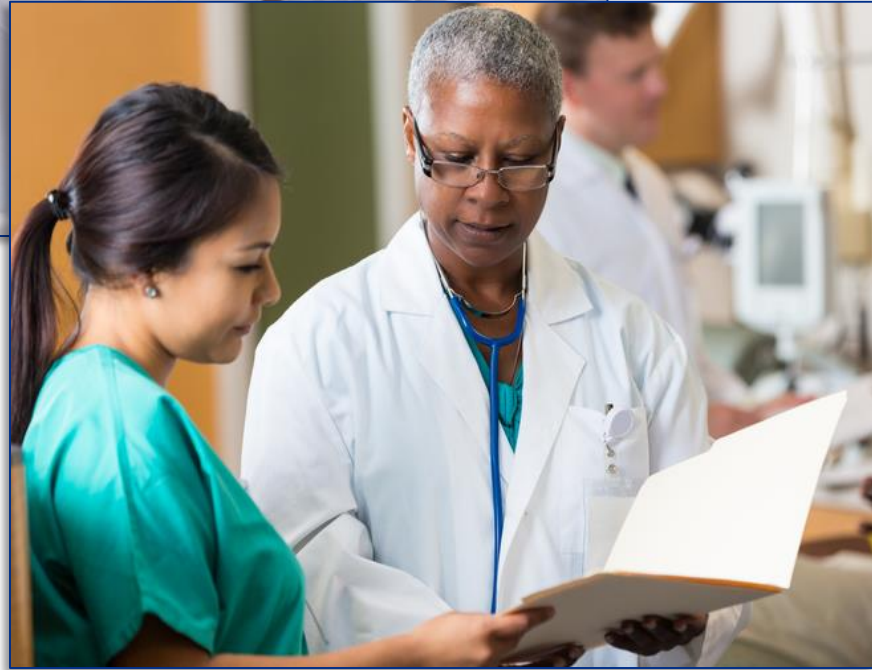
Marcia McNutt  
President  
National Academy of Sciences

# Diversity, inclusion, and equity require sustained and intentional institutional commitment





# Solution will require coordinated efforts from many stakeholders



“[R]eal progress on this issue will require **culture change** driven by systemic, coordinated efforts from a range of stakeholders—Congress, the White House, federal agencies, faculty, employees, academic administrators, professional societies, and others.”

# Pearls of Wisdom

NIH Office of Research on Women's Health

## Women in science offer career advice in growing video series

*Men are part of the solution!*



**Marie A. Bernard, M.D.**  
Deputy Director

 National Institute on Aging



**Anna María Nápoles, Ph.D.**  
M.P.H., Scientific Director

 National Institute  
on Minority Health  
and Health Disparities



**Vivian W. Pinn, M.D.**  
Former Director

 National Institutes of Health  
Office of Research on Women's Health



**Nora Volkow, M.D.**  
Director

 National Institute  
on Drug Abuse  
*Advancing Addiction Science*

[womeninscience.nih.gov](https://womeninscience.nih.gov)

more videos available at [https://womeninscience.nih.gov/resources/pearls\\_of\\_wisdom.asp](https://womeninscience.nih.gov/resources/pearls_of_wisdom.asp)



# Facebook Lives on careers reach tens of thousands

Host	People Reached*
Sadhana Jackson, MD Feb 2019	3,304
Faustine Williams, MD Aug 2019	3,488
<b>Panel, March 4, 2020</b>	<b><u>28,788</u></b>
<b>TOTALS</b>	<b>35,580</b>



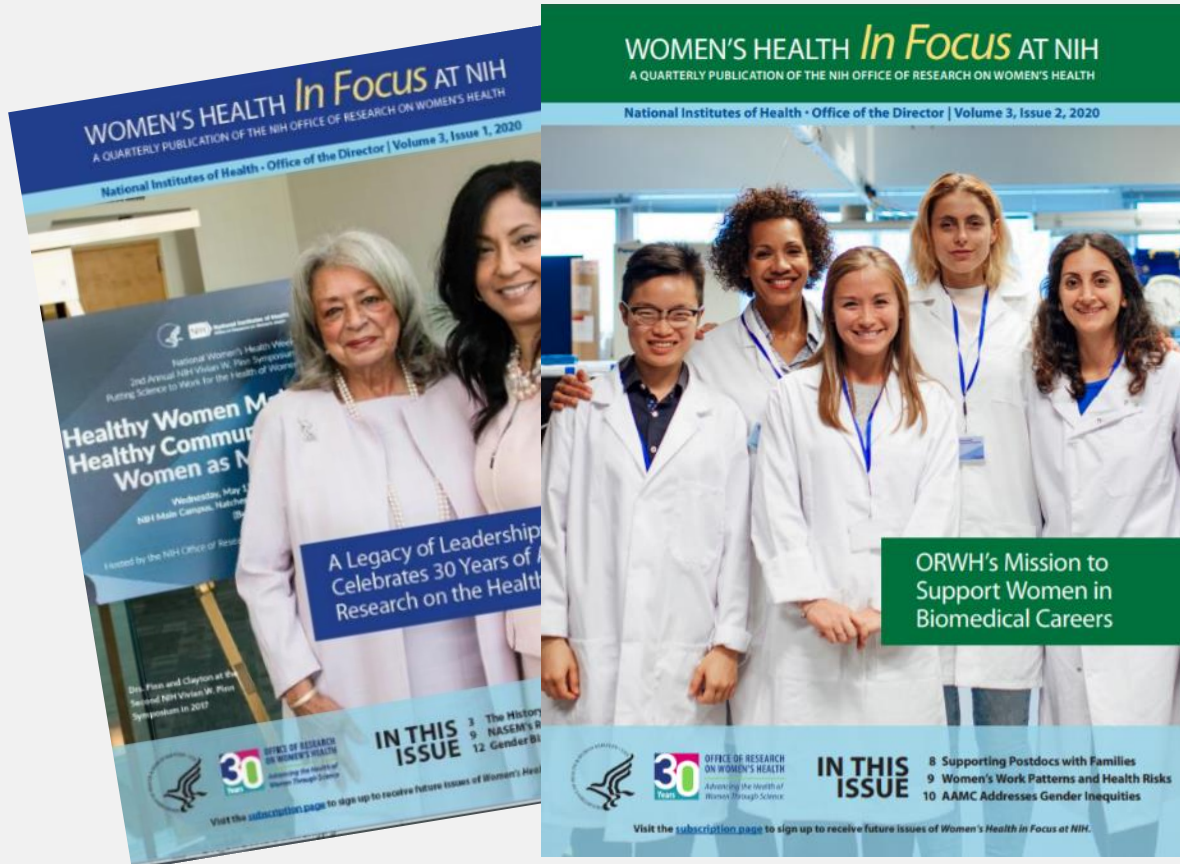
@NIHORWH



Join **NIH Women of Color Research Network**  
<https://womeninscience.nih.gov/women-of-color/>



# WOMEN'S HEALTH *In Focus* AT NIH



HISTORY

CAREERS

30<sup>TH</sup> ANNIVERSARY ISSUES

COMING  
2020 ISSUES

SABV  
INCLUSION

[bit.ly/ORWHInFocus](http://bit.ly/ORWHInFocus)

30 Years OFFICE OF RESEARCH ON WOMEN'S HEALTH  
Advancing the Health of Women Through Science

The Pulse

Introducing ORWH's new monthly email!  
[bit.ly/ORWHpulse](http://bit.ly/ORWHpulse)



## OFFICE OF RESEARCH ON WOMEN'S HEALTH

*Advancing the Health of  
Women Through Science*

SAVE THE DATE!

## ORWH 30th Anniversary Scientific Symposium

December 15, 2020

9:00 AM – 5:00 PM

NIH Main Campus, Natcher Building  
(Building 45)

## Connect With Us

 @JanineClaytonMD

[NIH.gov/women](https://www.nih.gov/women)

 @NIH\_ORWH

 NIHORWH

In Focus Quarterly [bit.ly/ORWHInFocus](https://bit.ly/ORWHInFocus)

# NIH Funding Opportunities for COVID-19

FON / FOA #	Organization / Division	Title
NOT-AG-20-022	NIA / NIA	Notice of Special Interest (NOSI): NIA Availability of Administrative Supplements and Revision Supplements on Coronavirus Disease 2019 (COVID-19)
NOT-AI-20-030	NIAID	Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions for Research on the 2019 Novel Coronavirus (2019-nCoV)
NOT-AI-20-031	NIAID	Notice of Special Interest (NOSI): Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Coronavirus Disease 2019 (COVID-19)
NOT-AI-20-034	NIAID / NIAID	Notice of Special Interest (NOSI) regarding the Availability of Emergency Competitive Revisions for Research on Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Coronavirus Disease 2019 (COVID-19)
NOT-AI-20-040	NIAID / NIAID	Notice of Early Expiration of "Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions for Research on the 2019 Novel Coronavirus (2019-nCoV)," NOT-AI-20-030
NOT-AT-20-011	NCCIH / NCCIH	Notice of Special Interest (NOSI): Availability of Administrative Supplements and Urgent Competitive Revisions for Research on Stress Management in Relation to Coronavirus Disease 2019 (COVID-19)
NOT-CA-20-042	NCI / DCBD	Notice of Special Interest (NOSI): National Cancer Institute Announcement Regarding Availability of Urgent Competitive Revision and Administrative Supplements on Coronavirus Disease 2019 (COVID-19)
NOT-CA-20-043	NCI / ODNCI	Notice of Special Interest (NOSI): National Cancer Institute Announcement regarding Availability of Competitive Revision SBIR/STTR Supplements on Coronavirus Disease 2019 (COVID-19)
NOT-DA-20-047	NIDA / NIDA	Notice of Special Interest (NOSI) regarding the Availability of Administrative Supplements and Urgent Competitive Revisions for Research on the 2019 Novel Coronavirus
NOT-DC-20-004	NIDCD / NIDCD	Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions and Administrative Supplements for Research on Coronavirus Disease 2019 (COVID-19)
NOT-DK-20-018	NIDDK / NIDDK	Notice of Special Interest (NOSI): Availability of Urgent Competitive Revision Supplements on Coronavirus Disease 2019 (COVID-19) within the Mission of NIDDK
NOT-DK-20-020	NIDDK	Notice of Special Interest (NOSI): Availability of Urgent Competitive Revision Supplements on Coronavirus Disease 2019 (COVID-19) Related to HIV Comorbidities, Coinfections, and Complications within NIDDK's Mission
NOT-EB-20-006	NIBIB / NIBIB	Notice of Special Interest (NOSI): Small Business Research and Development of Biomedical Technologies for Coronavirus Disease 2019 (COVID-19)
NOT-EB-20-007	NIBIB / NIBIB	Notice of Special Interest (NOSI): Development of Biomedical Technologies for Coronavirus Disease 2019 (COVID-19)
NOT-EB-20-008	NIBIB / NIBIB	Notice of Special Interest (NOSI): Availability of Emergency Competitive Revision and Administrative Supplements on Biomedical Technologies for Coronavirus Disease 2019 (COVID-19)
NOT-ES-20-014	NIEHS / WETP	Notice of Special Interest: NIEHS Worker Training Program Coronavirus and Infectious Disease Response Training (Admin Supp Clinical Trial Not Allowed)
NOT-ES-20-015	NIEHS / NIEHS	Notice of Special Interest (NOSI): NIEHS Support for Understanding the Impact of Environmental Exposures on Coronavirus Disease 2019 (COVID-19)
NOT-ES-20-016	NIEHS / WETP	Notice of Early Expiration of "Notice of Special Interest (NOSI) regarding the NIEHS Worker Training Program Coronavirus and Infectious Disease Response Training (Admin Supp Clinical Trial Not Allowed)"
NOT-ES-20-017	NIEHS / WETP	NIEHS Worker Training Program Coronavirus and Infectious Disease Response Training (Admin Supp Clinical Trial Not Allowed)
NOT-ES-20-019	NIEHS	Notice of Early Expiration of NOT-ES-20-015, "Notice of Special Interest (NOSI): NIEHS Support for Understanding the Impact of Environmental Exposures on Coronavirus Disease 2019 (COVID-19)
NOT-ES-20-020	NIEHS / NIEHS	Notice of Special Interest (NOSI): NIEHS Support for Understanding the Impact of Environmental Exposures on Coronavirus Disease 2019 (COVID-19)
NOT-FD-20-019	FDA / FDA	FDA - Flexibilities Available to Applicants and Recipients of Federal Financial Assistance Affected by COVID-19
NOT-GM-20-025	NIGMS	Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions for Research on Coronavirus Disease 2019 (COVID-19) and the Causative Virus SARS-CoV-2
NOT-GM-20-026	NIGMS	Guidance for Cost-Related Flexibilities Available to Support of Competitive Research (SCORE) Award Recipients Affected by COVID-19
NOT-GM-20-027	NIGMS	Notice of Special Interest (NOSI): Urgent Competitive Revisions to Accelerate Research on the Development of Predictive Models of the Spread of SARS-CoV-2 and Outcomes of Potential Public Health Interventions on COVID-19
NOT-HG-20-030	NHGRI / NHGRI	Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions for Research on the 2019 Novel Coronavirus
NOT-HL-20-757	NHLBI / DLD	Notice of Special Interest (NOSI): Availability of Administrative Supplements and Revision Supplements on Coronavirus Disease 2019 (COVID-19)
NOT-HL-20-759	NHLBI / DLD	NHLBI Announces Availability of Frequently Asked Questions (FAQs) for NOT-HL-20-757, Notice of Special Interest (NOSI): Availability of Administrative Supplements and Revision Supplements on Coronavirus Disease 2019 (COVID-19)
NOT-HS-20-007	AHRQ / AHRQ	Notice of Intent: Revision Supplements to Existing AHRQ Grants and Cooperative Agreements to Address Health System Responsiveness to COVID-19
NOT-HS-20-008	AHRQ / AHRQ	Notice of Intent: New Funding Opportunity Announcement to Support Novel, High-Impact Studies Evaluating Health System and Healthcare Professional Responsiveness to COVID-19
NOT-HS-20-010	AHRQ / AHRQ	Flexibilities Available to AHRQ Recipients and Applicants Directly Impacted by the Novel Coronavirus (COVID-19) Due to Loss of Operations
NOT-MD-20-019	NIMHD / NIMHD	Notice of Special Interest (NOSI): Competitive and Administrative Supplements for the Impact of COVID-19 Outbreak on Minority Health and Health Disparities
NOT-MH-20-047	NIMH / NIMH	Notice of Special Interest (NOSI) regarding the Availability of Administrative Supplements and Urgent Competitive Revisions for Mental Health Research on the 2019 Novel Coronavirus
NOT-OD-20-082	OD	NIH LATE APPLICATION POLICY Due to Public Health Emergency for United States for 2019 Novel Coronavirus (COVID-19)
NOT-OD-20-083	OD	General Frequently Asked Questions (FAQs) - Proposal Submission and Award Management Related to COVID-19
NOT-OD-20-086	OD	Flexibilities Available to Applicants and Recipients of Federal Financial Assistance Affected by COVID-19
NOT-OD-20-087	OD	Guidance for NIH-funded Clinical Trials and Human Subjects Studies Affected by COVID-19
NOT-OD-20-088	OD	Flexibilities for Assured Institutions for Activities of Institutional Animal Care and Use Committees (IACUCs) Due to COVID-19
NOT-OD-20-091	OD	UPDATE: NIH Late Application Policy Due to Public Health Emergency for United States for 2019 Novel Coronavirus (COVID-19)
NOT-TR-20-011	NCATS / NCATS	Notice of Special Interest (NOSI): Clinical and Translational Science Award (CTSA) Program Applications to Address 2019 Novel Coronavirus (COVID-19) Public Health Need
NOT-TR-20-012	NCATS / NCATS	Notice of Special Interest (NOSI): Repurposing Existing Therapeutics to Address the 2019 Novel Coronavirus Disease (COVID-19)
NOT-TR-20-016	NCATS / NCATS	Notice of Special Interest (NOSI) regarding the Availability of Administrative Supplements for Tissue Chips Research on the 2019 Novel Coronavirus
NOT-TR-20-017	NCATS / NCATS	Notice of Special Interest (NOSI) regarding the Availability of Emergency Competitive Revisions to Existing NIH Grants and Cooperative Agreements for Tissue Chips Research on the 2019 Novel Coronavirus