

NIH Advances Women in Biomedical Careers

Addressing the Underrepresentation of Women:
National Academies Symposium Highlighting Evidence-Based Interventions

Janine Austin Clayton, M.D.

NIH Associate Director for Research on Women's Health

Director, Office of Research on Women's Health

National Institutes of Health

March 11, 2019—Presentation on National Programs



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

orwh.od.nih.gov | [#SABV](https://twitter.com/NIH_ORWH) | [@NIH_ORWH](https://twitter.com/NIH_ORWH)

Legacy of Leadership



Rep. Donna E. Shalala, Ph.D.



Vivian Pinn, M.D.





“Career impediments for women deprive the nation of an important source of talented and accomplished scientists and engineers who could contribute to our nation’s competitiveness.”

BEYOND BIAS AND BARRIERS, 2007



NIH Working Group on Women in Biomedical Careers *Drives* Change

- NIH took *Beyond Bias and Barriers* seriously, creating Working Group in 2007
- WG works collaboratively across NIH to identify barriers, create solutions
- Co-chaired by Francis S. Collins, MD, PhD and Janine A. Clayton, MD
- Funded Causal Factors & Interventions RFA
- Work-life integration policies



NIH Makes Progress Through Broad Range of Policies, Programs, and Practices

Programmatic Efforts at the National Institutes of Health to Promote and Support the Careers of Women in Biomedical Science

Academic Medicine, August 2016

Jennifer L. Plank-Bazinet, PhD, Kjersten Bunker Whittington, PhD, Sara K.B. Cassidy, PhD, Rosemarie Filart, MD, MPH, MBA, Terri L. Cornelison, MD, PhD, Lisa Begg, DrPH, RN, and Janine Austin Clayton, MD

SIGNIFICANT PROGRESS TOWARD PARITY WITHIN THE LIFE AND MEDICAL SCIENCES... HAS BEEN UNDOUBTEDLY AIDED BY THE INNOVATIVE PROGRAMS IMPLEMENTED BY THE NIH AND ORWH.

Abstract

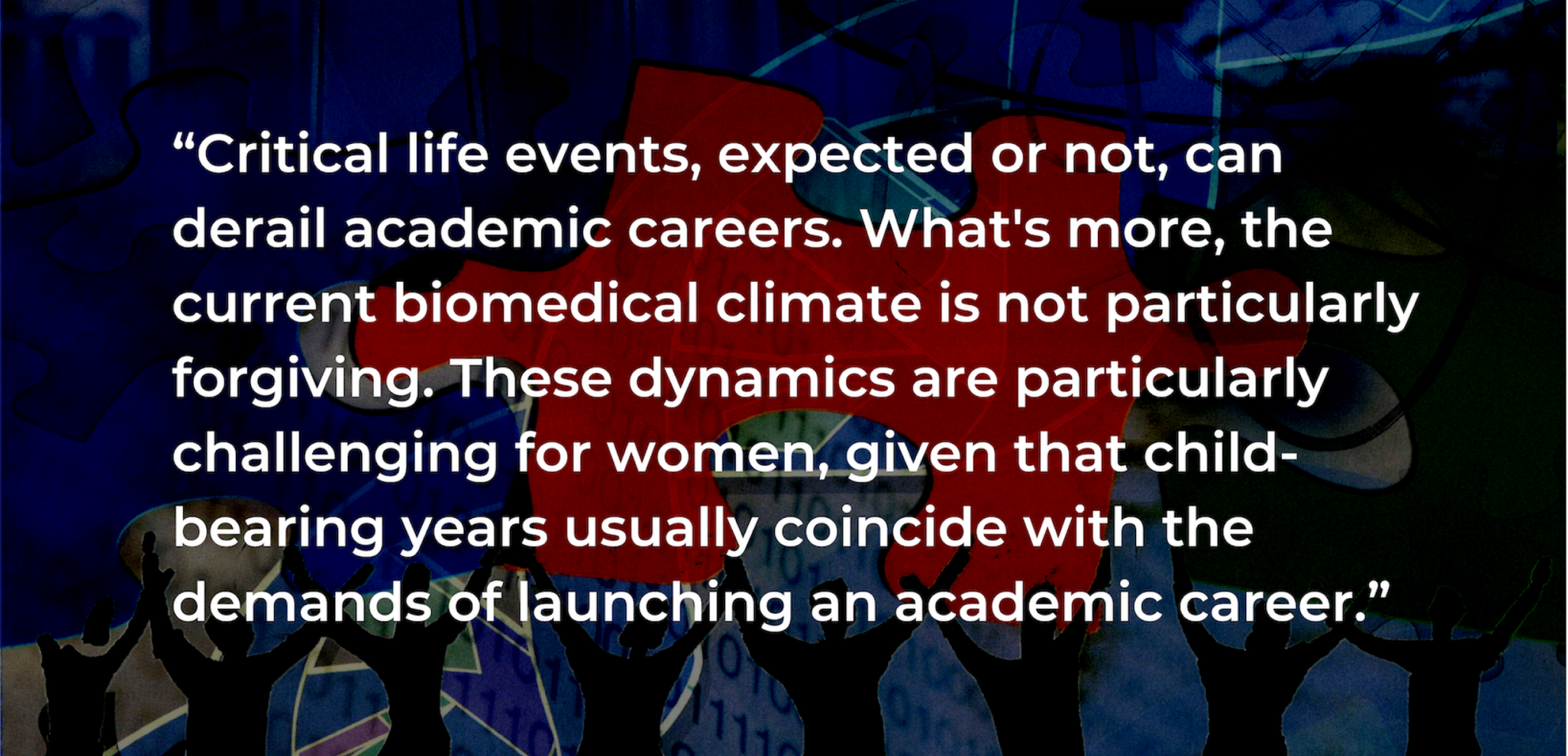
Although women have reached parity at the training level in the biological sciences and medicine, they are still significantly underrepresented in the professoriate and in mid- and senior level life science positions. Considerable effort has been devoted by individuals and organizations across science sectors to understanding this disparity and to developing interventions in support of women's career development. The National Institutes of Health (NIH)

improve women's health and providing opportunities and support for the recruitment, retention, promotion, and sustained advancement of women in biomedical careers. This review will review several accomplishments and challenges and discuss the NIH and ORWH in support of women's career development during this time. These include programming to support researchers returning to the workforce after a period away

awards made through the Building Interdisciplinary Research Careers in Women's Health program, and training involvement and activities stemming from the NIH Working Group on Women in Biomedical Careers. The innovative programs have contributed to the advancement of women by supporting the professional and personal needs of women in science. The authors discuss the unique opportunities that accompany NIH partnerships with

Plank-Bazinet, Whittington, Cassidy, Filart, Cornelison, Begg and Clayton. 2016. Programmatic Efforts at the National Institutes of Health to Promote and Support the Careers of Women in Biomedical Science. Acad Med 91: 1057-1064.





“Critical life events, expected or not, can derail academic careers. What's more, the current biomedical climate is not particularly forgiving. These dynamics are particularly challenging for women, given that child-bearing years usually coincide with the demands of launching an academic career.”



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

NIH Introduces Family-Friendly Policies

- Paid parental leave for trainees--up to 8 weeks
- Extended tenure clock to 1 year
- Temporary lab manager program
- Leave bank program for NIH employees
- Backup care for children, elders, and adult dependents
- “Keep the Thread” offers alternative career development schedules for intramural fellows

PNAS



ents fare in STEM, and whether parenthood contributes to the disproportionate attrition of women from STEM employment.



Cech and Blair-Loy. 2019. The changing career trajectories of new parents in STEM. PNAS, <https://doi.org/10.1073/pnas.1810862116>

Plank-Bazinet et al. 2016. Acad Med. 91: 1057-64.





NIH funds research on causal factors and interventions to support women in science

Generating Evidence

14 Grants
\$16.8M/4 years
11 ICs & 4
Offices in OD

- 
- Research on unconscious bias, mentoring, institutional flexibility
 - Research Partnership for Women in Biomedical Careers
 - >120 publications including Acad Med (2016) & JWH (2017)

C
H
A
N
G
E

Research Partnership Produces Key Insights on Barriers And Strategies



Barriers

- Sexual stereotyping
- Disproportionate family responsibilities
- Lack of competitive opportunities

"However, they don't impact the hierarchical culture of academic medicine. Frameworks are needed that include a more latticed approach to leadership opportunities for women."

J Gen Intern Med. 2018 Jul 12.
doi: 10.1007/s11606-018-4547-y

Reduce Barriers

g/coaching
records for women
optive gender norms
ereotype imaging
ograms, which
skill training

NIH Promotes Women Scientists & Career-Enhancing Networking

- **Wednesday Afternoon Lecture Series (WALS)**
 - Recently hosted by Dr. Alondra Nelson and Nobel Laureate Dr. Linda Buck
- **Increase the visibility of women in science**
 - *Women's Health InFocus at NIH* Newsletter
- **3rd Annual NIH Vivian W. Pinn Symposium –
*Catalytic Connections***



Save the Date!

4th Annual NIH Vivian W. Pinn Symposium

Improving Maternal Health - Behind the Numbers, May 15, 2019

Register at www.nih.gov/women



Speakers: Drs. Alondra Nelson, Linda Buck, Indira Raman, Lisa Barnes, and Jennifer Manly.

Visit womeninscience.nih.gov

NIH forms network on advancing diverse women scientists

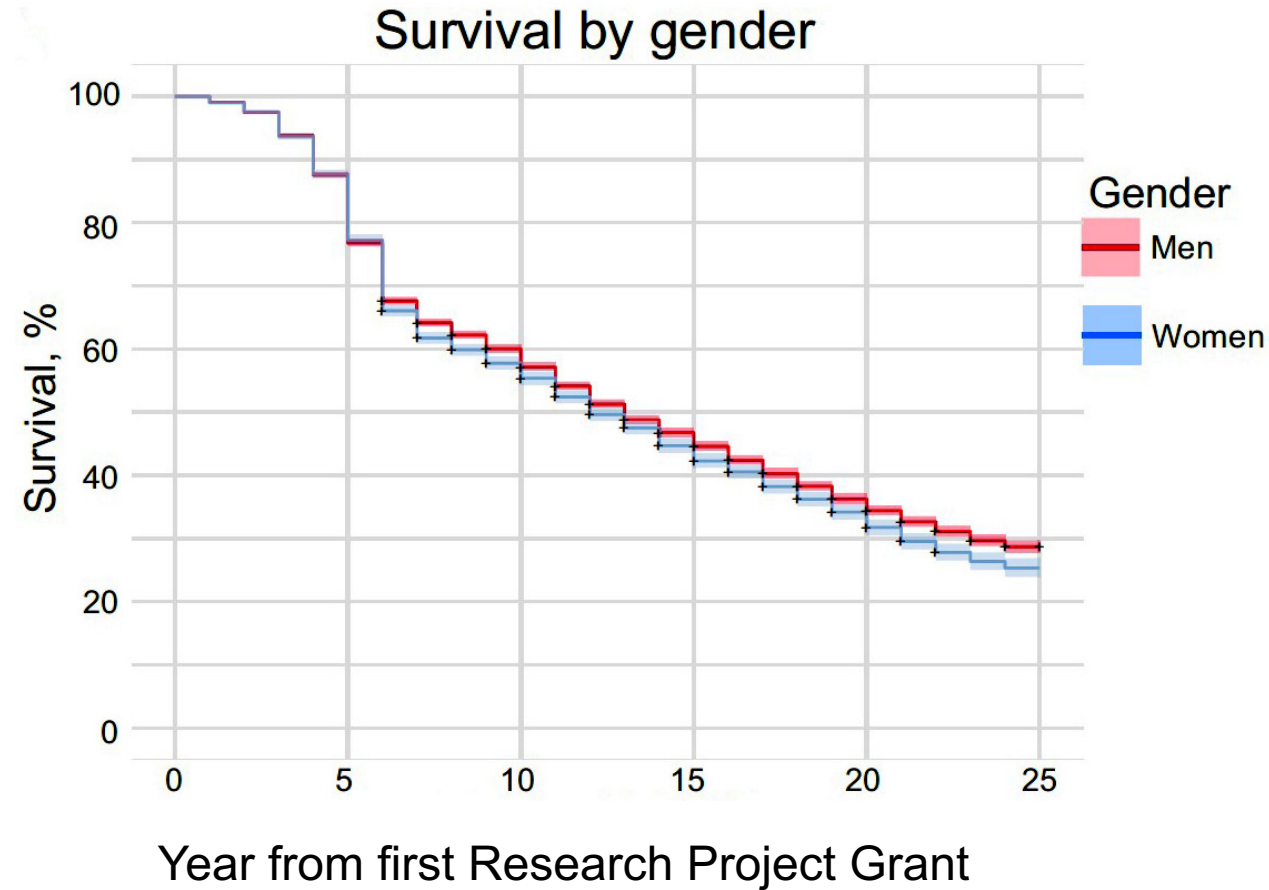
Women of Color Research Network (WoCRN)

- Four regional chapters: DC, IN, MD, NC
- Over 735 members and growing
- Award-winning website



<https://womeninscience.nih.gov/women-of-color>

Women maintain NIH funding at comparable rates to men



Hechtman LA et al. & Greenberg JH. 2018.
NIH funding longevity by gender. *PNAS* **115**: 7943-7948



NIH Tackles Problems and Barriers Facing Women in Biomedical Research



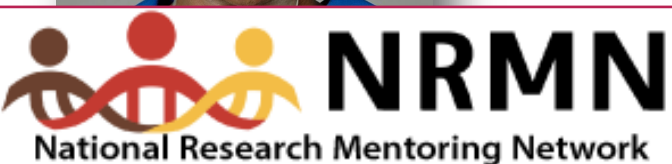
- Building Interdisciplinary Research Careers in Women's Health, 1999
- Research Supplements to Promote Reentry Into Biomedical and Behavioral Research Careers, 1992
- "Broadening Experiences in Scientific Training" awards
- National Research Mentoring Network
- ACD Working Groups on Diversity and Culture Change to end Sexual Harassment
- Scientific Workforce Diversity Office, led by Hannah Valentine, M.D., Chief Officer for SWD

Building Infrastructure Leading to Diversity (BUILD)

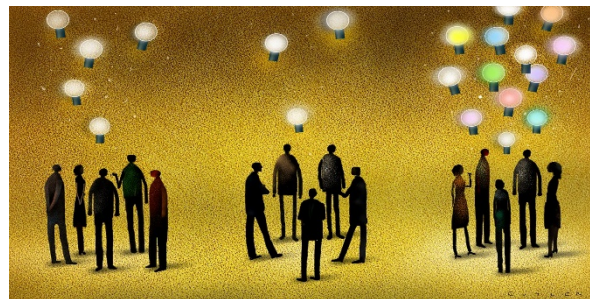
Future Research Leaders Conference

Distinguished Scholars Program

SWD Toolkit



A diverse, well-informed biomedical workforce yields better science and health



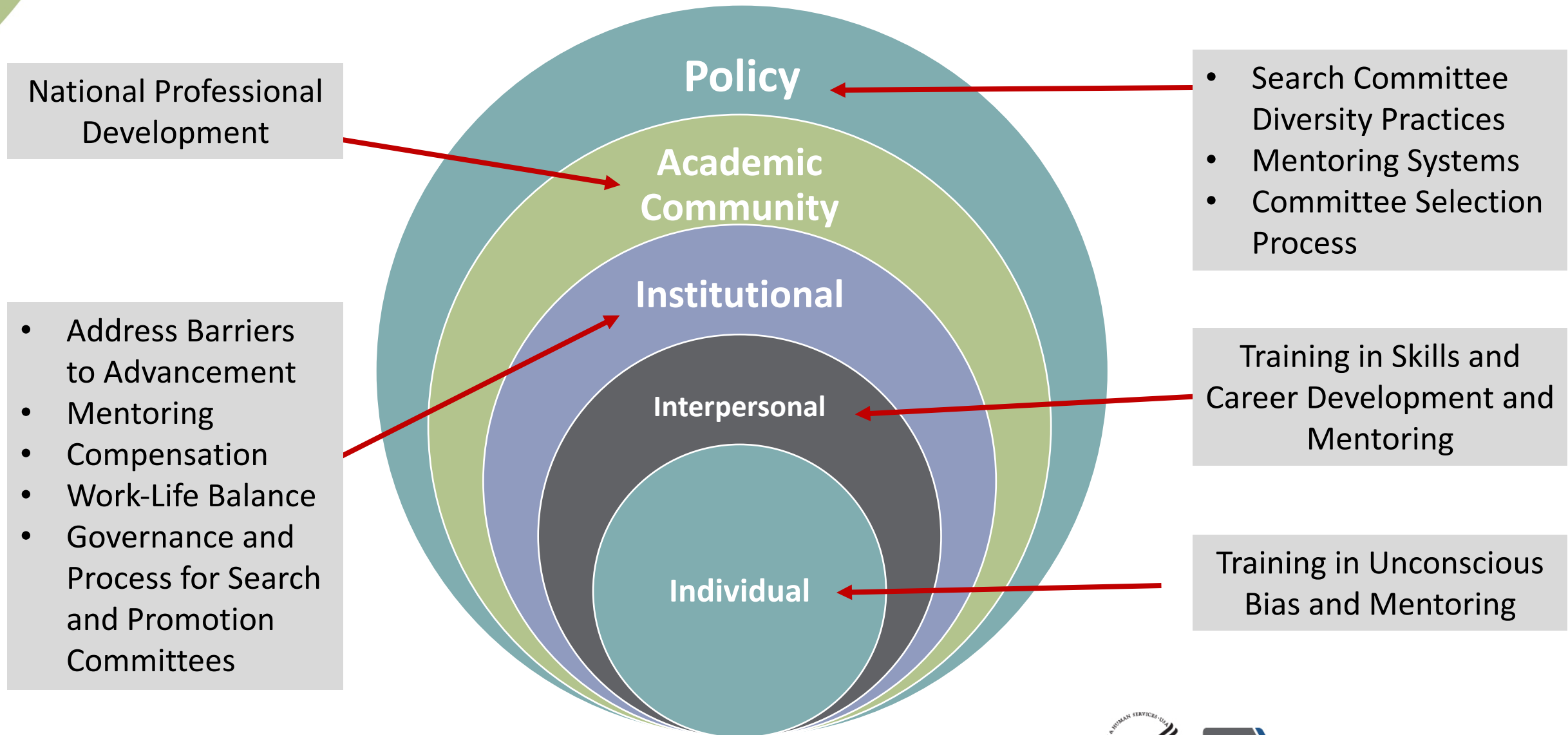
- Women and minorities in STEM careers engender better science & health equity.
- Gender diversity results in increased productivity and more substantial research.

*Positive climate *Diversifying research methods
*Utilizing team expertise *Engaging managers
*Diversifying knowledge outcomes *Critical mass
*Collective intelligence *Non-hierarchical structures

Mathias Wullum Nielsen et al. PNAS 2017;114:8:1740-1742. Image ©2017 by National Academy of Sciences

#LancetWomen

Model Lays Out Potential Interventions for Gender Equity



Trans-NIH Strategic Plan Sets Women's Health Research Agenda



Advance rigorous research relevant to the health of women



Develop methods & leverage data sources that consider sex and gender



Enhance dissemination & implementation of evidence to improve the health of women



Promote training & careers to advance science for the health of women



Improve evaluation of research relevant to the health of women

ADVANCING SCIENCE FOR THE HEALTH OF WOMEN

<https://orwh.od.nih.gov/about/trans-nih-strategic-plan-womens-health-research>





A well-trained, diverse, and
robust workforce is the engine
of scientific progress.

Connect With Us



@JanineClaytonMD

NIH.gov/women



@NIH_ORWH



NIHORWH



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