



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.

Feature Articles

[*Characteristics, Satisfaction, and Engagement of Part-Time Faculty at U.S. Medical Schools*](#)

[*A Quantitative Linguistic Analysis of National Institutes of Health R01 Application Critiques From Investigators at One Institution*](#)

Articles of Note

[*Demographic Characteristics of Doctors who intend to Follow Clinical Academic Careers*](#)

[*Starting an Academic Career and Starting a Family: Challenges and Some Potential Solutions*](#)

[*NIH to Probe Racial Disparity in Grant Awards*](#)

Current News

[*Spotlight: Michele Evans, MD*](#)

[*Spotlight: NIH Research Festival Symposium "The Health of Women of Color: A Critical Intersection at the Corner of Sex/Gender and Race/Ethnicity"*](#)

[*The Next Generation: What Will it Take to Keep Them in Research?*](#)

[*Stanford's Jennifer Eberhardt Wins MacArthur 'Genius' Grant*](#)

Feature Articles

Characteristics, Satisfaction, and Engagement of Part-Time Faculty at U.S. Medical Schools

Pollart SM, Dandar V, Brubaker L, Chaudron L, Morrison LA, Fox S, Mylona E, Bunton SA. Acad Med. [Epub ahead of print].

<http://www.ncbi.nlm.nih.gov/pubmed/25186817>

This group investigated the demographics of part-time faculty at U.S. medical schools and their satisfaction with their workplace. Over 9000 faculty members from 14 medical schools participated in a 2011-2012 survey. Approximately 60 percent (415/674) of the part-time respondents were women. The majority of the part-time respondents were satisfied with their department and institution and the resources provided to them. Additionally, nearly half (46 percent) indicated that their institution had clear expectations for part-time faculty. However, part-time faculty were less satisfied than full-time faculty regarding perceptions of growth opportunities, compensation, and benefits. The authors conclude that in addition to striving to increase satisfaction of full-time employees, institutions should also devote considerable effort to improving the satisfaction and engagement of part-time faculty.

A Quantitative Linguistic Analysis of National Institutes of Health R01 Application Critiques From Investigators at One Institution

Kaatz A, Magua W, Zimmerman DR, Carnes M. Acad Med. [Epub ahead of print].

<http://www.ncbi.nlm.nih.gov/pubmed/25140529>

In agreement with the National Institute of Health's recommendation to evaluate bias in peer review, the authors sought to evaluate inconsistencies in reviewers' scoring and award outcomes of certain applicant groups. The authors collected critiques from 67 R01 investigators (91 unfunded and 67 funded applications) at the University of Wisconsin-Madison using positive and negative grant application evaluation word categories. Unsurprisingly, funded applications contained more positive descriptors and superlatives and fewer negative descriptors than unfunded applications. Strikingly, the critiques contained different wording based on the applicant's sex, despite an overall similarity in grant scores. Applications from female investigators received more praise than comparable applications from male investigators. Furthermore, funded applications from male investigators contained a greater number of negative evaluation words. Overall, the study shows an inconsistency in evaluation and gender stereotyping in the peer review process.

Articles of Note

Demographic Characteristics of Doctors Who Intend to Follow Clinical Academic Careers: UK National Questionnaire Surveys

Smith F, Lambert TW, Goldacre MJ. Postgrad Med J. 2014; Vol 90, 557-564.

<http://www.ncbi.nlm.nih.gov/pubmed/25136138>

The goal of this study was to identify which factors (sex, ethnicity, choice of specialty, medical school attended or intercalated degree) were predictive of a doctor's intention to pursue a career in academic medicine. The authors found that at the end of the first year after qualification, 13.5 percent of men and 7.3 percent of women intended to apply for clinical academic positions. However, by the end of their training, only 6.0 percent of men and 2.2 percent of women decided to pursue academic medicine. Additionally, a higher percentage of Asian doctors were interested in an academic career than White doctors. The study suggests that overall there are differences in career aspirations of men and women as early as the first year of medical work.

Starting an Academic Career and Starting a Family: Challenges and Some Potential Solutions

Mann M, Goetz D, Leung DH, Borowitz D. J Pediatr. Sept 2014; Vol. 165(3) 430-431.

<http://www.ncbi.nlm.nih.gov/pubmed/25152148>

In this article, the authors, who are all pediatricians, focus on some of the challenges associated with raising a family while pursuing a career in medicine. The authors suggest that many of the stressors occur during the early child-raising years when there are competing and equally powerful demands for time. In this publication the authors suggest many potential solutions for decreasing the amount of stress and overcoming challenges. Some suggestions include lessening personal expectations, finding an optimal location in which to live in proximity to family and the workplace, and maintaining good communication between partners. Additionally, the authors mentioned that institutional culture plays a role in the stress and happiness of physicians. They recommend that institutions develop family friendly policies such as on-site childcare or offering part-time positions for faculty.

NIH to Probe Racial Disparity in Grant Awards

Reardon S. Nature. 21 August 2014; Vol. 512 (7514)p243.

<http://www.ncbi.nlm.nih.gov/pubmed/25143096>

Implicit association tests (IAT) have been used to demonstrate that many individuals have implicit, or subconscious, racial and gender biases. Therefore, the NIH will begin analyzing grant awards to determine if there are biases against minority award applicants. A 2011 study suggested that, even when correcting for factors such as publication record and training, African American applicants are less likely as a white scientist to be funded, and this discrepancy appears during the peer review process. The NIH hopes to determine whether reviewers are considering an applicant's race while reviewing. Additionally, the NIH will also be analyzing the written reviews of grants to determine if there are differences in text analysis among races. Finally, the NIH will also determine if there is a bias when making the decision to discuss an application from an African American scientist at study sections.

Current News

SPOTLIGHT: Michele Evans, MD

Dr. Michele Evans, a successful woman in science, is the Deputy Scientific Director at the National Institute of Aging and the Chief of the Health Disparities Research Section in the Laboratory of Epidemiology and Population Sciences. Her research is focused on two broad questions. First, she is interested in addressing the effect of socioeconomic status on health disparities. Second, she seeks to understand how health disparities promote the development of accelerated aging phenotypes in vulnerable populations. Specifically, Dr. Evans is interested in understanding the behavioral, psychological, and molecular basis of health disparities. She also studies how DNA damage may lead to the development of age related disease.

Dr. Evans' research resulted in a paradigm-shifting article in the New England Journal of Medicine in 2013 regarding Vitamin D deficiency and supplementation in African Americans. Currently, Vitamin D deficiency is diagnosed using the concentration of the molecule 25-hydroxyvitamin D (25OHD), and if the levels are low, supplementation is recommended. However, many African Americans exhibit low levels of 25OHD, but do not experience symptoms associated with Vitamin D deficiency. To determine the underlying cause of this paradox, Dr. Evans' group examined over 2000 participants in her longitudinal, epidemiologic study of health disparities, Healthy Aging in Neighborhoods of Diversity across the Life Span (HANDLS), focusing on the levels and polymorphic variants of Vitamin D Binding protein, the protein that binds more 85-90% of Vitamin D in the circulation. They found that serum Vitamin D levels are at least in part genetically determined. Vitamin D binding protein variations account for lower 25OHD levels in a significant portion of African Americans. Genetic polymorphisms explain 79 percent of Vitamin D binding protein variation, which was unassociated with clinical evidence of Vitamin D deficiency. In fact, African American participants had a greater bone density and higher calcium levels than white participants. They also found that while bound levels of Vitamin D were lower among African Americans there were similar levels of calculated levels of free bioavailable vitamin when compared to white Americans in this study suggesting that it is the amount of free bioavailable Vitamin D that is most

relevant. This research suggests that the current “gold standard” for analyzing Vitamin D deficiency likely results in over-diagnosis in a large percentage of the population.

Dr. Evans is an internist and medical oncologist. She received her undergraduate degree from Barnard College of Columbia University, and her medical degree from Rutgers, The State University of New Jersey, and The Robert Wood Johnson Medical School. She then went on to complete her residency in internal medicine at Emory University School of Medicine and a fellowship in medical oncology at the National Cancer Institute. Dr. Evans credits her undergraduate training and her mentors for encouraging her to pursue a career as a physician-scientist. According to Dr. Evans, “Attending a women’s college provided an excellent mentoring environment to prepare me to pursue a career as a physician-scientist. At Barnard, they instilled in me the sense of what was possible regardless of the perceived barriers as well as the sense that I just needed to stay loyal to my ambitions and motivations. At every level, throughout my subsequent education and training, I was able to find mentors who also supported my goals and ambitions and helped me to achieve them. Given the demographics of academic medicine and biomedical research these were usually white men and I am so grateful to them for their tutelage. I must also say that my decision was largely influenced by one of the few African Americans in a leadership position in medical education at that time, Dr. John C. Gardner, who was the Dean of Students at Rutgers at that time. He stayed in touch with me from medical school through my time here at NIH providing continual encouragement and help.”

Dr. Evans is certainly a role model for all young investigators, but she is particularly inspirational to early-career women of color researchers. When asked what advice she would give to young researchers, she said, “Seek out mentors, ask for help when you need it and graciously accept help and advice when it is offered.”

SPOTLIGHT: NIH Research Festival Symposium “The Health of Women of Color: A Critical Intersection at the Corner of Sex/Gender and Race/Ethnicity”

The Committee on Women of Color in Biomedical Careers and the Office of Research on Women's Health hosted a well-attended symposium session at the 2014 NIH Research Festival on the health of women of color. As data in the recently released [Women of Color Health Data Book \(4th edition\)](#) illustrates, complex racial/ethnic health disparities exist between populations of women and across different stages of the lifespan. Six researchers from across NIH joined the panel to discuss findings from health studies that address critical race, ethnicity, sex, and/or gender intersections that can affect disease risk and therapeutic response.

Dr. Lauren Wood of the National Cancer Institute focused on recent advances and challenges in the clinical translation of therapeutic cancer vaccines. Her presentation highlighted the prevalence of cancer in women and people of color, and focused on the challenges of developing effective vaccines that can overcome immune suppression and immune resistance. Dr. Nakela Cook of the National Heart, Lung, and Blood Institute spoke about issues of race/sex intersectionality related to cardiovascular risk and treatment. While sex disparities have been improving over time, Dr. Cook highlighted that important differences remain, especially for women of color compared to others. Also targeting cardiovascular health, Dr. Salman Tujuddin of the National Institute of Aging, and a postdoctoral FARE winner, focused on racial differences in onset of coronary heart disease specifically as it relates to carotid intima-media thickness. He presented research on a genome-wide association analysis among African-Americans and biomarkers of susceptibility in African-American patients.

Other panelists highlighted important bio-social dimensions that contribute to the health of women and people of color. Dr. Gina Brown of the Office of AIDS Research addressed sexual violence and the biomedical risk for HIV infection in women. Dr. Brown’s presentation highlighted how a focus on sexual assault dynamics reveals insights into the process of HIV infection for victims. This topic reaches beyond the dynamics of direct disease transmission and genital tract biology to also consider compromised health prevention and access to care. Dr.

Tamara Harris of the National Institute of Aging focused on the common pathways by which weight-related health conditions contribute to risk of disease and disability. Health disparities related to these factors are particularly focused for women of color. Dr. Tiffany Powell-Wiley of the National Heart, Lung, and Blood Institute also discussed weight and body composition, particularly with respect to neighborhood dynamics. Dr. Powell-Wiley's presentation focused on cardiovascular risk and the link between measures of neighborhood deprivation and increased weight gain and compromised health.

Inside NIA: A Blog for Researchers, [The Next Generation: What Will It Take To Keep Them In Research?](#)

Posted on August 27, 2014 by [Marie A. Bernard, National Institute of Aging](#)

Marie Bernard, MD, Deputy Director of the National Institute of Aging, spent time with early career researchers at the NIA's 2014 Butler-Williams Scholars Program. Afterwards, she reflected on what is important to today's early career investigators. She feels that it is important for mentors and administrators to address what is important to individuals at these stages. Some of the key differences she notices about research now versus when she was an early career investigator are different expectations about quality of life, an interest in different topics, and a change in the proportion of clinicians pursuing research careers.

[Stanford's Jennifer Eberhardt Wins MacArthur 'Genius' Grant](#)

Posted on September 17, 2014 by the [MacArthur Foundation](#)

Social scientist, Jennifer Eberhardt, PhD, was awarded the prestigious MacArthur Genius Fellowship for her studies on how people racially code and categorize other individuals, with a specific focus on crime statistics. In response to her findings demonstrating racial biases in arrests and convictions, Dr. Eberhardt has begun working with law enforcement agencies to design interventions to improve policing and establish a level of trust between the police and the communities they serve. In light of her research accomplishments, Dr. Eberhardt, an associate professor in the Department of Psychology at Stanford University, is an excellent role model for young female scientists, specifically women of color researchers.

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