COMPETES Reauthorization Emerges from House Science and Technology Committee

After a multiple-hour markup that included slogging through almost 60 amendments, on April 28 the House Science and Technology (S&T) Committee reported H.R. 5116, the reauthorization of the America COMPETES Act, to the House floor. Committee Chairman Rep. Bart Gordon (D-TN), who will retire from Congress at the end of this year, promoted the legislation saying: "The statistics speak for them themselves. More than half of our economic growth since World War II can be directly attributed to development and adoption of new technologies. The path is simple. Research and education lead to innovation. Innovation leads to economic development and good paying jobs."

The bill makes investments in science, innovation, and education to strengthen the U.S. scientific and economic leadership by reauthorizing the National Science Foundation (NSF), the National Institute on Standards and Technology, and the Office of Science at the Department of Energy. It also reauthorizes the National Nanotechnology Initiative and the Networking and Information Technology Research and Development Act. There are provisions directing the Office of Science and Technology Policy (OSTP) to work with agencies to develop a consistent policy regarding the management of scientific collection, coordinating federal programs and activities in manufacturing research and development, and establishing a working group to coordinate federal science agency
research and policies related to the dissemination and stewardship of the results of federally supported research. (For details of the NSF-related parts of the bill see UPDATE, April 19, 2010)

Prior to the markup, Gordon had reduced the authorization levels in the bill by ten percent. So that the NSF authorized level for FY 2011 is $7.481 billion, but still $57 million above the President's request. The legislation maintains a path toward doubling the NSF budget, but it is now spread over ten years rather than the seven in the COMPETES Act passed in 2007. Despite this concession to those concerned with federal spending, Republicans such as Reps. Paul Broun (R-GA) and Mario Diaz-Balart (R-FL) on the Committee offered a slew of amendments to reduce the funding further. They all failed. The authorization levels are recommendations. The Appropriations Committees make the decisions on actual funding levels for the agencies.

One amendment that was accepted came from Rep. Eddie Bernice Johnson (D-TX). It seeks to expand federal programs to "fulfill the potential of women in science and engineering." The provisions include support for holding workshops, providing extensions in research grants supports for caregivers, and collecting data by gender on research grants and faculty demographics, including hiring, promotion, tenure, ranks, and attrition.

The Committee hopes that the full House will act on the legislation before the Memorial Day recess.

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Collins Discusses NIH Budget with House Appropriations Panel

Making his first appearance before the House Appropriations Subcommittee on Labor, Health and Human Services, and Education as director of the National Institutes of Health (NIH), Francis Collins thanked the Subcommittee and the Congress for its support of the agency. Collins, presenting the fiscal year 2011 budget, discussed his "vision for the future of biomedical research." Appropriations Committee and Subcommittee Chair Rep. David Obey (D-WI) opened the hearing acknowledging that "supporting the work of NIH has been a priority of this subcommittee." He noted that he was "pleased that the president has in the context of a tight budget situation still provided a request for a billion dollar increase proposed for NIH overall." Obey also expressed his desire for the development of a better track record from the agency in attacking disease, noting that it has been a "mixed bag with respect to success against various diseases." He articulated his appreciation of Collin's efforts to make "it quite clear that there is not necessarily any inconsistency between a pursuit of science and the belief in religion."

Rep. Jerry Lewis (R-CA), Ranking Member of the full Appropriations Committee, expressed his concern that despite the president's budget with the billion dollar adjustment, one could argue that there's an $8 billion reduction, "if you take where we were in FY 09 and that dollar amount and if real value came from that stimulus funding." He asked Collins for "his commentary regarding that and how you've budgeted to try to deal with that adjustment, if it remains as a part of our pattern." Lewis noted that if he was looking at those adjustments in readjusting budgets, he "would make sure that continuing funding flowing to NIH would have very high priority in those considerations." He further emphasized there is a "broadly based, nonpartisan support for research, applied research, as well as the basic research" and stressed the "need to preserve this nonpartisan environment in this committee and otherwise."

Collins responded by noting that "given the very difficult economic times, the president's support of science and the willingness to put forward a $1 billion increase for NIH is reflective of the administration's strong support for research and what it can do." The NIH, said Collins, is "deeply grateful for that, because, certainly, it could have been justified at the time of growing deficits to be even more conservative here in terms of providing support for this." According to Collins, the proposed increase basically matches the inflationary index for biomedical research, just about 3.2 percent. He acknowledged that the outcome of Recovery Act funding would result in a "cliff" in
resources available in FY 2011 and the agency has attempted to reduce the consequences of this cliff by funding one-time expenditures and special equipment needs. The agency has tried to fund special projects that it thought could get done in two years, along with innovative grants, Collins informed the Subcommittee.

Responding to Obey’s question as to whether it “would it have been better had the committee not provided that money over the last two years,” Collins noted that the “$10 billion came at a time where there was a great pent-up demand and need, and a whole series of innovative ideas that weren’t possible to support.” Scientists “came forth in great numbers” and those “supported by the Recovery Act are doing remarkable things right now. And we will see the consequences of those.” He cautioned, however, that it would not happen overnight “because science does not operate overnight,” but in the long run the Recovery Act funding would be seen as having been a very wise investment in advancing research. He acknowledged that “it does create some stresses for the system when this comes forth in a two-year period and we can’t see sort of a more stable trajectory.” He observed that the upcoming stresses in FY 2011 would be worth it “to get the research done that has been possible to support through the Recovery Act.”

Rep. Tim Ryan (D-OH) inquired about NIH’s support of behavioral research, particularly the area of mindfulness and social and emotional learning and its use in teaching children how to pay attention in class. Noting that health care reform will add approximately 30 million people to the health care system, Ryan added that we know that high levels of long-term stress leads to a lot of the problems that we are researching. He encouraged the NIH to continue to support this research. Responding, Collins noted that the NIH “agrees that this is a fruitful area for research. Clearly, the mind, body interaction plays a significant role in lots of illnesses, both in terms of their occurrence and their adaptation to those who are afflicted with them.” He pointed to the NIH’s basic behavior and social science initiative, OppNet, which the agency thinks “will provide some of the foundational information to help us understand the correlation between behavior and illness.”

In his oral testimony, Collins discussed the five areas of opportunity/themes he sees for the NIH (see UPDATE, September 15, 2009). One of these opportunities, he indicated, addresses getting information out there about the public health by putting science to work for the benefit of health care. Collins stressed the need for evidence to support the transformation of the practice of medicine that all agree is necessary. “Some of that is comparative effectiveness research, personalized medicine, the study and the attempt to solve health disparities, the efforts to focus on behavioral medicine, and even on health care economics, to understand what are the factors that play into better outcomes at lower costs.” He also discussed the theme of global health, noting that there is the opportunity “to push that agenda forward, building upon what NIH has done already in the past, and focusing now not only on infectious diseases but also on noncommunicable diseases like depression, which also become in the developing world major public health problems.” It is the “noncommunicable diseases that represent the most rapidly growing area of morbidity and mortality,” he explained.

Ranking Subcommittee Member Todd Tiahrt (R-KS) expressed his concern about comparative effectiveness research and his fear the U.S. would “start making decisions based on costs that start rationing some care, rationing some treatments.” Collins explained that in the kinds of research NIH has done in the past and is planning to do now, the goal is to “identify interventions that may be more effective and others that are less so, because evidence has to be valuable in making decisions about how we’re going to put together a health care system that actually works.” He cited the Diabetes Prevention Program (DPP) as an example of a comparative effectiveness research study that taught us something really important about how to prevent diabetes and which is now being implemented across the country.

National Institute of Diabetes, Digestive Diseases, and Kidney Diseases director Griffin Rodgers explained to the Subcommittee that the DPP was a landmark study started more than 10 years ago involving multiple institutes within the NIH and the Centers for Disease Control and Prevention (CDC) to identify those patients who are at high risk of developing diabetes. He explained that the intervention, a comparative effectiveness study, involved patients being treated with just general
instructions -- this is called the placebo group, a second group with a standard therapy for diabetes, Metformin, and a third group with an intensive lifestyle modification in more than 3,000 patients. The DPP study was published in 2002, but just last year a follow-up study called the Outcome Study was published, which shows that this is an ongoing effect. Rodgers testified that even as long as 10 years, patients who were randomized in this intensive lifestyle still maintained the ability to prevent or delay the onset of diabetes. He explained that it was clear that in order for this to be effective we had to figure out a way to make it more reasonable and cost effective. The YMCA was used to do a translational study to determine whether if the intervention was done on a group basis the cost could be cut. Rodgers noted the cost for implementing this intensive lifestyle was reduced from the thousands down to $300, with the same effect.

### AAG Robinson Defends OJP Budget to House Appropriations Panel

On April 22, Laurie Robinson, Assistant Attorney General (AAG) for the Office of Justice Programs (OJP), appeared before the House Commerce, Justice, Science (CJS) Appropriations Subcommittee to defend her proposed FY 2011 budget. Subcommittee Chairman Rep. Alan Mollohan (D-WV) began the hearing by referencing the panel’s 2009 hearings on re-entry and recidivism (see [UPDATE March 23, 2009](http://www.justicedata.org)). He noted the focus on “evidence-based practices” and the “need to keep investing in research that’ll help us further refine what works.”

Robinson testified that the budget request of almost $3.1 billion for OJP, including a $22 million increase for the National Institute of Justice (NIJ), reflects four themes: 1) strengthening partnerships with state, local and tribal stakeholders; 2) restoring the role of research in criminal and juvenile justice policy and practice; 3) promoting evidence-based approaches to crime and violence; and 4) ensuring fairness, transparency and effectiveness in grant administration.

Regarding the second theme, she declared that one of my goals in returning to OJP (she had served as AAG in the Clinton Administration) was “to help restore the role of science in our work in criminal and juvenile justice.” “We’ve got employ smart-on-crime approaches,” and “a robust research program,” she asserted. She pointed out that the budget proposal calls for a three percent set-aside of all OJP grant and reimbursement funds to support research and statistics, which would bring the total request for these activities to $189 million in FY 2011.

To help states and localities put into place crime-fighting strategies that work, OJP, Robinson reported, has developed an Evidence Integration Initiative “that would assess our understanding about what works in reducing and preventing crime.” There are two elements to this initiative, she told the panel, a What Works Clearinghouse and a diagnostic center or help desk to provide technical assistance and training in how to implement evidence-based approaches. Both of these would apply research into the OJP’s programs and distill and translate that knowledge for police chiefs and other practitioners.

Returning to his interest on re-entry and recidivism, Mollohan asked Robinson, “What progress are we making with regard to devising different models…and testing the success of different approaches?” The AAG responded that “I don’t think we have learned as much as I would’ve hoped we would have learned…from the research.” She informed the panel that OJP now has four solicitations on the street, including a field experiment that will use a randomized control trial to investigate solutions to the problem. She admitted that understanding re-entry is “a very messy business.” This occurs, she explained, because “we have offenders moving back in very, very different circumstances with very, very different backgrounds with very, very different kinds of problems.” Thus, the research so far “is very unclear about what kind of interventions made a difference.”

Rep. Frank Wolf (R-VA), the Subcommittee’s Ranking Republican, strongly criticized the Administration and Robinson for “diverting funding away from some of the critical and proven
programs.” These included reductions in the proposed budget for prescription drug monitoring, victims of trafficking, the Prison Rape Prevention and Prosecution program, and the National White Collar Crime Center. Robinson acknowledged that "there is not agreement on all the offsets proposed in the budget," and defended the reductions. Yet as Wolf noted about these programs, "You felt maybe Congress would put it [the money] back, so you took it out."

Rep. Adam Schiff (D-CA) expressed concern about the elimination of the $10 million Congress provided in FY 2010 for Justice Reinvestment activities from the proposed FY 2011 budget. These activities invest funds in communities to which prisoners return in the hopes of reducing recidivism. Robinson suggested that its omission from the FY 2011 proposal resulted from a "budget cycle problem." She indicated that this was not likely to happen again in FY 2012 since "the Attorney General and I are very favorably disposed toward working on justice reinvestment."

Mollohan concluded the hearing by praising Robinson for "the excellent work you're doing and the attitude that your bringing to the job, not to mention the experience." He indicated that the Subcommittee would "get down to the details and see how we can support your work as best we can."

Census 2010 Equals Census 2000 Mailback Participation Rate

U.S. Census Director Robert Groves announced on April 28 that the mailback participation rate for the 2010 Census reached 72 percent, the same as the 2000 Census. This is a high achievement given the difficulties the Census faced from the economic recession and housing foreclosure crises, the fears of immigrants, the political sniping (although not as fierce as in 2000 when a Census Monitoring Board made life difficult for the Bureau), and the general decline in responses to surveys. The Bureau's massive targeted advertising campaign, its partnership efforts, and other outreach activities seemed to deliver.

The Bureau now moves into the Non-Response Follow-Up phase where thousands of Census workers will go to houses of those who did not mail back their forms and enumerate these persons. This phase will continue for the next few months.

Senate Panel Passes Census Independence Bill

In the meantime, looking ahead to the 2020 Census, on April 28, the Senate Homeland Security and Governmental Affairs Committee, chaired by Sen. Joseph Lieberman (I-CT), marked up and reported to the full Senate, S. 316, the Census Oversight Efficiency and Management Reform Act of 2010. The bill was introduced by Senators Tom Carper (D-DE) and Tom Coburn (R-OK), both members of the Committee. (For more information about the bill see UPDATE April 5, 2010). Chairman Lieberman praised the bill, calling it a "really good piece of legislation."

At the markup, Carper said he is willing to work on the bill's budget provision once the bill goes to the Senate floor. He expressed sympathy to the Administration's concern with the bill's provision that Congress would see the agency's budget proposal at the same time it is submitted to the Commerce Secretary.

Coburn praised the current Census Bureau Director, Bob Groves, calling him "exactly what the doctor ordered" because he has the appropriate balance of technical and managerial expertise to manage the agency.” He also offered, and the Committee accepted, an amendment to increase from 30 to 60 days Congress' review of any Administration's decision to remove a Census Bureau Director.

Senator Roland Burris (D-IL) raised the issue of the Bureau's counting of prisoners. Currently the Bureau counts them as residents of the county in which they serve their prison time. Burris and others have long sought a change to this procedure to have these people counted in the places from
which they came. The proponents of this position argue that our prison population is made up overwhelmingly of minorities from big cities. Most prisons are in rural counties. Thus, the current system deprives urban areas of population for representation and federal funding and unfairly rewards rural counties. Burris said he would introduce an amendment on this topic when the bill reaches the Senate floor.

A companion House bill has been introduced by Rep. Carolyn Maloney (D-NY) and has been referred to the Oversight and Government Reform Committee.

(Mary Jo Hoeksema of the Population Association of America contributed to this story.)

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**Senate Committee Produces FY 2011 Budget Resolution**

The Senate Budget Committee, chaired by Sen. Kent Conrad (D-ND), produced its version of a FY 2011 budget resolution, S.Con.Res.60, which emerged out of the panel on April 22 on a party line vote of 12 to 10. The resolution sets overall spending numbers that the Senate Appropriations Committee will use to divide up discretionary spending among the many agencies and programs supported by the federal government.

Conrad called the plan “fiscally-disciplined when it comes to spending.” The resolution freezes total non-security discretionary spending for three years at $397 billion, which is $4 billion below President Obama’s request. The assumption is that the $4 billion will come from foreign aid spending, but the appropriators are not bound by that assumption. In addition, the resolution assumes an additional $5.5 billion to cover a shortfall in funding for Pell Grants, but assumes that the appropriations committee will reduce funding in other areas to make up that difference. The President had asked that Pell Grant funding shift to the mandatory side of the budget taking it out of the discretionary appropriations process. Congress has not agreed to this request.

In setting priorities, Conrad indicated that the President's defense and war funding are fully funded at $733 billion and that additional investments in education and energy are included “to help lay the foundation for long-term economic security.” These include funding for early education, elementary and secondary schools, and college affordability. In addition, the resolution includes funding for alternative and clean energy, energy efficiency, and green jobs.

During its projected five-year outcomes, the resolution would cut spending as a percent of GDP by eleven percent as well as cut taxes by $780 billion. By 2015 the deficit would see a reduction to three percent of GDP.

With regard to science funding, Conrad indicates that the resolution assumes the President's requested funding for the National Institutes of Health and mentions the importance of improving health outcomes through the coordination of research activities on health disparities. The resolution also assumes the President's requested increase for the National Oceanographic and Atmospheric Administration (NOAA). It assumes a $1 billion increase for NASA.

Function 250, which includes the NASA, the National Science Foundation, and the Office of Science at the Department of Energy, has Budget Authority for FY 2011 at $31.793 billion, an increase of $712 million over FY 2010; and $32.281 billion in Outlays, an increase of $608 million over FY 2010.

The bill may go to the Senate floor sometime during the first two weeks of May.

In the meantime, House Democrats continue to discuss whether they will produce a House version of a FY 2011 Budget Resolution. Different world-views about the importance of cutting spending and how to cut between the conservative and progressive wings of the party in the House make forging an agreement difficult for Speaker Nancy Pelosi (D-CA) and Budget Committee Chairman, Rep. John Spratt (D-SC).
Deficit Commission Holds First Meeting

On April 26, the recently appointed Deficit Commission held its first meeting. Charged by President Obama to fashion long-term, bipartisan solutions to America's deficit and long-term debt problems, the panel is co-chaired by former Clinton White House Chief of Staff Erskine Bowles and former Senator Alan Simpson (R-WY). The task is going to be quite difficult as some GOP-appointed members expressed concerns about raising taxes and some Democratic-appointed members worried about drastic cuts to entitlement programs such as Medicare and Social Security. The goal is to reduce the deficit to three percent of GDP by 2015. The President told the commission that "all options should be considered." Fourteen of the eighteen members have to agree to any report, which the Commission is expected to submit by December 1, 2010, and which the congressional leadership has committed to hold votes on before the current Congress adjourns.

Senate Committee Hears About Standards and Assessments in ESEA Reauthorization Hearing

On April 28, the Senate Health, Education, Labor and Pensions (HELP) Committee, as part of its hearing series in preparation for the reauthorization of the Elementary and Secondary Education (ESEA), heard from witnesses discussing the need for common core standards and new methods of assessing student learning.

Committee Chairman Sen. Tom Harkin (D-IA) opened the hearing by noting that in order for our country to develop a world-class education system, “it is vital that we have a clear understanding of what students need to learn, and develop ways to accurately assess their progress.” The panel's Ranking Member, Sen. Mike Enzi (R-WY) agreed, but warned that the "federal government should stay out of the way," and "assist, not coerce" the states in their education reform efforts.

President Obama has called for all students to be ready for some sort of postsecondary education. Others have discussed the notion of "college or career ready." Cynthia Schmeiser, President and CEO of ACT, told the Committee that her organization defines college readiness "as an acquisition of knowledge and skills a student needs to enroll and succeed in credit-bearing, first year courses at a postsecondary institution...Simply stated, readiness for college means not needing to take remedial courses in postsecondary or training programs.” Unfortunately, she reported, of the 1.5 million high school graduates who took the ACT tests in 2008-09, 33 percent were not ready for college-level English, 47 percent were not ready for college social science, 58 percent were not ready for college algebra, and 72 percent were not ready for college biology.

At the same time, Schmeiser noted that career readiness "requires the same level of foundational knowledge and skills in mathematics and reading that college readiness does," especially for 21st Century jobs. Regrettably, she asserted, there are far too many people in this country who believe that those students who plan to enter workforce training programs need a far lower level of high school preparation.

One key to developing both college and career readiness is the development of core state standards. Steve Paine, West Virginia State Superintendent of Schools and President of the Chief State School Officers (CCSSO), testified to the panel on the efforts of the National Governors Association (NGA) and the Chiefs to lead in this area.

Forty-eight states, two territories, and the District of Columbia have worked collectively to advance a common core in English language arts and mathematics, Paine related. He indicated the principles that guided their work mean that the common standards must be: 1) higher, clearer, and fewer; 2) internationally benchmarked; 3) include content knowledge and skills; 4) evidence and research based; and 5) prepare students for college and career.
With stakeholder and public comments, the NGA and CCSSO were able to complete the initial phase by publishing in the fall of 2009 common standards illustrating what students should know at the end of high school. The second phase, Paine explained, has focused on "back-mapping the college and career ready standards on a grade-by-grade basis for Kindergarten through Grade 12." He reported that Kentucky has already adopted the common core and other states, including his own West Virginia, will soon follow.

Paine agreed with Enzi that this effort should remain in the hands of the states and that the federal government's role is to provide "greater flexibility" to help the states, particularly with regard to accountability systems. He praised the $350 million in federal Race to the Top Assessment funds as furthering state cooperation to develop common, high quality assessments.

**Time for 21st Century Assessments Using Technology**

Regarding these assessments, Gary Phillips, former Acting Commissioner of the National Center for Education Statistics and now Vice President and Chief Scientist at the American Institutes for Research (a COSSA member) testified that it was time to take advantage of modern technology. He proposed that "Congress encourage states to abandon their outmoded 20th Century paper/pencil based testing paradigm for a new generation of 21st Century technology-based tests that are more accurate, less burdensome, faster, and cheaper." He also added that any assessment activities need to be internationally benchmarked.

Three states, Delaware, Hawaii, and Oregon, have turned over their entire student state testing programs to these computer-adaptive tests, Phillips remarked. He explained that "the test consists of multiple-choice items and challenging constructed-response items that are both administered and scored by computer." The tests can provide formative assessments for diagnostic purposes and interim assessments for teacher use to measure student progress as well as a summative test at the end of the school year. What makes these assessments valuable, Phillips asserted, is the almost instantaneous feedback; results are available for each student in 15 seconds.

He also suggested that this kind of test is helpful to measure the performance of students with disabilities and English language learners. The former was the concern of Martha Thurlow, Director of the National Center on Educational Outcomes, and the latter to Charlene Rivera of the Center for Equity and Excellence in Education at the George Washington University, in their testimony to the committee.

Most of the other Senators present including former U.S. Secretary of Education Lamar Alexander (R-TN) and former Denver Schools Superintendent Michael Bennet (D-CO) supported the effort on common core standards and improved assessments. Alexander, as Harkin had done in his opening statement, reviewed the long litany of education reform efforts in the past 27 years since the publication of *A Nation at Risk* in 1983. Bennet, in particular, decried the "springtime ritual" of the statewide tests and curricula that tried "to cover the waterfront." Sens. Patty Murray (D-WA), Al Franken (D-MN), Kay Hagan (D-NC) and Robert Casey (D-PA) expressed support for higher standards for all. Casey also noted the importance of teacher training. Sen. Johnny Isakson (R-GA) joined Harkin's and Thurlow's concern for including students with disabilities in these reform efforts.

A video of the hearing as well as the testimony of the witnesses is available at: [http://help.senate.gov/hearings/hearing/?id=717fefda-5056-9502-5da4-0d6384131206](http://help.senate.gov/hearings/hearing/?id=717fefda-5056-9502-5da4-0d6384131206).

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**President Nominates Woteki as Under Secretary of Agriculture for Research, Education and Economics**
On April 26, President Obama nominated Catherine E. Woteki as the next Under Secretary for Agriculture for Research, Education and Economics (REE) at the U.S. Department of Agriculture (USDA). If confirmed by the Senate, she would replace Rajiv Shah, who left to become the Administrator of the U.S. Agency for International Development. Molly John has served as Acting Undersecretary since Shah’s departure.

Woteki currently serves as Global Director of Scientific Affairs for Mars, Incorporated, where she manages the company's scientific policy and research on matters of health, nutrition, and food safety. From 2002-2005, she was Dean of Agriculture and Professor of Human Nutrition at Iowa State University.

She is no stranger to the Department of Agriculture having served as the first Under Secretary for Food Safety at USDA from 1997-2001. Previously, she was the Deputy Under Secretary for REE. Prior to going to USDA, Woteki served in the White House Office of Science and Technology Policy as Deputy Associate Director for Science from 1994-1996. Her government service also includes positions in the National Center for Health Statistics at the Center for Disease Control and Prevention and the Human Nutrition Information Service at USDA.

In the early 1990s she was the study director for the Food and Nutrition Board of the Institute of Medicine (IOM) at the National Academies. In 1999, Woteki was elected to the IOM and chaired the Food and Nutrition Board from 2003-2005. Woteki has M.S. and Ph.D. degrees in Human Nutrition from Virginia Polytechnic Institute and State University and a B.S. in Chemistry from Mary Washington College.

**NSF Division of Science Resource Statistics Seeks Deputy Director**

The National Science Foundation's (NSF) Science, Resources Statistics division seeks a Deputy Director. The position is a career appointment in the Senior Executive Service. The **closing date for applications is May 28, 2010.**

The Division of Science Resources Statistics (SRS) is the Federal statistical agency with responsibility for data and analyses on the science and engineering enterprise writ large. SRS develops factual and analytic information to form the basis of national planning and policy formulation in the area of science and technology (S&T) resources. SRS conducts surveys from which it collects and analyzes statistical data and prepares analytical studies on subjects that include the following: characteristics of S&T personnel and education; industrial, academic, and government research and development (R&D) funding; the S&T labor market; intersectoral economics; and international S&T indicators. SRS is also responsible for producing the biennial *Science and Engineering Indicators* report for the National Board as well as other congressionally-mandated products. A major component of SRS’s responsibility is dissemination of data and analyses to policy makers, researchers and the general public through a variety of mediums.

The Deputy Division Director serves as a member of the **Directorate for Social, Behavioral and Economic Sciences (SBE)** and SRS leadership teams. In collaboration with the Division Director, the Deputy implements overall strategic planning and day-to-day management for the Division with respect to ongoing SRS data collections, the development of new data collections and products, ongoing and proposed analyses as well as management of the production of *Science and Engineering Indicators* and a wide variety of other products. The Deputy, in collaboration with the Division Director, provides leadership and guidance to Division staff members, determines funding requirements, maintains overall management of Division contracts, prepares and justifies budget estimates and budget products, balances program needs within SRS, establishes priorities in data collections and analytical projects, allocates resources within the several SRS programs and represents NSF to relevant external groups. The Deputy Division Director fosters partnerships with
other Divisions, Directorates, Federal agencies, scientific organizations, international bodies and relevant professional associations and the academic community. The incumbent assumes the Division Director's role in the absence of the Division Director.

For the full announcement go to:


NSF Dear Colleague Letter for Assessing and Enhancing the Impact of Science R&D in the United States: Chemical Science

As part of the Science of Science and Innovation Policy (SciSIP) program, the National Science Foundation’s (NSF) Social, Behavioral and Economic Sciences directorate and Mathematical and Physical Sciences (MPS) directorate have issued the following joint dear colleague letter to the scientific community.

According to the letter, evidence has an increasingly important role as the basis for decision-making in Washington. Federal science agencies are being asked to manage their portfolios by using sound science: developing data sets, measuring outcomes, and evaluating performance. Indeed, a recent memo from the Office of Management and Budget and the Office of Science and Technology Policy regarding Science and Technology Priorities for FY 2011 Budget urged science agencies to develop ‘science of science policy tools’ and ‘datasets to better document Federal science and technology investments.’

But narrow or biased measures of scientific achievement and scientific outcomes can lead to narrow and biased science. Farsighted action, based in sound science, can ensure that the evidence that is gathered to inform policy captures the essence of science and what it means to be a good scientist.

This action needs to be grounded in answering important scientific questions, such as:

1. How can we measure the broad (economic, social, and scientific) impact of scientific research?
2. What is the nexus between industrial and federal investments in science R&D?
3. How can an optimal portfolio of (public and private) science R&D investments be characterized?
4. How can the social, behavioral, and economic sciences inform federal R&D investments?

These questions were discussed by participants at a recent workshop on “Assessing and Enhancing the Impact of Science R&D in the United States: Chemical Sciences,” sponsored by the NSF Divisions of Chemistry, Chemical, Bioengineering, Environmental and Transport Systems, and the Directorate of Social, Behavioral, and Economic Sciences. The workshop report (available at http://www.ccrhq.org/economicimpact) discusses the need for and value in a multi-disciplinary, multi-sector, multi-perspective investigation to inform our understanding about the impact of research investments in all sectors - questions that lie at the core of NSF’s SciSIP Program.

The Dear Colleague suggest that Chemistry provides an exemplary test bed upon which to base such an investigation. The long history, structure and diversity of the discipline - which touches areas as wide-ranging as electronics materials, pharmaceuticals, and bulk commodity chemicals - has engendered a rich range of data, outcome measures, and institutional variety that create a rich scientific basis that can be studied by teams of social and domain scientists.
The purpose of the letter is to provide advice about funding opportunities at NSF to develop a better understanding of these issues as applied to the Chemical Sciences. Research of interest can range from the innovative application of existing technologies through the creation of new approaches, and possible combinations that could create a transformative, interdisciplinary research agenda. Proposals with the following features are particularly encouraged:

- Contrasts between public and private research investments;
- Examinations of the perspectives of public, private, academic, industrial, and government labs;
- Examinations of the impact of differences in levels and modes of research investment; and
- Collaborations involving domain scientists in the mathematical and physical sciences and engineering as well as SciSIP researchers.

Investigators are encouraged to e-mail a SciSIP program officer to discuss prospective proposal topics, and to review the SciSIP program description at: (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501084&org=SES&from=home) to ensure that eligibility requirements are met.

Submit proposals to the SciSIP program, which has a September 9 deadline annually. SciSIP and the relevant MPS program will co-fund the awards, upon the approval of the associated MPS Program Officer.

For further information contact: Julia Lane, jlane@nsf.gov or Kelsey Cook, kcook@nsf.gov.

Interagency Working Group Releases White Paper: A Human Health Perspective on Climate Change

On April 21, an interagency working group released a white paper examining 11 key categories of diseases and other health consequences that are occurring or will occur due to climate change. According to the working group, the report, A Human Health Perspective on Climate Change, provides a starting point for coordination of federal research to better understand climate's impact on human health. The recommendations of the working group include research to identify who will be most vulnerable, and what efforts will be most beneficial.

When releasing the report, National Institute of Environmental Health Sciences (NIEHS) director Linda Birnbaum explained that: "This white paper articulates, in a concrete way, that human beings are vulnerable in many ways to the health effects of climate change. It lays out both what we know and what we need to know about these effects in a way that will allow the health research community to bring its collective knowledge to bear on solving these problems." Birnbaum also observed that the "report provides a guide for researchers throughout the world who are working to improve the health of the planet and the health of all people."

The Ad-hoc Interagency Working Group on Climate Change and Health was formed following a 2009 Institute of Medicine Roundtable on Environmental Health Sciences, Research, and Medicine on climate change. At that meeting, leaders from NIEHS, the U.S. Environmental Protection Agency, the National Oceanographic and Atmospheric Administration, and the Centers for Disease Control and Prevention recognized that the scientific discussion around climate change needed reframing to emphasize the human health impacts and research needs to address them.

NIEHS led the interagency effort. Membership of the working group also includes representatives from the National Institutes of Health Fogarty International Center, the U.S. Department of
Agriculture, the U.S. Department of State, the White House Office of Science and Technology Policy, and the U.S. Department of Health and Human Services, with support and input from the U.S. Global Change Research Program and others.

**A Human Health Perspective on Climate Change**

"The purpose of the paper is to identify research needs for all aspects of the research-to-decision making pathway that will help us to understand and mitigate the health effects of climate change, as well as ensure that we choose the healthiest and most efficient approaches to climate change." Accordingly, the white paper highlights the state-of-the-science on the human health consequences of climate change on: Asthma, respiratory allergies, and airway diseases; Cancer; Cardiovascular disease and stroke; Foodborne diseases and nutrition; Heat-related morbidity and mortality; Human developmental effects; Mental health and stress-related disorders; Neurological diseases and disorders; Waterborne diseases; Weather-related morbidity and mortality; and Vectorborne and zoonotic diseases.

The report also examines a number of cross-cutting issues for federal research in this area, including susceptible, vulnerable, and displaced populations; public health and health care infrastructure; capacities and skills needed; and communication and education efforts.

It acknowledges that "data to support a broad understanding of which populations will be most susceptible and vulnerable to diseases affected by climate change are generally lacking at this time; however, data are available that identify vulnerable populations for some diseases with environmental causes or triggers that are likely to be altered by climate change." The report emphasizes that if research efforts are to be effective, they "must involve a broad spectrum of research scientists from epidemiologists and physicians to environmental engineers and community planners. Such efforts also will require a broad-based, multi-agency federal program that builds on the strengths of each agency to develop an overall comprehensive research agenda."

The report notes that: A greater emphasis must be placed on developing and maintaining interdisciplinary and inter-institutional collaborations, as well as on ensuring that established resources and expertise of all of the relevant disciplines, including climatology, modeling, environmental science, risk assessment, public health, and communications and education, are applied to these pressing problems. Many additional disciplines including ecology, social science, economics, geography, behavioral psychology, and others will need to play a vital role in climate and health decision making.

Other areas where public health professionals may contribute robustly to efforts to address the impacts of climate change are in communication and education. According to the paper, research is still needed to determine how to effectively educate and organize the public to respond. The report notes that this is complicated by recent research showing that various audiences within the American public respond to the issue of climate change each in their own distinct way. Research is needed that will aid climate change communicators and educators in adapting their messages and approaches to most appropriately and effectively reach and be assimilated by each individual audience.

Through the process of developing this white paper, the working group noted that "it rapidly became clear that identifying research needs; mobilizing and creating the expertise, resources, tools, and technologies to address them; and translating these efforts into solutions that will enable human adaptation to our changing environment while protecting public health will require collaborations on an unprecedented scale."

**NSF Seeks Proposals to Help Predict Climate Change Using Earth**
System Models

The National Science Foundation (NSF), in cooperation with the U.S. Department of Agriculture and the U.S. Department of Energy, seeks interdisciplinary proposals to develop the next-generation of Earth System Models to help predict climate changes. The letter of intent deadline is May 24, 2010. The full proposals are due on June 25, 2010.

According to the solicitation, the consequences of climate variability and change are becoming more immediate and profound than previously anticipated. Important impacts, such as the onset of prolonged droughts on several continents, increasing stresses on natural and managed ecosystems, loss of agricultural and forest productivity, altered biological feedbacks, degraded ocean and permafrost habitats, global sea level rise and the rapid retreat of ice sheets and glaciers, loss of Arctic sea ice, and changes in ocean currents, have highlighted that climate variability and change can have significant effects on decadal and shorter time scales, with significant consequences for plant, animal, human, and physical systems.

This activity enables interagency cooperation on one of the most pressing problems of the millennium—climate change—how it is likely to affect our world, and how we can proactively plan for its consequences. It allows the partner agencies to combine resources to identify and fund the most meritorious and highest-impact projects that support their respective missions, while eliminating duplication of effort and fostering collaboration between agencies and the investigators they support.

This interdisciplinary grand challenge calls for the development of next-generation Earth System Models that include coupled and interactive representations of ecosystems, agricultural working lands and forests, urban environments, biogeochemistry, atmospheric chemistry, ocean and atmospheric currents, the water cycle, land ice, and human activities. The realization of these goals demands the engagement of diverse interdisciplinary teams of experimental, theoretical, modeling and computational researchers, including but not limited to, biologists, chemists, computer scientists, geoscientists, material scientists, mathematicians, physicists, cyberinfrastructure specialists, and social scientists. Successful proposals should develop intellectual excitement in the participating disciplinary communities. Also encouraged are proposals that promote diversity and have broad educational or societal impacts.

Competitive projects should address key problems critical to linking relevant Earth system processes over a variety of spatial and temporal scales and to advancing the theoretical foundations for the modeling and simulation of existing data and data collected by the new and envisioned NSF environmental observatories. NSF encourages proposals that have the potential to dramatically improve our predictive capabilities as well as our understanding of how small and large scale processes lead to non-linearities and activation thresholds.

The specific goals of this solicitation are to improve upon and extend current modeling capabilities in order to:

1. Achieve comprehensive, reliable global and regional predictions of decadal climate variability and change through advanced understanding of the coupled interactive physical, chemical, biological and human processes that drive the climate system.

2. Quantify the impacts of climate variability and change on ecological, agricultural and other human systems, and identify and quantify feedback loops through which human systems help determine environmental outcomes.

3. Maximize the utility of available observational and model data for impact and vulnerability/resilience assessments through up/downscaling activities.

4. Effectively translate model results and associated uncertainties into the scientific basis for well-informed human adaptation to and management decisions for climate change.
NSF is soliciting two types of proposals--incubator/capacity building activities (Type 1) and large collaborative interdisciplinary research projects (Type 2).

For more information contact: Cheryl Eavey at ceavey@nsf.gov; or (703) 292-7269. The full solicitation is available at: http://www.nsf.gov/pubs/2010/nsf10554/nsf10554.pdf.

### NIH Seeks Information on Priorities for the NIH Adherence Research Network

Poor adherence to prescription medications and treatments has been labeled a “worldwide problem of striking magnitude” by the World Health Organization. Over the last 40 years, researchers have observed and documented universally poor adherence to prescription medications and behavioral treatments (e.g., diet change for hypertension, smoking cessation and screenings for cancer). They found that up to 20 percent of patients fail to fill new prescriptions and approximately 50 percent of people with chronic health conditions discontinue their medication within six months. Likewise, adherence to behavioral and biobehavioral treatments remains poor, no more than 30 percent of patients quit smoking when advised by their health care providers that quitting smoking was essential for their health, even those affected with lung conditions. Despite this need for enhancing adherence at both the individual and population levels, research on interventions related to adherence remains underdeveloped.

The National Institutes of Health (NIH) Office of Behavioral and Social Sciences Research (OBSSR) and the NIH Adherence Research Network are seeking input from the scientific community, health professionals, patient advocates, community-based organizations, students, and the general public regarding current and emerging priorities in adherence research that offer the greatest potential for improving the nation's health and well-being. This input will inform the Adherence Research Network’s strategic planning process and help the Network meet its mission of pursuing opportunities for strengthening adherence research at NIH while innovating beyond existing investments. Launched May 2007, the Adherence Research Network is a working group with representatives from multiple NIH Institutes, Centers and Offices whose goal is to provide leadership and vision for this research at NIH.

The request for information (RFI) seeks information that will help NIH to identify priorities for adherence research that are consistent with the mission of the Network. Ideas for both short-term (1-2 years) and long-term (3-5 years) activities that focus on adherence are welcome. Members of the scientific community, scientific organizations, healthcare professionals, patient advocates, and the public are invited to respond to the following:

1. **The Challenge** - Describe the critical gaps in the science of adherence. Gaps can be at the level of basic mechanisms, measurement, methodology and/or intervention.

2. **The Potential Solution** - Describe what you believe to be the most innovative research approaches to address these challenges. Solutions should focus on potential research methodologies that could address scientific gaps in adherence science.

Suggestions on adherence that address the research priorities and public health challenges addressed in the NIH mission, which is to improve health and save lives across the full range of diseases and health problems, are especially welcome. For each suggested priority, it is also requested that brief background information is provided. **Responses will be accepted until May 25, 2010 via email to Wendy Nilsen at nilsenwj@od.nih.gov.** For more information see: [http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-078.html](http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-078.html).
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