



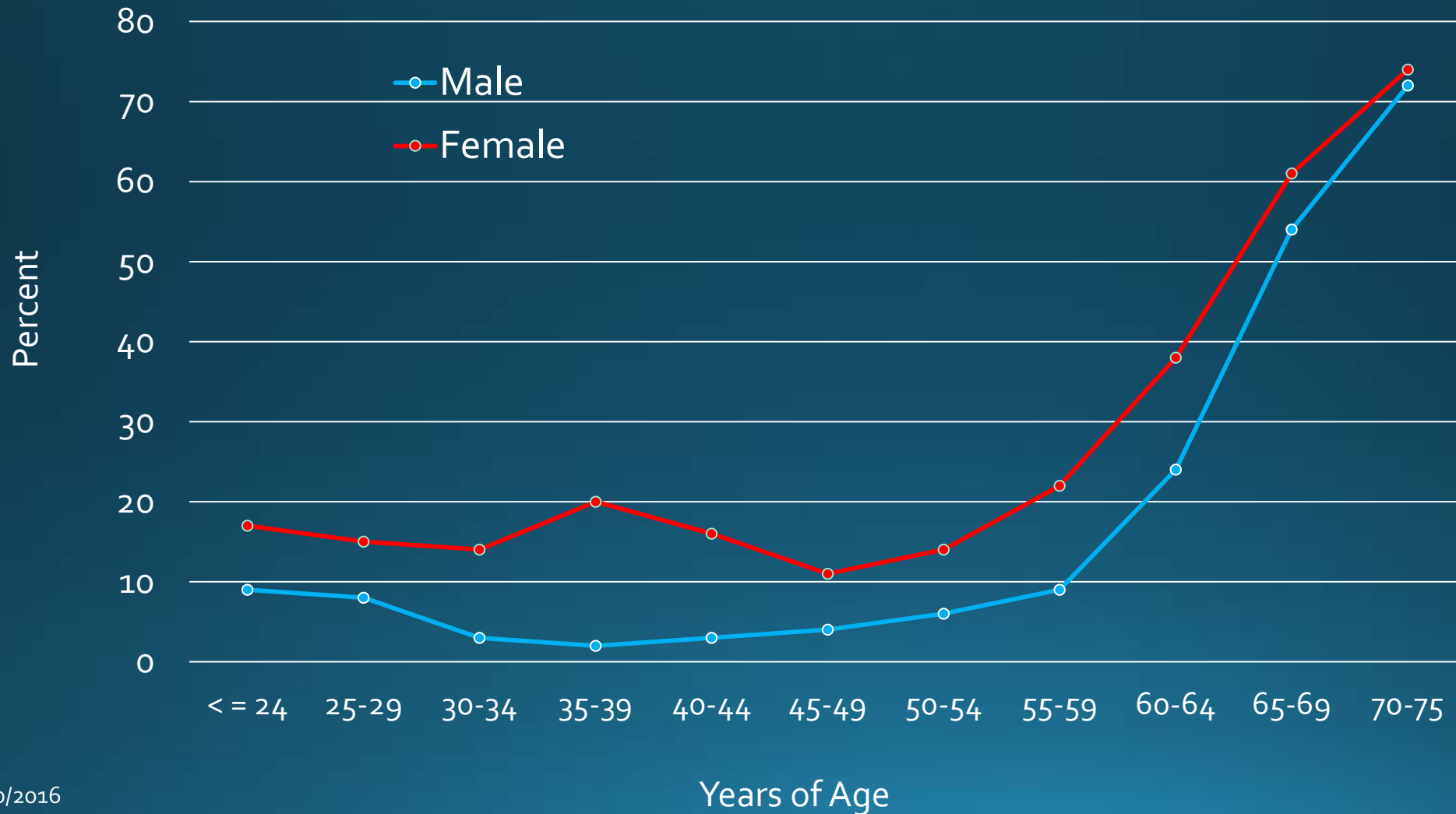
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The Role of the National Science Foundation in Gender Equity and Broadening Participation

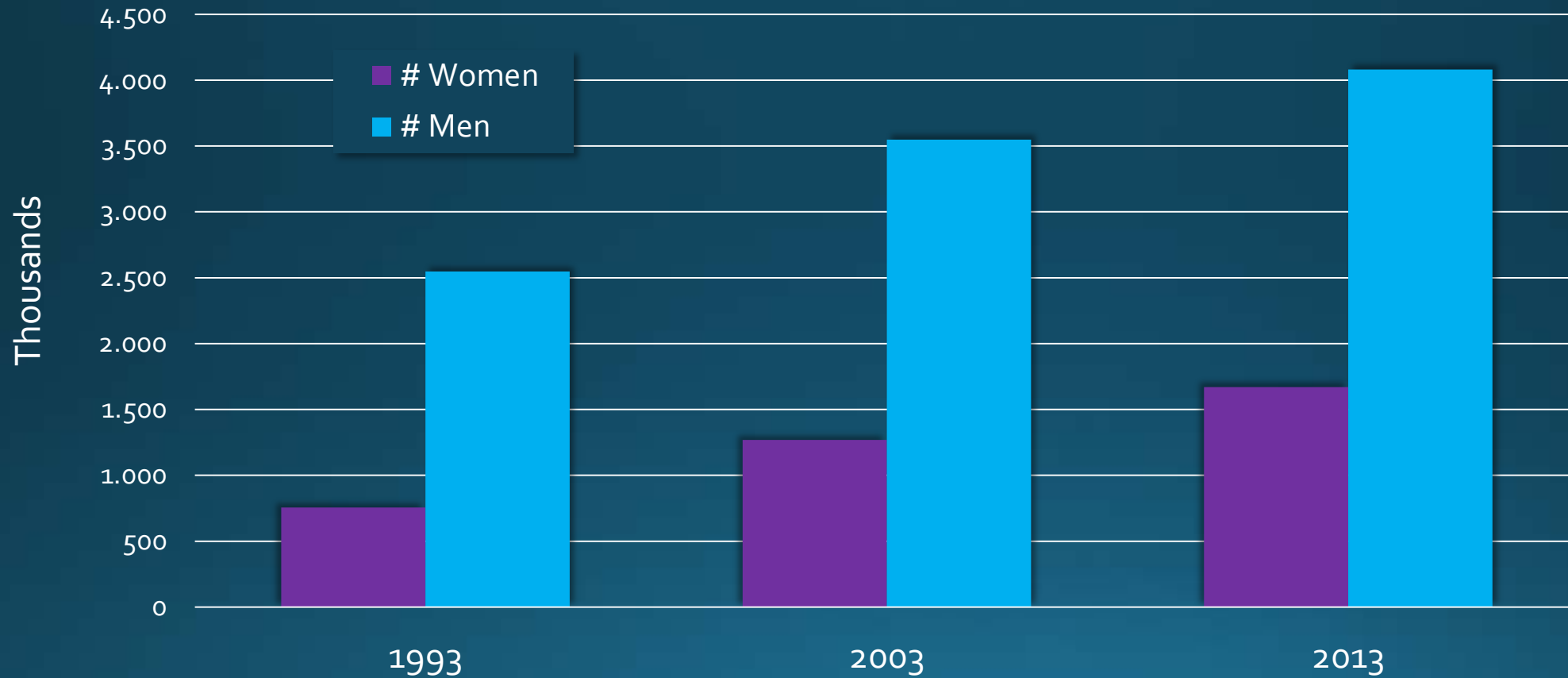
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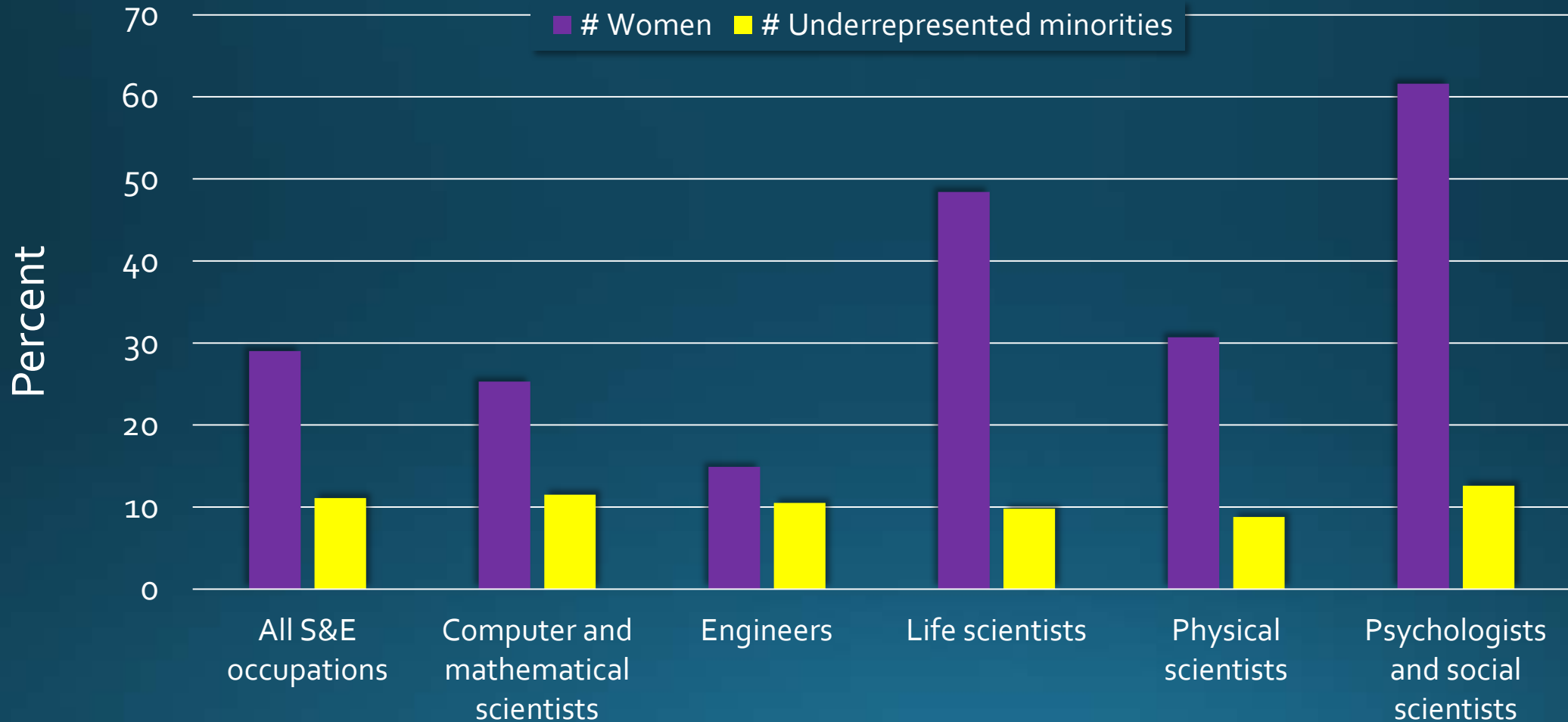
Women and Men Not in Labor Force



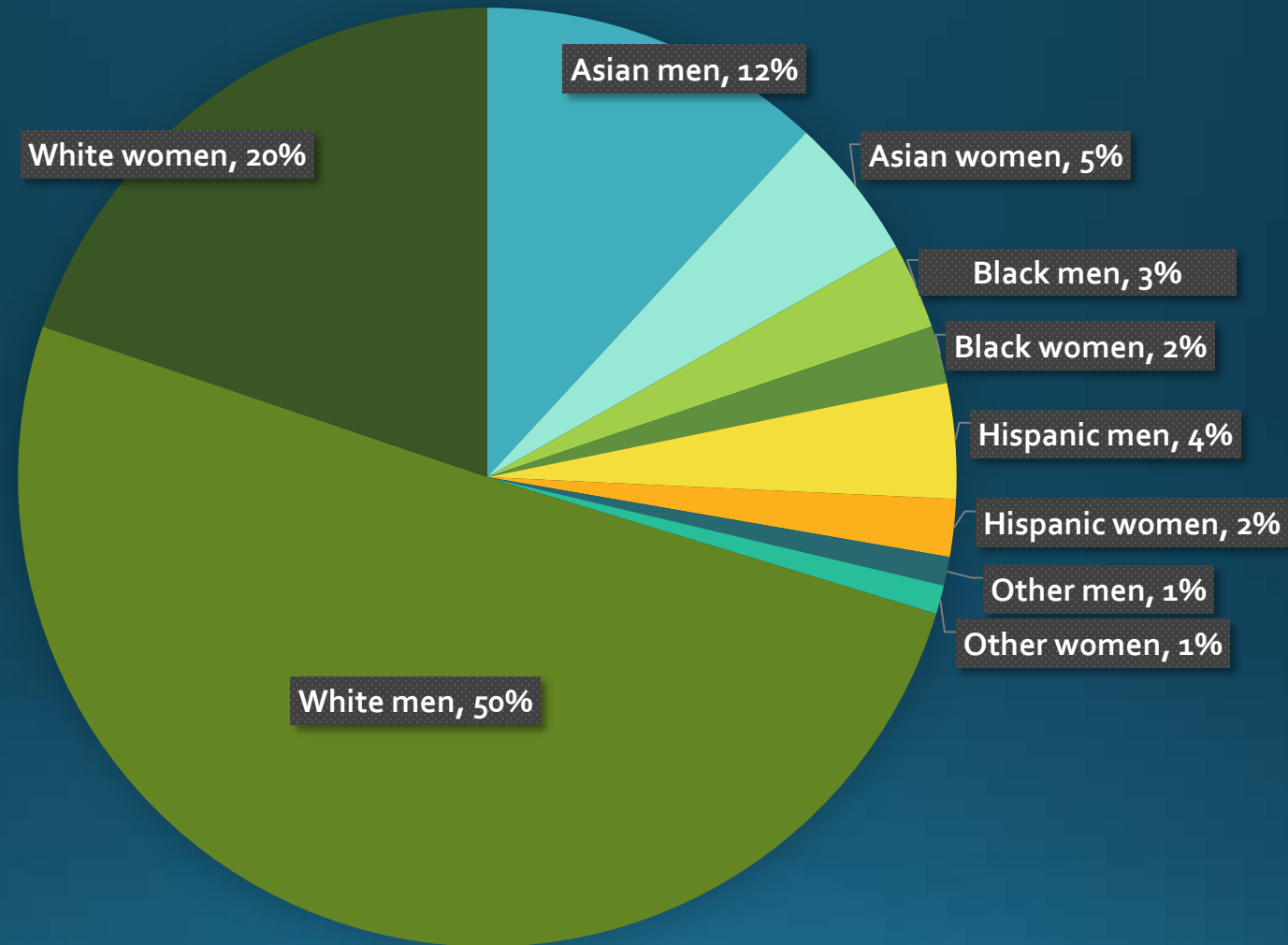
Men and Women in S&E Occupations: 1993, 2003, and 2013



Women and Underrepresented Minorities in S&E Occupations: 2013



Scientists and Engineers working in science and engineering occupations: 2013



NOTE: Hispanic may be any race. Other includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and multiple race.

Promoting Gender Equity

- Career-life balance for NSF grantees
- Leading by Example
 - Gender distribution of NSF Program Officers is much more balanced than the community overall
 - 292 male, 59%, and 204 female, 41%
- Implicit bias training
 - For Program Officers
 - For Review Panelists

NSF Career-Life Balance Initiative

- Flexibility in timing the initiation of approved research grants
- No-cost extensions of awards
- Grant supplements for research technicians to sustain research when investigators need to provide family care
- Flexibility for early-career researchers and those on Graduate/Postdoctoral research fellowships

Implicit Bias Training

- For Program Officers
 - Recognize negative biases in gender and underrepresented groups
 - Acknowledge positive biases such as those toward researchers at top-tier institutions
- For Panelists
 - Some training provided prior to merit review panels
 - Work on making training more standard

NSF Programs to Broaden Participation

- ADVANCE
- Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES)
- Science of Broadening Participation (SBP)

ADVANCE Goals

- To develop system approaches to increase representation and advancement of women in academic STEM careers
- To develop innovative and sustainable ways to promote gender equity in the STEM academic workforce
- To contribute to the development of a more diverse science and engineering workforce

NSF INCLUDES

- Goal is to achieve national level impact and progress toward STEM inclusion
- Fund innovative models, networks, partnerships and research
- Work to ensure that women, African-Americans, Hispanics, and people with disabilities are represented in percentages comparable to their representation in the U.S. population
- Current solicitation: two-year pilot projects

Science of Broadening Participation

- Research to better understand the barriers that hinder and factors that enhance our ability to broaden participation in STEM
- Employ theories, methods, and analytic techniques of the social, behavioral, economic, and learning sciences
- Provide scientific evidence that STEM educators, employers, and policy makers need

SBP Examples

- Chad Forbes, University of Delaware
 - Intersection of cognitive neuroscience and broadening participation
 - Looking at biological stress response to gender stereotypes in STEM
 - This stress response can create a negative imprint on the psyche and negative associations with STEM
- Other awards
 - Examination of how gender stereotypes develop
 - Developing a successful Masters-to-Ph.D. bridge program to advance diversity