



NIH **U**pdates on Women in Science News for Yo**U** to Use!

Keren Witkin, Ph.D., Editor
Office of Research on Women's Health
Office of the Director, National Institutes of Health
United States Department of Health and Human Services

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NIH Updates on Women in Science is brought to you by the [NIH Working Group on Women in Biomedical Careers](#). We encourage you to share this e-newsletter with colleagues.

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Experimental Evidence for Gender Bias among Science Faculty

A recent paper in *PNAS* explored the role of gender bias in the underrepresentation of women in academic science. The authors asked biology, chemistry, and physics faculty members from six research-intensive universities to review application materials from undergraduates who recently applied for a lab manager position. Identical application

materials were altered to reflect either male or female authorship, and faculty members were asked to rate an application from a single candidate based on student competence. Faculty participants assessed whether they would hire the student, how much mentoring they would provide to this student, and an appropriate starting salary. Faculty members of both genders consistently scored the male applicant as more competent, suggesting higher starting salaries and recommending more mentoring for the male candidate. Notably, faculty subjects reported liking the female candidate more, based on the application, suggesting that the study results reflect unconscious bias rather than overt hostility towards female students. The authors suggest that improving family friendly policies and providing access to mentors and role models are only partial solutions for the underrepresentation of women in science. A comprehensive approach must also include interventions for faculty members, such as bias training.

[Science Faculty's Subtle Gender Biases Favor Male Students](#)

Department Culture Affects Work Satisfaction for Female Assistant Professors

Through a recent NIH-funded study, researchers aimed to identify and address cultural issues that disproportionately affect women scientists and engineers. To better understand existing culture within academic departments, they embarked on a literature search, focus groups, and interviews with subject matter experts. With knowledge gained from these sources, they created a comprehensive list of relevant issues and themes encompassing their concept of CCWAS, or "culture conducive to women's academic success." The authors created a questionnaire with 104 items related to these issues, which they tested on a group of 56 female assistant professors from 15 medical schools nationwide. They then refined their questionnaire and administered it to 133 female assistant professors at the University of Pennsylvania. Key topics included in the survey fell into the following categories: Equal access to opportunities, work-life balance, freedom from gender bias, and support from leadership. Based on survey results, each academic department was given a CCWAS score. Results indicated that women working in departments with higher CCWAS scores, indicating a culture that supports their career success, expressed more satisfaction and a deeper commitment to their work. This study highlights local culture as a prime area for intervention in the quest to increase representation of women in scientific careers.

[A Culture Conducive to Women's Academic Success: Development of a Measure](#)

Gender Bias Study of Kindergarten Students Provides Clues to Academic Gender Gap

Researchers surveyed 81 Chilean schoolchildren around the age of 5, in order to gain insight into the gender gap in math performance. Students were presented with cartoon images of a young boy or girl and asked six questions about the characters' preferences and innate ability for math and language tasks. While subjects rated the male character with an equal inclination for math and language, children of both genders judged the female character as more likely to struggle with the math task and to enjoy it less. The striking conclusion of this study is that gender bias forms extremely early, even before formal math and language education begins in the classroom. Recognizing these early gender biases may be key to intervening before stereotypes can affect academic interest and performance.

[Preschool Children's Beliefs about Gender Differences in Academic Skills](#)

Online Program Connects STEM Students with Prominent Female Mentors

Where can you find over 300 female scientists and engineers eager to serve as mentors to science students nationwide? Starting on October 1, 2012, Harvey Mudd College and the online learning platform Piazza teamed up to sponsor a six-week pilot community mentorship program called Women in Technology Sharing Online, or WitsOn. Over sixty colleges and universities and over 10,000 students participated in the program, which allowed science, technology, engineering, and math (STEM) students to submit questions online to the team of distinguished mentors. The mentors then answered the most popular questions in a public forum that made answers accessible to all participants. Mentors coming from academia and industry included astronaut Mae C. Jemison, Harvey Mudd President Maria Klawe, and Microsoft Vice President Julie Larson-Greer, among many others. Each week, a new pool of mentors answered questions on issues pertaining to career development, work-life balance, and workplace culture. Structured like a massive open online course, the program aimed to form relationships between students and leading scientist mentors, in order to support women pursuing undergraduate STEM degrees and encourage them to choose careers in science and technology. While participation was not restricted to female students, the organizers emphasized the importance of mentorship for women, who are often underrepresented in STEM fields.

[Women in Technology Sharing Online](#)

NIH Unveils Updates to the Women of Color Research Network

The Women of Color in Biomedical Careers Committee of the NIH Working Group on Women in Biomedical Careers first launched the Women of Color Research Network (WoCRn) in August 2011 as a new social media site for women of color and everyone who values diversity in the biomedical workforce. Goals of the site are to promote community, provide information, and facilitate access to colleagues and mentors who can offer advice on career development and navigating the NIH grants process. After a successful first year which saw over 700 women of color scientists and advocates for diversity join the network, the NIH Office of Research on Women's Health (ORWH) and the Women of Color in Biomedical Careers Committee supported upgrades designed to improve the appeal of the site and advance social media functions. These upgrades launched in September 2012, enhancing the WoCRn experience. Membership continues to grow every day, and is open to anyone interested in diversity issues, regardless of gender, race, or ethnicity. Visit the site and consider joining the network!

[Women of Color Research Network \(WoCRn\)](#)

The Johns Hopkins Women's Health Research Group Launches New Website

The Johns Hopkins Women's Health Research Group (WHRG) is an interdisciplinary collaborative research team, which draws from the Schools of Medicine, Public Health and Nursing at The Johns Hopkins University. The group aims to provide a discussion forum for research related to women's health and sex differences, build interdisciplinary collaborations to enhance women's health and sex differences research on campus, provide mentorship and training opportunities to students, fellows and junior faculty doing women's health and sex differences research, and support professional development of scientists from underrepresented groups, such as women and racial/ethnic minorities. WHRG has just launched a new website, including information on training, mentoring and networking sessions, and a resources section with links to funding opportunities and other professional development sites.

Best Practices—University of California San Diego

Several new programs at the University of California San Diego (UCSD) aim to enhance teaching and mentoring on campus while creating an inclusive and welcoming environment for all members of the campus community. Postdoctoral fellows Dr. Suzanne Lee, Dr. Daniel Pollard, and Dr. Evan Merkhofer started the STEM Education and Diversity Discussion Group in the winter of 2011 to engage their colleagues in discussion of teaching and diversity issues. The bi-weekly group brings together graduate students, postdocs, and faculty members to hold discussions, examine best practices, and share resources and creative teaching tools. Members of this group and other UCSD postdocs lead quarterly training workshops for UCSD teaching assistants (TAs), called "Creating an Inclusive Classroom." These workshops have a dual purpose of providing leadership and teaching experience for the postdoc teachers while promoting inclusive and culturally competent practices for the TAs. By participating in the workshop, TAs learn to value the unique contributions of each student to the classroom, explore teaching methods that contribute to an inclusive environment, and examine the biases and assumptions that affect their own teaching styles. UCSD postdocs have also been leading annual diversity courses for undergraduate students. The eight-session interactive seminar course, "Intergroup Dialogue: Skills for Building Effective Multicultural Research Teams," explores how issues of identity and race/ethnicity affect their research communities. According to Dr. Suzanne Lee, a postdoctoral fellow working with Dr. Jens Lykke-Andersen, "The STEM Diversity efforts at UCSD have opened my mind to better approaches to teaching and mentoring, and have given me a wonderful way to connect with similarly minded post-docs, grad students and faculty as we work together to come up with solutions to improve our communities and training environments."

[Diversity: Initiatives for Postdoctoral Scholars](#)

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