

Women in Biomedical Careers



NIH Updates on Women in Science **News for You 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 who may find it of interest.

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The U.S. House of Representatives Holds a Hearing on Women in Science

On July 21, the U.S. House of Representatives Committee on Science and Technology's Subcommittee on Research and Science Education held a hearing, which according the meeting charter was intended, "to examine current research findings, best practices, and the role of the federal agencies in increasing the interest of girls in science, technology, engineering, and mathematics (STEM) in primary and secondary school, and addressing the challenges that deter young women from pursuing post-secondary STEM degrees."

Subcommittee Chairman Daniel Lipinski noted in his opening statement that it is important for the Federal government to do its part in supporting research and programs that encourage best practices to attract and retain women in STEM, but there is a role for scientific societies, formal and informal educators, non-profit organizations, businesses, and other stakeholders.

The witnesses at the hearing were Dr. Alan Leshner, Chief Executive Officer, American Association for the Advancement of Science (AAAS); Dr. Marcia Brumit Kropf, Chief Operating Officer, Girls Incorporated; Dr. Sandra Hanson, Professor of Sociology, Catholic University; Ms. Barbara Bogue, Associate Professor, Engineering Science and Mechanics and Women in Engineering, Penn State College of Engineering; and Ms. Cheryl Thomas, President, Ardmore Associates LLC, a construction management company.

[Hearing Information, including video and transcripts, from the U.S. House of Representatives Committee on Science and Technology](#)

[Seeking Advice on Women in Science \(Inside Higher Ed\)](#)

[Hearing: Women's Participation in the Sciences \(American Institute of Physics FYI\)](#)

Three More Women Scientists to Join the Obama Administration in Leadership Roles, Including Surgeon General

On July 13, President Barack Obama nominated Regina Benjamin, M.D., M.B.A., to be the next U.S. Surgeon General. Dr. Benjamin currently runs a clinic in rural Bayou La Batre, AL which serves a diverse but impoverished mix of patients. She has previously served as Chair of the Federation of State Medical Boards of the United States, and as the Associate Dean for Rural Health at the University of South Alabama College of Medicine. In 1995 she was elected to the American Medical Association's board of trustees, making her the first physician under age 40 and the first African-American woman to be elected, and is currently serving as the president of the Medical Association of the State of Alabama, the first African-American woman to hold that post in any state.

Dr. Benjamin has often noted that the loss of much of her immediate family to preventable illnesses such as diabetes, high blood pressure, lung cancer, and HIV/AIDS has inspired her commitment to improving the nation's health and its health care.

On July 17, Lori B. Garver was confirmed as the Deputy Administrator of the National Aeronautics and Space Administration (NASA). Now second in command at NASA, Ms. Garver previously served as the lead civil space policy advisor for the 2008 Obama presidential campaign and helped guide the agency review team for NASA during the post-election transition. She is an experienced science administrator, having worked in a variety of senior roles in the nonprofit, government, and commercial sectors. She holds an M.S. in Science, Technology, and Public Policy from the George Washington University. In addition, she is the president and a board member of Women in Aerospace, and president of the American Astronautical Society.

On August 4, President Obama nominated Marcia K. McNutt, Ph.D. to the posts of Director of the U.S. Geological Survey and Science Advisor to the Secretary of the Interior. Dr. McNutt is currently the CEO of the Monterey Bay Aquarium Research Institute and a member of the in the National Academy of Sciences. She holds a doctorate in Earth Sciences from the Scripps Institution of Oceanography and has published 90 peer-reviewed scientific articles. While on the faculty of MIT, she served as the Director of the Joint Program in Oceanography & Applied Ocean Science & Engineering, a joint program offered by both MIT & the Woods Hole Oceanography Institution. After the announcement, Dr. McNutt said, "It is a distinct honor to be asked by the President to serve his administration, especially given the high caliber of science appointments already made."

[Regina Benjamin, Obama's Pick For Surgeon General \(Huffington Post\)](#)

[Lori B. Garver, NASA Deputy Administrator \(NASA\)](#)

[President Obama Announces More Key Administration Posts Including Dr. Marcia K. McNutt, Director of the United States Geological Survey and Science Advisor to the Secretary of the Interior \(White House\)](#)

Thirty-one Women Among the Winners of the Presidential Early Career Award for Scientists and Engineers

On July 9, President Barack Obama announced the names of the 100 recipients of the Presidential Early Career Award for Scientists and Engineers (PECASE). This prestigious, annual award is given to doctors, engineers, and scientists in fields ranging from molecular biology to high energy physics. Nine Federal departments and agencies nominate young researchers who have been successful in pursuing innovative research at the frontiers of science and technology as well as a commitment to community service and scientific leadership. Each winner receives up to five years of grant funding.

Of this year's one hundred PECASE winners, thirty-one were women, representing eight of the nine awarding agencies. Women represented fifty percent of awardees from two agencies; six of twelve winners from the NIH were women, as was one of the two winners from the Department of Veterans' Affairs. While neither of NASA's two winners were women, both winners from the Department of Education were women. Below, the names of this year's women awardees are listed by department along with the percentage of winners from that department that were women:

- **Department of Agriculture (1/3, 33.3%)**
- Erica Spackman, Poultry Res. Lab/USDA

- **Department of Commerce (1/6, 16.7%)**
- Pamela L. Heinselman, National Severe Storms Laboratory

- **Department of Defense (11/41, 26.8%)**
- Elizabeth Boon, Stony Brook University
- Yu Huang, University of California, Los Angeles
- Xiaoqin Li, University of Texas, Austin
- Leigh S. McCue-Weil, Virginia Polytechnic University
- Beverley J. McKeon, California Institute of Technology
- Anastasia H. Muliana, Texas A&M University
- Susan E. Parks, Penn State University
- Adrienne D. Stiff-Roberts, Duke University
- Sharon M. Weiss, Vanderbilt University
- Tanya Zelevinsky, Columbia University
- Xiaolin Zheng, Stanford University

- **Department of Education (2/2, 100%)**
- Nonie K. Lesaux, Harvard University
- Katherine A. Rawson, Kent State University

- **Department of Energy (2/12, 16.7%)**
- Cecilia R. Aragon, Lawrence Berkeley National Laboratory

- Thao D. Nguyen, Johns Hopkins University

- **Department of Veterans' Affairs (1/2, 50%)**
- Melina R. Kibbe, Jesse Brown VA

- **National Institutes of Health (6/12, 50%)**
- Felicia D. Goodrum, University of Arizona
- Helen H. Lu, Columbia University
- Ulrike Peters, Fred Hutchinson Cancer Center
- Marisa Roberto, The Scripps Research Institute
- Erica O. Saphire, The Scripps Research Institute
- Kristin V. Tarbell, The National Institute of Diabetes and Digestive and Kidney Diseases

- **National Science Foundation (7/20, 35%)**
- Maria M. Calbi, Southern Illinois University, Carbondale
- Amy B. Cerato, University of Oklahoma
- Monica F. Cox, Purdue University
- Chun Ning Lau, University of California, Riverside
- Rada F. Mihalcea, University of North Texas
- Zuzanna S. Siwy, University of California, Irvine
- Joy K. Ward, University of Kansas

[President Honors Outstanding Early-Career Scientists \(White House\)](#)

[A Statement from the Acting NIH Director Regarding the 2008 NIH-Supported PECASE Recipients \(NIH News\)](#)

Study Examines the Professional and Work/life Challenges of Women and Men Surgeons

Katherine M. Troppmann, M.D., a gastrointestinal surgeon and Associate Professor of Surgery at the University of California – Davis Medical Center (UCDMC) lead a team of researchers in conducting a survey of board certified surgeons to obtain a better understanding of the issues faced by women surgeons and how they differ from men surgeons. The authors noted that since women currently represent only 14% of the surgical workforce in the United States, but over 50% of the medical students, “a better understanding of the issues that women surgeons face when integrating their family and professional lives would provide professional societies and health care policy makers with the opportunity to intervene and to address issues and obstacles that (1) keep women from entering surgery and (2) contribute to attrition among women surgeons.”

The surveys were distributed to American Board of Surgery-certified surgeons who received their certification in 1988, 1992, 1996, 2000, or 2004. A total of 895 surgeons responded, 20.3% of whom were women, although women made up only 14.2% of the sample. The authors note that while previous surveys of surgeons have sampled only academic surgeons, medical students on their perceptions of surgery as a career, or practitioners of individual subspecialties, this survey covered practicing surgeons in all surgical subspecialties. The survey, which collected demographic data including marital and parental status, also asked about full-time vs. part-time work experience, spousal work status, timing of the birth or adoption of the first child, availability of on-site child care, number of hours worked, and perception questions regarding whether the respondent felt they worked too many hours or whether they would recommend surgery as a career to others.

The responses to the surveys were analyzed with respect to gender and showed that for the most part, both women and men surgeons would choose that career again and would recommend it as a career to others. Interestingly, men surgeons were equally likely as women to recommend the career to men, but less likely to recommend the career to women. Women reported working on average 5 fewer hours a week as men but both men and women reported that they felt they worked too many hours. More women had worked part-time as a surgeon at some point in their careers and women were generally in favor increased opportunities for part-time work.

Women were more likely than men to be single or divorced and those who were married were more likely to have a spouse that worked outside the home. Fewer women than men had children and of those with children women were more likely to have an in-home babysitter as the primary caretaker whereas for men it was more likely to be a spouse of significant other. While most surgeons, both women and men reported that there was no on-site child care available where they worked, more women than men thought that there should be.

Dr. Troppmann’s co-authors were Bryan E. Palis, M.A. of the American College of Surgeons, and James E. Goodnight Jr., M.D., Ph.D., Hung S. Ho, M.D., and Christopher Troppmann, M.D., all of the Department of Surgery at UCDMC.

[Women Surgeons in the New Millennium \(Archives of Surgery\)](#)

[UC Davis study highlights work-life issues of female surgeons \(EurekAlert!\)](#)

Registration is Now Open for the Third NIH Regional Meeting Which Will Address Women's Careers in Science and Seek New Dimensions and Strategies for Women's Health Research

Registration is now open for the third regional meeting entitled *Moving into the Future - New Dimensions and Strategies for Women's Health Research for the National Institutes of Health*. As well as covering health issues throughout the lifespan, this meeting will continue the conversation on women's careers in science that has taken place at the previous two meetings. Recommendations from these meetings include improvements to child care and family leave policies; emphasis on the importance of "leveling the playing field" and mentoring; including women of color and their unique challenges in all discussions; focusing efforts on both early career and advanced leadership training; and continuing to support research on the barriers that oppose as well as the interventions that promote women's success in biomedical careers. While the discussion at the upcoming meeting will build on previous recommendations, it is hoped that participants will bring with them truly innovative suggestions and "outside the box" ideas. The theme of the upcoming working group will be careers in dentistry, bioengineering, and other non-M.D. disciplines.

The meeting is being co-hosted by the NIH Office of Research on Women's Health, the Warren Alpert Medical School of Brown University, and Women & Infants Hospital of Rhode Island. It will take place on September 21-23 at the Women & Infants Education Center in Providence, RI. The deadline for hotel reservations is August 27, 2009.

[*Moving Into the Future – New Dimensions and Strategies for Women's Health Research for the National Institutes of Health*](#)

[Federal Register Notice of Meeting](#)

Highlighting Best Practices – Stanford University

Stanford University, located in Palo Alto, California, has been among the forerunners of instituting family-friendly policies for its faculty, postdoctoral scholars, and graduate students. The policies for faculty include multiple child care subsidy programs, child care programs including onsite centers, emergency and back up care, and grants to defray the cost of child care while traveling for work. The university also offers elder dependent care and general parenting resources. The Faculty Development & Diversity Office supplies an online listing of these programs as well as a downloadable handbook, [*Family Matters @ Stanford for Faculty*](#), which lists also contains information on tenure clock extension, extended leave, part-time appointment policies, dual-career services, etc., in one place, ensuring that faculty can easily find and understand what programs are available to them without having to search multiple websites.

A similar handbook is available for postdoctoral scholars. This handbook outlines the rights and responsibilities of postdoctoral scholars, who are registered as non-matriculated, non-degree seeking students with the University. The classification of scholars as students, among other things, allows deferment of student loans. Postdoctoral scholars are also guaranteed a minimum yearly salary based on number of years of research and a six week paid maternity leave period, among other benefits which are outlined in the handbook.

For graduate students, the Graduate Academic Policies and Procedures handbook (the GAP handbook) contains a compilation of university policies and other information related to the academic progress of Stanford graduate students -- from their application and admission, to the conferral of degrees and retention of records. It also contains information on leave, salary, and benefits. This information has been compiled from multiple sources, removing the burden of researching policies from graduate students and ensuring that conflicting or ambiguous policies are not posted at different sites.

[In 2005](#), Stanford University's chemistry department adopted a policy which made pregnant graduate students eligible for an academic accommodation period of up to two consecutive academic quarters (in total) before and after the birth. This policy now applies to all Stanford graduate students. During the accommodation period, the student may postpone course assignments, examinations, and other academic requirements, while retaining their full-time status and their eligibility for health insurance, student housing, and access to Stanford facilities. Students supported by grants or teaching assistantships are eligible for relief from duties with pay for six weeks. The University set aside a fund to supplement those students whose external funding does not allow funding for maternity leave.

[Stanford University Family Friendly Programs for Faculty](#)

[Stanford University Postdoctoral Scholars Handbook](#)

[Stanford University Childbirth Accommodation Policy for Graduate Students \(PDF\)](#)

Women Scientists in Action – Yardena Samuels, Ph.D.

Yardena Samuels, Ph.D., is a tenure track investigator at the National Human Genome Research Institute (NHGRI) in the NIH Intramural Research Program. Her research focuses on the genetics of melanoma, a type of skin cancer.

Dr. Samuels received her B.Sc. from Cambridge University, UK where she focused her studies on cancer research. Dr. Samuels went on to earn an M.Sc. in immunology and cancer research at Hebrew University of Jerusalem, Hadassah Medical School in Israel and a Ph.D. in molecular cancer biology at the Ludwig Institute for Cancer Research, Imperial College, London. During her Ph.D., Dr. Samuels was involved in identifying a key family of proteins that can both promote and inhibit tumor growth by associating with the protein p53. The discovery of the evolutionarily conserved ASPP family of proteins, which consists of three members, ASPP1, ASPP2 and inhibitory ASPP (iASPP), revealed a novel mechanism by which the apoptotic function of the p53 family is regulated.

Impressed with the ingenuity of their genetic model of colorectal tumorigenesis, or tumor growth, she joined the lab of Dr. Bert Vogelstein and learned high-throughput DNA sequencing. Using this technique, she discovered that the gene encoding PI3Kalpha is mutated in 32% of colorectal cancer patients as well as in a large fraction of other human cancers, making this one of the most highly mutated oncogenes in human malignancies. Functional characterization of these mutations showed that PI3Kalpha is an exciting target for therapeutic intervention and opens the door to individualized diagnostic and treatment approaches in human cancer. This early and important success strengthened her conviction that her “scientific path was to pursue cancer genetics as a means of understanding tumorigenesis and thereby combating it.”

As a tenure track researcher in the Molecular Cancer Genetics Section of the Cancer Genetics Branch, NHGRI, Dr. Samuels continues to use high-throughput DNA sequencing and whole-genome genotyping to identify novel mutations in gene families that regulate signal transduction in late-stage cutaneous melanoma. Melanoma disease progression is thought to be associated with the accumulation of genetic mutations over time. While several genes have already been implicated in the development of melanoma, Dr. Samuels’ interest is to further elucidate these genetic alterations and to investigate their functional effects. To this end she has recently reported the results of the first systematic genetic analysis of a group of enzymes, called matrix metalloproteinases (MMPs), implicated in many types of cancer. Importantly, her group found that one-quarter of human melanoma tumors had mutations in genes that code for MMP enzymes. Among the discoveries of particular importance for melanoma treatment is the identification of a new tumor suppressor gene, called MMP-8.

Dr. Samuels’ team is currently using similar high throughput approaches to examine the genes encoding tyrosine protein kinases, which play important roles in cell signaling; these genes are associated with a variety of human cancers and may be targets for therapeutic intervention. Identifying melanoma-associated genetic alterations in specific genes may eventually allow clinicians to understand the clinical progression of the disease, allowing them to better predict clinical course and therapeutic response. Dr. Samuels hopes to identify new targets for drug development and to deliver on the promises made during human genome sequencing efforts by connecting the base pairs of the Human Genome Project to the bedside of those afflicted with genetic disease.

Dr. Samuels credits her success in balancing her active roles in science and in her family to good fortune and enormous support from her husband, colleagues, and mentors. She is also committed to helping train the next generation of scientists. This summer, she hosted an undergraduate intern as part of the NIH Intramural Program on Research on Women’s Health ([IPRWH](#)) Summer Internship Program. The IPRWH was created to help promote women's health research, including sex and gender comparisons, within the NIH Intramural Research Program. Its mission includes enhancing communication among, and recruitment of, researchers on women's health among the twenty-seven Institutes and Centers of the NIH and is supported by the Office of the Director, the Office of Intramural Research and the Office of Research on Women’s Health.

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