



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

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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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## **Feature Articles**

### **Elite Male Faculty in the Life Sciences Employ Fewer Women**

Sheltzer JM, Smith JC. PNAS. Early Edition

<http://www.pnas.org/content/early/2014/06/25/1403334111>

This group sought to identify the cause of underrepresentation of women at the faculty level in the life sciences. They collected publicly available data, such as university databases and faculty websites, to determine the percentage of women in laboratories at leading US institutions. They found that, overall, male faculty members trained fewer females. Additionally, elite male faculty- defined as faculty whose research was funded through the Howard Hughes Medical Institute, had been elected to the National Academy of Sciences, or had won a major career award- trained significantly fewer women than other male faculty members. No gender bias was detected in the employment patterns of elite female faculty. The authors suggest that one cause of the leaky pipeline is the low percentage of women being trained in high-achieving laboratories.

### **The Women in Medicine and Health Science Program: An Innovative Initiative to Support Female Faculty at the University of Davis School of Medicine**

Bauman MD, Howell LP, Villablanca AC. Acad Med. [Epub ahead of print].

<http://www.ncbi.nlm.nih.gov/pubmed/25006704>

In 2000, The University of California Davis School of Medicine established the Women in Medicine and Health Science (WIMHS) program to provide women with opportunities for networking, sponsorship, mentorship, and career development. In this publication, the authors discuss the components and successes of the WIMHS program. Since implementation of the program, there has been an increase in the percentage of women faculty and department chairs. Additionally, the departure rate of women faculty has decreased. The data suggest that the WIMHS program has led to a robust change in the institutional climate. Future initiatives of the program include broader institutional changes to support female faculty, such as on-site child care.

### **Leader Self-Awareness: An Examination and Implications of Women's Under-Prediction**

Sturm RE, Taylor SN, Atwater LE, Braddy PW. J Organiz Behav. 2014; Vol 35 (5) 657-677.

<http://onlinelibrary.wiley.com/doi/10.1002/job.1915/abstract>

This study focused on an individual's ability to anticipate the views of others. Female leaders tend to under-predict how others rate them. Participants in this study were asked to anticipate the views of their bosses. The authors found that women are more likely to under-predict their ratings compared to men. They also found that the supervisor's gender did not impact ratings. In a second study, women were asked open-ended questions related to the causes and consequences of under-prediction. The results from this study suggest that under-prediction results from lack of self-confidence, difference in feedback needs, learned gender roles, and self-sexism. Additionally, the participants felt that under-prediction is negative for both women and the organization.

## **Articles of Note**

### **The Test That Fails**

Miller C, Stassun K. Nature. 2014 June 12; Vol 510, 303-304.

<http://www.nature.com/naturejobs/science/articles/10.1038/nj7504-303a>

The authors of this column argue that universities place too much emphasis on graduate record examinations (GRE) resulting in decreased diversity within STEM fields. For example, many top-tier institutions only consider applications from prospective students who have scored greater than 700 (out of 800) in a particular area. Within the physical sciences, only 26 percent of women- compared to 73% of men- score greater than 700 on the GRE Quantitative section. The disparity is larger when considering the test scores of individuals from

underrepresented groups. The authors argued that using more comprehensive selection criteria is required. Additionally, they recommend interviewing prospective students to examine college and research experiences, leadership experience, service to community, and life goals.

### **Increasing Women in Leadership in Global Health**

Downs JA, Reif LK, Hokororo A, Fitzgerald DW. Acad Med. Aug 2014; Vol. 89(8) 1103-1107.

<http://www.ncbi.nlm.nih.gov/pubmed/24918761>

Despite the fact that globally, women experience a disproportionate amount of burden of disease and death, the leadership in the field of global health are predominantly men. Multiple trials have demonstrated that women in leadership positions within government organizations implement different policies than men, and these policies are often more supportive of women and children. Additionally, other studies have shown that interventions to increase the number of women in leadership positions have been successful. Therefore, the authors argue that increasing female leadership in global health is feasible and essential. In this perspective, the authors provide suggestions for increasing the number of women in leadership positions.

### **Gender Differences in Resources and Negotiation among Highly Motivated Physician-Scientists**

Holliday E, Griffith KA, DeCastro R, Stewart A, Ubel P, Jagsi R. J Gen Intern Med. [Epub ahead of print]

<http://www.ncbi.nlm.nih.gov/pubmed/25112462>

This study analyzed gender differences in resources, negotiation behaviors, and negotiation outcomes of researchers who received NIH K08 and K23 awards between 2006 and 2009. Access to research space and perceived adequacy of physical resources did not differ among genders. However, a higher proportion of women reported inadequate access to grants administrators and statistical support. Additionally, women were more likely to ask for reduced clinical hours and to raise concerns regarding unfair treatment. The likelihood that requests were granted did not vary by gender.

### **Survey of Academic Field Experiences (SAFE): Trainees Report Harassment and Assault**

Clancy KBH, Nelson RG, Rutherford JN\*, Hinde K. PLoS One. 2014 July 16; Vol 9 (7).

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0102172>

This study used an internet survey to assess the climate of scientific fieldwork as it relates to gendered experiences, sexual harassment, and sexual assaults. Sexual harassment and assaults were frequently encountered by trainees, predominantly female trainees, while performing fieldwork. Most of the perpetrators against women were more senior researchers while males who were harassed were most commonly targeted by their peers. Furthermore, few survey participants were aware of the mechanisms to report incidents suggesting that increased awareness of such procedures will improve the environment for individuals conducting field work.

\*Julienne Rutherford is a former NIH, ORWH Building Interdisciplinary Research Careers in Women's Health (BIRCWH) scholar

## **Current News**

### **SPOTLIGHT: Story Landis, PhD**

A track record of notable achievements in scientific discovery would satisfy most researchers. For Dr. Story Landis, Director of the National Institute of Neurological Disorders and Stroke (NINDS), that's only half the story.

Throughout her research career, Dr. Landis has made fundamental contributions to the understanding of developmental interactions required for synapse formation and plasticity of signaling mechanisms in the nervous system. From her doctoral work at Harvard on studying transmitter plasticity in sympathetic neurons to

her distinguished tenure at Case Western Reserve University School of Medicine, her work has received acclaim and a reputation for excellence.

Along the way, Dr. Landis' facility for the creation and revitalization of scientific programs became evident. At Case Western she was instrumental in establishing the Department of Neurosciences, and in 1995, she joined NINDS as the Institute's Scientific Director, working to coordinate and re-engineer the Institute's intramural research programs. Working with NINDS and the National Institute of Mental Health (NIMH) leadership, she went on to lead the movement to bring a sense of unity and common purpose to the 200 intramural laboratories focused on neuroscience from 11 different NIH Institutes.

Her natural leadership and organizational acumen propelled her to become NINDS' first female director in 2003 where she oversees an annual budget of \$1.5 billion. Together with NIMH and the National Institute on Aging institute directors, she co-chairs the NIH Blueprint for Neuroscience Research, a cooperative effort among the 15 NIH Institutes, Centers and Offices that support neuroscience research trans-NIH activities in the brain sciences. In 2013 she helped launch NIH's Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative. Dr. Landis is also the chair of the NIH Stem Cell Task Force.

Throughout her research career, Dr. Landis has made fundamental contributions to the understanding of nervous system development. She has garnered many honors, is an elected fellow of the Institute of Medicine, the Academy of Arts and Sciences, the American Association for the Advancement of Science and the American Neurological Association, and was elected President of the Society for Neuroscience in 2002.

Dr. Landis recently announced her retirement in fall 2014, leaving behind a legacy of scientific contributions and policy advancements. NIH Director Dr. Francis Collins described her as a "true giant ... a superstar among us," and wrote in a statement, "We have been extremely fortunate to have Story on the NIH leadership team. Very few can match her towering intellect, boundless energy, commitment to biomedical research, and scientific expertise." Dr. Landis has been an advocate on many fronts – increasing workforce diversity while unifying laboratories to create one neuroscience network. Congratulations and well done.

**Inside NIA: A Blog for Researchers, [Join the Women of Color Research Network](#)**

**Posted on July 16, 2014 by [Marie A. Bernard](#), [National Institute of Aging](#)**

Marie Bernard, MD, Deputy Director of the National Institute of Aging discussed her personal story of the adversity she faced by being a woman of color attending medical school. She also discussed the importance of having amazing mentors and role models. The Women of Color Research Network (WoCRn) is an online community that is addressing the challenges faced by all women and minorities entering and advancing in scientific careers. WoCRn can serve as an invaluable resource for women of color, mentors of women of color, and individuals who value diversity in science and medicine. She highly encourages anyone who is interested to join the site.

**Nexus August 2014, Rock Talk, [Women in Biomedical Research](#)**

**Posted on August 8, 2014 by [Sally Rockey](#).**

In her blog, Dr. Rockey discusses the differential rates of application between men and women. Male recipients of NIH career development awards (K awards) were more likely to apply for additional funding than women. However, when the recipients were tracked for greater than 10 years, there was little difference in the rates in which men and women applied for and received NIH funding. Furthermore, female K99/R00 award recipients were less likely to apply for subsequent R01 grants. Finally, the Advancement of Women in Biomedical Careers Workshop held at the NIH reinforced the notion that the research community, including NIH, must continue to focus on career advancement of women in the biomedical workforce.

### **[In Science, It Matters that Women Come Last](#)**

**Posted on August 5, 2014 by [Emma Pierson](#), [FiveThirtyEight](#)**

A measure of success in science is the number of papers written by a researcher. Over the past two decades, the number of papers authored by female scientists has steadily increased. Additionally, when a female scientist writes a paper, she is more likely than average to be listed first, suggesting she is the primarily responsible for the work completed. However, female scientists are less likely to be listed as the last author, write fewer papers than male authors, and are unlikely write single-author papers. The writer also analyzed “connectivity” among scientists. Two scientists are considered to be connected if they have co-authored a paper. Using this analysis, she found that female scientists have fewer collaborators and are less connected than male scientists, leading to isolation that could be detrimental to an individual’s career.

### **Biomedical Research Workforce**

#### **[Improving Graduate Student and Postdoctoral Training](#)**

The Advisory Committee to the Director Biomedical Research Working Group, led by Shirley Tilghman, [recommended](#) that “all Institutes and Centers (ICs) should offer comparable training programs and their requirements should be harmonized.” In response to the recommendation, all ICs now provide F30 and F31 awards to dual doctoral degree students and predoctoral students, respectively. New funding opportunity announcements were issued in May 2014 and all ICs will fund F30 and F31 awards beginning in FY2015.

#### **[Diverse Workforce the Key to Better Business Results](#)**

**Posted on July 30, 2014, Federal News Radio**

Dr. Pam Drew, the executive Vice President and President of Information Systems, a business area of Excelis was interviewed by Aileen Black and Gigi Schumm of Federal News Radio. Dr. Drew discusses her successful career as an aerospace engineer, work-life balance, and why women make great engineers.

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