

## ADVANCES & INSIGHTS: *The NIH Women in Science Newsletter*

This e-newsletter is brought to you by the NIH Working Group on Women in Biomedical Careers.



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### Recent Research and Perspectives

#### **Males under-estimate academic performance of their female peers in undergraduate biology classrooms**

Grunspan, D. Z., Eddy, S. L., Brownell, S. E., Wiggins, B. L., Crowe, A. J., & Goodreau, S. M. (2016). *PLoS ONE*, 11(2), e0148405.  
<http://www.ncbi.nlm.nih.gov/pubmed/26863320>

Favoring of males in the classroom may influence social environment and self-confidence of students, affecting female persistence in the science, technology, engineering, and math (STEM) fields. In a series of online surveys among three biology classes with a total of 1,715 students (57.4 percent female), Grunspan et al. asked undergraduate students to nominate classmates they thought mastered the subject and polled instructors to learn which students were outspoken in class as a measure of active participation. Male students were over-nominated by both male and female peers, and nominations of male students increased as the class progressed. These social dynamics may perpetuate gender biases that go beyond the classroom.

#### **Silent bias: challenges, obstacles, and strategies for leadership development in academic medicine—lessons from oral histories of women professors at the University of Kansas**

Pingleton, S. K., Jones, E. V. M., Rosolowski, T. A., & Zimmerman, M. K. (2016). *Academic Medicine*. Advance online publication.  
<http://www.ncbi.nlm.nih.gov/pubmed/26886809>

The number and share of women in medicine have increased dramatically

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### In This Issue

#### Recent Research

Males under-estimate academic performance of their female peers in undergraduate biology classrooms

Silent bias: challenges, obstacles, and strategies for leadership development in academic medicine—lessons from oral histories of women professors at the University of Kansas

The intersectional matrix: rethinking institutional change for URM women in STEM

since the 1970s, and today, women make up nearly 50 percent of medical students and junior faculty. However, senior female academic achievement and leadership continue to lag, and women hold a significantly smaller percentage of leadership positions than men. Pingleton et al. interviewed 26 female M.D. and Ph.D. full professors at the University of Kansas Medical Center to discuss their experiences during their medical and research careers. These professors reported significant challenges, such as being treated with “silent bias,” feeling like an “other,” and facing challenges balancing life at work and at home. Overcoming these challenges requires support from mentors, self-reflection, and organizational support.

### **The intersectional matrix: rethinking institutional change for URM women in STEM**

Armstrong, M. A., & Jovanovic J. (2016). *Journal of Diversity in Higher Education*. Advance online publication. <http://psycnet.apa.org/psycinfo/2016-13822-001>

Higher education institutions face several challenges in supporting the success of underrepresented minority (URM) women in STEM. Armstrong and Jovanovic looked at whether and how intersectional interventions empower URM women in STEM, whether these interventions are taking place at the institutional level, and what factors enable or hinder the success of intersectional strategies at institutions that received large National Science Foundation ADVANCE program Institutional Transformation (IT) grants. The researchers found that intervention efforts on behalf of URM women were more additive than intersectional, and those intersectional initiatives that exist place less emphasis on broader URM entry points than on the success of individual URM women in STEM fields.

### **How prevalent are potentially illegal questions during residency interviews? A follow-up study of applicants to all specialties in the National Resident Matching Program**

Hern, H. G., Trivedi, T., Alter, H. J., & Wills, C. P. (2016). *Academic Medicine*. Advance online publication. <http://www.ncbi.nlm.nih.gov/pubmed/27049540>

Potentially illegal questions asked during residency interviews may intentionally or accidentally reveal an applicant’s membership in a class protected by state or federal law. In a survey aimed at all applicants in the National Resident Matching Program in 2012–2013, Hern et al. asked the 10,967 respondents whether their residency interviews included questions about gender, age, marital status, parental status, plans for child rearing, ethnicity, religion, or sexuality. Women were significantly more likely than men to be asked any potentially illegal questions and were more often asked about gender, marital status, plans for childbearing, and commitment to the program. The researchers suggest that recruiting and retention of female applicants could be improved by establishing better boundaries for interviewers.

How prevalent are potentially illegal questions during residency interviews? A follow-up study of applicants to all specialties in the National Resident Matching Program

### **Spotlights**

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# Spotlights

## Scientist Spotlights



### **Tara Chaplin, Ph.D.**

As part of her research on the role of family in adolescent development, Tara Chaplin, Ph.D., leads a parenting mindfully study. Dr. Chaplin received a Ph.D. in child-clinical psychology from Penn State University and completed postdoctoral training at the University of Pennsylvania. She then moved to Yale University, where she completed one year as a postdoctoral associate, two years as an...[\(read more\)](#)



### **Regina Smith James, M.D.**

Currently the Director of Clinical and Health Services Research at the National Institute on Minority Health and Health Disparities (NIMHD), Regina Smith James, M.D., works to strengthen the Institute's projects on minority health and health disparities in clinical settings, health services research, and patient-clinician communication. She has also been the lead NIMHD representative in planning activities...[\(read more\)](#)



### **Elizabeth Parks, Ph.D.**

Elizabeth Parks, Ph.D., studies how human bodies work—specifically, how the body uses and distributes the nutrients from food. As a professor in the Department of Nutrition and Exercise Physiology at the University of Missouri School of Medicine, she focuses on non-alcoholic fatty liver disease (NAFLD), a condition that occurs when some people put on too much body fat and begin to store fat in their liver...[\(read more\)](#)



### **Vivian W. Pinn, M.D.**

Vivian W. Pinn, M.D., is a woman of many firsts. She was the first full-time director of NIH's Office of Research on Women's Health from 1991 to 2011 and the first permanent NIH Associate Director for Research on Women's Health. Prior to that, Dr. Pinn became the third woman and the first African-American woman to lead a U.S. pathology department when she joined the staff and faculty of Howard...[\(read more\)](#)

## **Did you know?**

The NIH-modified biosketch guidelines give applicants an opportunity to explain how personal circumstances may have reduced their scientific productivity. To learn more, please see [NOT-OD-11-045](#) and [NOT-OD-11-050](#).

# Current News and Reports

## Lab Life: Lone-Parent Scientist

Written by Helen Shen for *Nature* on March 2, 2016

At every level in academia or industry, single scientists too often face a shortage of resources to help them balance their work and family responsibilities. Child care can exceed the parent's ability to pay; the need to relocate can create nearly impossible demands; even conference travel presents extra expenses that can be difficult to meet. Candid talk with a dean might produce surprising levels of support, and upfront conversations about the need for schedule flexibility to care for children might lead a prospective employer to offer what is needed. There is no one-size-fits-all public policy solution, but unexpected support may be available.

## Interview with Rose Leke: Urging Female Scientists to Shoot for the Moon

Submitted by Rose Leke, for *Trends in Parasitology* in April 2016

Dr. Rose Leke is an emeritus professor of immunology and parasitology at the University of Yaoundé I, Cameroon. Her research focuses on pregnancy-associated malaria, which poses significant risk for pregnant women, fetuses, and newborns. In this interview, Dr. Leke talks about what led her to pursue an academic career in medicine and discusses her research lab. Because she considers collaboration to be the foundation of current research, she highlights the value of communication in science and discusses her own efforts to train her students to be strong communicators. Dr. Leke encourages women in science to “push as far as, or further than, our male counterparts.”

## Mentoring Is the Key to Increasing Minority and Women's Participation in STEM Education, Researchers Say at the Emerging Researchers Network Conference

Written by Kathleen O'Neil for the American Association for the Advancement of Science on March 8, 2016

In February, the sixth Emerging Researchers National (ERN) Conference in STEM was held in Washington, D.C. Nearly half the previous undergraduate ERN attendees reported entering a STEM graduate program—well above the norm, considering that underrepresented minorities earned only 7 percent of science and engineering Ph.D.s and 14 percent of science and engineering master's degrees in 2012. Research suggests that students who are mentored and encouraged are more likely to stay in STEM education, making such support especially important for women and underrepresented minorities. One ERN attendee said that having female professors in her department gave her the confidence to enter a Ph.D. program.