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President Nominates Suresh to Lead NSF; Marrett Now Acting Director

On June 3, President Obama announced his intention to nominate Subra Suresh, currently Dean of the School of Engineering and the Vannevar Bush Professor of Engineering at the Massachusetts Institute of Technology (MIT), to become the next director of the National Science Foundation (NSF). The nomination was sent to the Senate on June 7, where Suresh must now endure the confirmation process.

Suresh would replace Arden Bement, who left NSF at the end of May after serving as director since 2004. Bement has returned to Purdue University, where he will head the Global Policy Research Institute. Before leaving, he announced that current Acting Deputy Director Cora Marrett will serve as Acting NSF Director until Suresh is confirmed.

Marrett returned to NSF in 2007 to head the Education and Human Resources directorate and was named Acting Deputy Director in January 2009. She also served as the first Assistant Director for the Social, Behavioral and Economic Sciences Directorate from 1992-1996.

From 2000 to 2006, Suresh served as the head of the MIT Department of Materials Science and Engineering. He joined MIT in 1993 as the R.P. Simmons Professor of Materials Science and Engineering and since then has held joint faculty appointments in the Departments of Mechanical Engineering and Biological Engineering, as well as the Division of Health Sciences and Technology. From 1983 to 1993, Suresh was a faculty member in the Division of Engineering at Brown University.

He has been elected to the U.S. National Academy of Engineering, the American Academy of Arts and Sciences, the Indian National Academy of Engineering, the Indian Academy of Sciences in Bangalore, the Royal Spanish Academy of Sciences, the Academy of Sciences of the Developing World based in Trieste, Italy, and the German National Academy of Sciences. Suresh is the recipient of the 2007 European Materials Medal, the highest honor conferred by the Federation of European Materials Societies, and the 2006 Acta Materialia Gold Medal.

The NSF director-designate has a bachelor's degree from the Indian Institute of Technology in Madras, an M.S. from Iowa State University, and a Sc.D. from the Massachusetts Institute of Technology. Suresh also holds honorary doctorate degrees from the Technical University of Madrid in Spain and Sweden's Royal Institute of Technology in Stockholm.

The Five Percent Solution to the Deficit Problem

With the federal deficit exceeding $1.4 trillion in FY 2010 and the expectation that in FY 2011 it will be only slightly less than that, the Obama Administration has decided to focus on deficit reduction in its guidance to federal agencies as they prepare their FY 2012 budgets for submission to the Office of Management and Budget (OMB).

The President's FY 2011 budget proposal sent to the Congress in early February of this year requested a three-year freeze on overall non-security spending. Within that overall freeze some agencies, such as the National Science Foundation (NSF), received significant proposed increases (see Update, March 8, 2010). The President has also appointed a commission chaired by former Clinton Administration Chief of Staff Erskine Bowles and former Wyoming Republican Senator Alan Simpson that is supposed to issue a report this December indicating the path forward to reducing the deficit by 2015.

Federal agencies are always working with three budgets at any one time. The current fiscal year (2010), in which they are spending their appropriation; the next fiscal year (2011), when they await their final spending number from the Congress; and the year after that (2012), where
they are conducting internal discussions and making decisions about new programs to ask for and how to justify the spending increases they usually seek.

In a memorandum issued on June 8, OMB director Peter Orszag told the non-security agencies to forget about increases in their thinking about FY 2012 and get ready on September 13 to "submit a budget request five percent below the discretionary total provided for that agency for FY 2012 in the FY 2011 budget." For NSF this would mean providing OMB savings of about $390 million.

In meeting that target, Orszag continued, "agencies should not simply reduce spending across the board." Rather, he directed the agencies to "restructure their operations strategically."

According to the memo, this means eliminating low-priority programs and activities. In a separate guidance issued by OMB and White House Chief of Staff Rahm Emanuel, agencies were ordered "to identify the programs and subprograms that have the lowest impact on your agency's mission and constitute at least five percent of your agency's discretionary budget."

Restructuring also means re-engineering staff plans, improving procurement and grants management processes and strengthening information technology (IT) and financial management "to squeeze waste out of existing operations and produce better outcomes." Improving IT was the focus of a speech Orszag delivered to the Center for American Progress on June 8. He declared: "Closing the IT gap [between what is available for the private sector worker and the public sector worker] is perhaps the single most important step we can take in creating a more efficient and responsive government."

A third strategic goal, according to the Budget Guidance memo, would focus 'management attention on high-priority performance goals...to deliver better service to the American people within available resources." This includes eliminating duplication of programs. In his speech, Orszag cited the "110 funded programs in Science, Technology, Engineering and Mathematics education in 14 departments and agencies across the federal government; over 100 programs that support youth mentoring scattered across 13 agencies; and more than 40 programs located in 11 departments with responsibility for employment and training." "This redundancy wastes resources and makes it harder to act on each of these worthy goals," the OMB director concluded.

All of this activity will lead to the President's proposed FY 2012 budget scheduled for unveiling in early February 2011. Within the freeze and the proposed reductions, the Administration will prioritize its funding for the agencies. For example, will the NSF exercise under the guidance come to nothing, since the Administration has pronounced its strong support for science and for doubling NSF's budget?

In the meantime, the FY 2011 appropriations process has barely gotten underway as neither the House nor the Senate has passed a budget resolution setting overall spending targets for the appropriations committees to use to divide the pie among its 12 Subcommittees. As this Administration, like others before it, has discovered, requesting to eliminate or significantly reduce spending for programs cherished by members of Congress will lead to hearings punctuated by expressions of outrage at the proposals and much political grandstanding. Add to this the exacerbation of an already fractured political system with a congressional election in November. At this point in the FY 2011 spending process, most observers expect a Continuing Resolution when the new fiscal year begins on October 1, 2010 that would fund agencies at their FY 2010 levels until some uncertain time.

Yet, even in the midst of an uncertain economic recovery from the "great recession," it appears that the Administration and Congress are ready to heed the advice of Federal Reserve Chairman Ben Bernanke and other economists that current federal deficits are unsustainable and action must be taken.

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On June 9, the Senate Commerce, Science and Transportation Committee, chaired by Sen. Jay Rockefeller (D-WV), approved and sent to the full Senate the nomination of Carl Wieman to become the Associate Director for Science at the White House Office of Science and Technology Policy (OSTP).

President Obama nominated Wieman, who currently divides his time between the University of British Columbia and the University of Colorado, on March 22 and his hearing before the Committee occurred on May 20.

Wieman is a Nobel Laureate Physicist, who in recent years has turned his attention to directing Collaborative Science Education Initiatives to improve undergraduate science education. (For more on his background, see Update April 5, 2010.) At the hearing, Rockefeller indicated that he welcomed Wieman's experience in STEM (Science, Technology, Engineering, and Math) education. Rockefeller noted, as OMB Director Peter Orszag has as well, (see other story) that one concern is the "need to improve collaboration across the federal government between STEM programs," making it less difficult to evaluate their overall effectiveness.

The Chairman concluded: "For too long, American students have lagged behind much of the developed world in measures of scientific and technical literacy. The stakes are too high. We have to get this right. I want to thank Dr. Wieman for his testimony and for his service to our nation. I will be looking to him for his leadership in this very important area. I am committed to making sure our nation is prepared to compete in the 21st-century, global economy. And that begins with creating a highly educated science and engineering workforce."

Wieman agreed about the importance of improving U.S. STEM education, testifying that: "Our global economy is increasingly based on science and technology. To maintain US economic competitiveness and leadership in innovation, we need to also have leadership in STEM education. This will both enhance the scientific and engineering workforce and the technical literacy of all our citizens, providing them with complex problem-solving skills they can use in many aspects of their jobs and lives."

The full Senate will now take up Wieman's nomination. One can hope that this one, unlike many Administration nominations, will not be stymied by...
DOD Affirms Commitment to Dissemination of Unclassified Research Results

On May 24, Department of Defense (DOD) Undersecretary Ashton Carter issued a memorandum to the Secretaries of the Military Services, the Joint Chiefs of Staff, and the Directors of other defense agencies affirming the Department's and the Obama Administration's commitment to "free..."
Carter further indicated that policies “governing restrictions that apply to the DOD on basic and applied research,” must recognize “the necessarily open nature of unclassified fundamental research.”

The latest memo is an update and clarification of National Security Decision Directive (NSDD) 189 issued by the Reagan Administration in 1985. That directive sought to establish a “national policy on the transfer of scientific, technical, and engineering information.” The Reagan White House was concerned about the transfer of American technology to enhance the military capability of what was then called the “Eastern Bloc” - the Soviet Union and its Eastern European allies.

Relying on a 1982 National Academy of Sciences study chaired by Dale Corson of Cornell University and co-sponsored by DOD and the National Science Foundation, the Reagan Administration concluded that to the “maximum extent possible, the products of fundamental research [should] remain unrestricted.” When the national security requires controls, the mechanism would be classification, the Reagan folks concluded.

Fundamental research was defined in 1985 as: “Basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community.” The new Carter memo uses the same definition.

It also stresses the intent that DOD should not restrict the disclosure of research results. It furthermore suggests that “DOD awards for the performance of contracted fundamental research should not involve classified items, information, or technology other than in exceptional circumstances.” In addition, “the performance of contracted fundamental research should not be managed in a way that it becomes subject to restrictions on the involvement of foreign researchers or publication restrictions.” Of course, Carter points out there may be exceptional cases in which these guidelines should not be applied. Yet, he declares that “such cases will be extremely rare and that exception should be made only with the approval of high-level DOD management.”

The full Carter memo and the earlier document can be found at: 

**Senate Panel Examines the Impact of the Recession on the State of the Nation's Children**

On June 8, the Senate Health, Education, Labor, and Pensions Committee's Subcommittee on Children and Families, chaired by Senator Christopher Dodd (D-CT), held a hearing on "The State of the American Child." to discuss the most challenging issues facing today's young people and how Congress and the American public can help solve them.

Some indicators suggest the state of the American child is not good. Recent studies have reported that one in a hundred children is a victim of substance abuse, a number that doubles for those below one year of age. Nearly three-quarters of a million children were abused or neglected last year. Every 101 minutes, a child in the United States dies from an unintentional injury, such as a vehicle crash or a fire, making it the leading cause of death and disability for children ages one to 14. The persistent achievement gap in U.S. schools has been well documented and money to fix crumbling facilities, alleviate crowded classrooms, and provide quality after school programs has become scarce.

Dodd recalled how he has consistently worked for the rights of children and families. "I fought for the Family and Medical Leave Act and to help every family afford pediatric checkups through the CHIP (Child Health Insurance Program) program. I've worked to build an effective Head Start program, so that every child can be prepared to excel in school. We've learned that, while a child's development begins at birth, it doesn't start and stop with the ring of the school bell. And so I've worked to establish safe and stimulating child care facilities, as well as quality after school programming." "I'm proud of that work," continued Dodd "but I'm well aware that there's more work to be done."

The star witness for the hearing was Alma Powell, Chair of the America's Promise Alliance. The Alliance, founded in 1997 with General Colin Powell as Chairman, is a cross-sector partnership of more than 300 corporations, nonprofits, faith-based organizations and advocacy groups that are passionate about improving lives and changing outcomes for children. One of the major programs of the Alliance is Grad Nation, a 10-year mobilization campaign to reverse the dropout crisis and enable our children to be prepared for success in college, work and life.

Powell told the Subcommittee that the U.S. faces many urgent priorities: the economy, healthcare, national security and global competitiveness but that "one of the most important issues we face as a nation is one that impacts all of these priorities - and that is the well being of our children." She lamented that: "Sadly, our children are often overlooked when addressing many urgent issues of the time. But let there be no doubt - meeting the needs of our most vulnerable youth means building a stronger, safer, healthier, and more equitable country."

Calling attention to the high school dropout crisis, Powell testified that it not only takes a toll on our children, but it also takes an enormous and unsustainable toll on the country. She asked the Subcommittee to consider the students from the class of 2009, calculating that had all of them stayed in school and graduated our economy would gain more than $320 billion over their working lives.

She declared that the government has a role to play in providing the resources families need to thrive. "I want to make it very clear that this is a crisis we can solve," said Powell. "We have seen what success looks like when sound policies and best practices are paired with strong community support," she noted.

Powell concluded that the state of our children is not simply a failure of government or of schools but that "it is a failure of all of us" and hence "Each and every one of us must be part of the solution."

Impact of ‘Great Recession’

Also testifying was Harry Holzer, Professor of Public Policy at Georgetown University and a Fellow of the Urban Institute's Center on Labor, Human Services, and Population. Holzer focused his remarks on the impact of the the 'Great Recession' on the well-being of American children.

NCRR Science Education Partnership Award – Applications Wanted

Through its Science Education Partnership Award (SEPA), the National Institutes of Health (NIH) National Center for research Resources (NCRR) actively supports K-12 and Informal Science Education/media projects to support the development of a diversified pipeline for basic, behavioral, and clinical research fields and to educate the community regarding NIH-funded research and health-related issues. Accordingly, NCRR is seeking applications (PAR-10-206) to its SEPA program for the development and evaluation of innovative research education programs to improve PreK-12 research career opportunities and the community’s understanding of the health science advances supported by NIH-funded clinical and basic research.

The SEPA K-12 programs provide educational resources, a supportive learning environment, near-peer mentoring and community involvement. PreK-12 curriculum content must be inquiry-based, hands-on, biomedically relevant, and rigorously evaluated. Examples of appropriate SEPA projects include, but are not limited to the following:

- PreK-12 curriculum that will increase student understanding and interest in science and the scientific method.
- Teacher Professional Development and research internship opportunities for PreK-12 teachers that deliver scientific content, an understanding of the scientific research process and pedagogical skills.
- Science center and museum-based exhibits, traveling exhibits and public outreach activities (e.g., Science Cafes) that will educate students, teachers and the community on topical, health related issues such as: stem cells and regenerative medicine; NIH-funded basic or clinical research; the clinical trials process; ethical use of animals in research or emerging infectious diseases.
- Activities relevant to preschool & kindergarten children such as food and nutrition activities that will introduce concepts of healthy food and exercise and the negative impact of an unhealthy diet.
- Collaborations with NCRR-funded Clinical Trial Science Awards (CTSA), Institutional Development Awards (IDea), Research Centers in Minority Institutions (RCMI), Animal Resources or Biomedical Technology Research Centers. These collaborations should leverage the proposed SEPA project with the existing or to-be-developed NCRR-funded resource centers.
- Neuroscience-based projects on anatomy, cell biology, physiology and chemistry of the brain that integrate current technologies such as neuroimaging, genomics and computational neuroscience into PreK-12 curriculum or ISE/media projects.
- Nanotechnology-based projects that address medical applications such as disease prevention and diagnosis, novel methods of therapy or medical tools for the understanding of molecular and cellular processes.
- Community-based health education and participatory research programs on important health prevention issues such as obesity, diabetes and cardiovascular disease.
- Veterinarian-based PreK-12 or ISE/media projects that educate students, teachers, and the community on the need for, and the ethical use of, animals in research.
- Public service announcements, documentaries, films, radio, TV and other media-based projects that may include topics such as: lifestyle and health correlations (obesity, diabetes, cardiovascular); chronic diseases or emerging infectious disease (osteoporosis, HIV/AIDS, influenza), NIH-funded research, regenerative medicine or the clinical trials process.
- Innovative and rigorous evaluation methodology to assess the effectiveness of PreK-12 or ISE/media projects that may include Randomized Controlled Trials or Well-Matched Comparison-Group study design.

The proposed research education program may complement ongoing research training and education occurring at the applicant institution, but the proposed educational experiences must be distinct from those research training and research education programs currently receiving federal support. This grant mechanism (NIH Research Education-R25) is not a substitute for an institutional research training program (T32).
Seeding National Mentoring Networks to Enhance Diversity of the Mental Health Research Workforce

The National Institute of Mental Health (NIMH) recently released a funding opportunity announcement (FOA) soliciting Resource-Related Research Projects-Cooperative Agreement applications from institutions and organizations that are designed to conceptualize, plan and pilot an innovative prototype of a national infrastructure to mentor individuals from diverse backgrounds who are conducting research relevant to its mission. The Institute expects the resulting infrastructure will be capable of sustaining an effective and vibrant national mentoring network.

According to the FOA, each mentoring network will be expected to have a focused scientific theme that is highly germane to the mission and strategic priorities of the NIMH including the Center for Mental Health Research on AIDS. The networks are envisioned to enhance the professional development of the participating individuals, sustain their career trajectory through research independence, and lead to scientific advances that will help transform the understanding and treatment of mental illness and HIV/AIDS. Accordingly, mentoring programs are expected to propose a set of goals rather than a single goal.

Access to a national network of skilled mentors who are outstanding researchers is seen by NIMH as assisting protégés in various ways with their specific goals depending upon the career stage of each protégé. The FOA cites as an example, a national mentoring network that facilitates leadership development, learning to mentor others, and successful transitions from one career stage to another. Additionally, a national mentoring network could help protégés identify potential collaborators and could facilitate establishing interdisciplinary or translational collaborations. NIMH expects, however, that an overarching goal of any mentoring network is to facilitate the professional success of protégés as independent researchers and members of the research community.

NIMH intends this FOA to seed mentoring networks across the scientific spectrum of the NIMH research mission. In order to provide sustained, competitive funding for national mentoring networks the Institute expects to issue a subsequent FOA to provide an opportunity to compete for continued support of mentoring networks for individuals from diverse backgrounds to achieve a long-term vision of an integrated collective of mentoring networks.

Letters of intent are due on August 30, 2010. Applications are due September 29, 2010. NIMH will hold a pre-application teleconference on Monday, June 21, 2010, from 3:00 p.m. to 4:00 p.m. (EDT) to which all prospective applicants are invited. This is a technical assistance teleconference conducted by NIMH staff involved in managing this program to explain the goals and objectives of this initiative and answer questions from attendees. Potential applicants are encouraged to submit their questions or comments to NIMH_Training@mail.nih.gov in advance of the call. Potential applicants interested in participating in the technical assistance call should send a message to the e-mailbox above to obtain the dial-in number no later than 5:00 p.m. (EDT), June 17, 2010. For more information see: http://grants.nih.gov/grants/guide/pa-files/PAR-10-206.html.
The Consortium of Social Science Associations (COSSA) is an advocacy organization promoting attention to and federal support for the social and behavioral sciences.

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Address all inquiries to COSSA at newsletters@cossa.org