



# COSSA Washington Update

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## OLD AND NEW SPENDING PANELS SCRUTINIZE NSF BUDGET PROPOSAL

In late February, the Senate Appropriations Committee gave in to its House counterpart and agreed to restructure the appropriations subcommittees. Under the new plan, the VA, HUD, and Independent Agencies (IA) panel, which is where the National Science Foundation's (NSF) budget has been reviewed, would disappear in both the House and Senate. The agencies under the Subcommittee's jurisdiction would be redistributed among four other existing panels in the House, with NSF and NASA moving to a new Science, State, Justice and Commerce (SSJC) Subcommittee, chaired by Rep. Frank Wolf (R-VA). In the Senate, the State Department is jettisoned from the Commerce, Justice, and Science Subcommittee, where Senator Richard Shelby (R-AL) will serve as Chair. Providing some continuity for NSF, the ranking Democrats from the old VA, HUD, and IA panel, Rep. Alan Mollohan (D-WV) and Senator Barbara Mikulski (D-MD), became the Ranking Members on the new panels.

On March 11<sup>th</sup>, NSF Director Arden Bement appeared before the new SSJC Subcommittee, sharing the witness table with John Marburger, Director of the Office of Science and Technology Policy (OSTP) and the President's science adviser. Marburger's presence at the hearing served as an impetus for Wolf and other Subcommittee members to harangue about the Administration's insistence on removing congressionally-sponsored projects from the proposed budget. Wolf, in particular, berated Marburger, claiming that the Congress has equally as many meritorious ideas for programs and projects as the Administration does. Rep. John

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## HOUSE APPROPRIATORS DISCUSS NIH FUNDING WITH ZERHOUNI

On March 9<sup>th</sup>, National Institutes of Health Director Elias Zerhouni appeared before a friendly House Appropriations Subcommittee on Labor, Health, and Human Services Appropriations, still chaired by Rep. Ralph Regula (R-OH). The new chairman of the full House Appropriations Committee Rep. Jerry Lewis (R-CA) was also in attendance.

Lewis explained his desire for Congress to maintain its support for scientific research. He also noted that the full Committee "feels very strongly committed to R&D" and does "not intend to reduce R&D funding but rather see it continue on a healthy growth path."

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## **BUDGET (Continued from Page 1)**

Culberson (R-TX) joined Wolf in this attack, emphasizing that the Administration's budget proposal is simply a "recommendation." Culberson also later voiced his support for NSF's merit review process and its importance in producing excellent science.

In addition, Wolf announced that he wants to do "something dramatic" for the "hard sciences" and kept touting a proposal that would provide student loan forgiveness if a person majored in the "hard sciences" and continued on to teach at the K-12 level or entered into another type of public service. It was clear that Wolf was not using the late Herbert Simon's definition of the "hard sciences" – the social and behavioral sciences – but meant physics, chemistry, and engineering, among others. Marburger's presence also allowed Subcommittee members to focus upon NASA and Energy Science for much of the hearing.

With regard to the NSF budget proposal, a number of panel members expressed concern over the provision to transfer \$48 million to NSF from the Coast Guard for maintaining ice breaker ships for the NSF South Pole stations (*also see related story on House Science Committee, Page 6*). Chairman Wolf and other Subcommittee members argued that this apparent one-year transfer would be insufficient for NSF to maintain these vessels in future years, and that some undue burden would inevitably be placed upon the Foundation that would further erode its capability to support basic research.

Director Bement defended NSF's budget, noting the need to restore the declining proposal success rate and defending the cuts in the Education and Human Resources (EHR) Directorate by extolling NSF's programs for broadening participation. To further boost his case, he also pointed out the education that occurs in the research directorates by high school through graduate school students' participation in research grants.

### **Senate VA, HUD, IA has Last Hurrah on NSF Budget**

On February 17<sup>th</sup>, shortly before its demise, the old Senate VA, HUD, and IA Subcommittee, chaired by Senator Kit Bond (R-MO), held a farewell hearing for the NSF and the Office of Science and Technology Policy (OSTP). At the time, Bond spoke out against changing the Appropriations

Committee structure, chastising the House for their "ill-advised action" in abolishing VA, HUD, and IA Subcommittee. Praising Mikulski, his long-time partner on the panel, Bond recalled their efforts to double the NSF budget – efforts that have thus far fallen short. With regard to the two percent increase in the FY 2006 proposal, Bond declared: "Sadly, the budget request for NSF does not provide it with the adequate resources to meet its mission." He vowed to continue fighting to make NSF "one of the highest priorities" of our nation. He also called upon the National Science Board to provide "a vision for the future of science and technology, including the next bold cutting-edge areas of research."

Mikulski echoed Bond's disappointment with the President's proposed budget for NSF, claiming that "this Administration has broken its promise to NSF." Harkening back to the \$8.5 billion that was authorized for NSF in the bill enacted in 2002, she noted that the FY 2006 recommendation was 34 percent below "where it should be." Mikulski also focused on the 12 percent cut to education programs, admonishing NSF for significantly reducing the research and evaluation component of its EHR Directorate. She argued that it was the Foundation's mission to continue to find research-based solutions to problems in math and science education, and that this cut was unacceptable.

While the Administration was attacked in both hearings for proposing such a small increase for NSF in FY 2006, the fact that Congress was responsible for reducing NSF's FY 2005 budget to below the FY 2004 level was kept relatively quiet. Many Members vowed to help NSF rise above the two percent proposed increase in FY 2006. Given the constraints on the domestic discretionary budget and the consistent interest in boosting NIH, NASA, Pell Grants and other education programs, NSF's place on the congressional priority ladder remains to be seen.

## **NIH FUNDING (Continued from Page 1)**

Lewis pointed out the "progressive building of research dollars flowing through the Defense Subcommittee," and expressed his concern that many in that resource-plentiful Subcommittee consider the NIH to be a kind of "closed fraternity." He urged more coordination and communication between the Department of Defense and the NIH in order to foster more cross-agency research.

Ranking Member David Obey (D-WI) expressed his concern about the decreased number of grants that the President's budget request allows NIH to fund. "I

think that it is also important to take a look at what happens to NIH in conjunction with the National Science Foundation, because they do much of the basic research which you take at a later time or a later stage” in the research, said Obey. He further indicated that while the budget for NSF provides “an increase of \$132 million... it comes in the teeth of a \$179 million reduction that was made last year. Thus, the net result over two years is a small decline.”

## **21<sup>st</sup> Century Research**

During his testimony, Zerhouni informed the Subcommittee that “chronic diseases now account for 70 percent of all deaths and 75 percent of our health care costs.” The discovery of new, affordable treatments can extend individuals’ productive years and reduce the burden of disease, explained Zerhouni. This requires “a preemptive strike against disease, on the intervention of science before symptoms appear, and before normal function is lost,” he added. According to the NIH Director, the agency’s budget equals an investment of \$96 per American each year. Conversely, he related that health care costs per individual are more than \$5,500.

Zerhouni explained that there are three phases of disease: (1) preclinical, (2) tolerable, and (3) intolerable. Past strategies for dealing with disease have been to intervene during the intolerable phase, he noted. In the 20<sup>th</sup> Century, disease was treated when symptoms occurred and function was lost. In the 21<sup>st</sup> century, the paradigm will be to intervene before the symptoms occur.

If accomplished, Zerhouni emphasized that these goals will be “orders of magnitude more effective” from the standpoint of health and costs. Acknowledging that we cannot eliminate all diseases in “one fell swoop,” he argued that early intervention will provide the maximum benefit in terms of reducing the disease burden.

Stressing that he is “fully cognizant of the societal impact of medical research,” Zerhouni emphasized that in the 21<sup>st</sup> Century, it is necessary for a “forward looking, proactive” agency. Accordingly, NIH is “re-tooling [its] management tactics.” Noting the success that the agency is having with its trans-NIH initiatives such as the NIH Roadmap for Medical Research, Neuroscience Blueprint, and Task-Force on Obesity Research, Zerhouni argued that it is “time to focus additional attention on creating better institutional tools to analyze, assess, and manage the NIH-wide research portfolio and to provide better information to

support priority-setting decisions in areas of common interest to all Institutes and Centers.” In order to accomplish this, he is creating an Office of Portfolio Analysis and Strategic Initiatives (OPASI) (*see related story*).

Responding to Rep. Randy Cunningham’s (R-CA) inquiry regarding the NIH’s decision-making process for setting priorities, Zerhouni explained that priorities are based upon science, public health implications, and society. He noted that the agency has approximately 21,000 public science members serving as peer reviewers who help the NIH to make decisions on research priorities.

## **Obesity Continues to be High Priority**

Rep. John Peterson (R-PA) again expressed his concerns regarding the increasing rates of childhood obesity, noting that in spite of “breakthrough drugs” and “breakthrough treatments... we are a less healthy society.” “I think,” Peterson added, that the issue of obesity is “going to be paramount in this country.”

The Director highlighted the NIH Strategic Plan for Obesity, noting that it is one “of the nation’s most dramatic health challenges.” Given the fact that obesity decreases the quality of life for individuals and increases the risk of premature death, he argued that it will additionally cost the U.S. an estimated \$117 billion in direct medical costs and indirect costs such as lost wages. “The obesity epidemic represents a complex interplay of behavioral, sociocultural, economic, and environmental factors against a backdrop of genetic and other biological factors,” Zerhouni explained.

National Institute of Diabetes & Digestive & Kidney Diseases (NIDDK) Director Alan Spiegel explained that obesity research requires “a multi-pronged approach that really looks at both the biologic and genetic factors, along with the behavioral factors.” Spiegel argued that solving this problem would require closing the communication gap between behavioral and social scientists, as well as biologists and geneticists. “Then we will be able to be successful,” he concluded. Zerhouni added that the obesity problem is not the same in all populations, but that the magnitude of the problem requires national action, not just at the NIH. He also observed that obesity is “as large and worrisome as the smoking epidemic” where we have made progress. Just as the reduction in smoking has been a big driver in reducing cancer mortality rates, the same thing must be done with obesity because it will drive down the rates of diabetes and heart disease over time, Zerhouni explained.

In FY 2006, the NIH will focus on another area of disease burden: that which is related to mental health, neurological disorders, and behavioral disorders. Fifteen institutes and centers whose primary mission involves these elements will collaborate on what NIH is calling the Neuroscience Blueprint.

Asking “how do we get more quality research for less money” in times of tight budgets, Rep. Ernest Istook (R-OK) noted that a “great amount of research is done in high cost areas.” He argued that research can be done more cheaply in Oklahoma, which has made a major effort to expand its capacity to conduct studies. He also expressed concern that the Administration had “flat lined” the IDeA [Institutional Development Award] program, and conveyed his hope that the program would “do better than proposed.” Istook also questioned whether NIH was supporting research “aimed at reducing the cost of medical procedures.”

Zerhouni responded to Istook’s concern by noting that the shift to less costly areas for conducting research “will occur.” IDeA, continued Zerhouni, is creating the necessary conditions in states such as Oklahoma, Kansas, and Arkansas. While noting that NIH would like to encourage such development, he cautioned against forcing it. With regard to reducing the costs of health care, Zerhouni noted that while the NIH does some research in this area, a significant part of its budget goes to Agency for Healthcare Research and Quality (AHRQ) for this purpose.

## HOUSE COMMITTEE WANTS NIH REAUTHORIZATION BILL

In anticipation of drafting a bill for the reauthorization for the National Institutes of Health (NIH) this year, on March 17<sup>th</sup>, the House Energy and Commerce Subcommittee on Health held its tenth hearing over the last two and a half years to discuss how to restructure the \$28.8 billion agency. Congress last reauthorized the NIH in 1993, which now consists of 27 institutes and centers (see *UPDATE*, June 14, 2004).

According to Subcommittee Chair, Rep. Nathan Deal (R-GA), the Subcommittee is seeking to “achieve some much-needed reform to the administrative structures” of the NIH through reauthorization. Acknowledging the difficulty of reauthorizing the NIH, Deal urged his colleagues not to “fall into the same old trap of letting one relatively minor set of issues derail our goal of modernizing the

organizational structure of the NIH.” He remarked that the Congress has “been working on reauthorizing the NIH longer than most of us have been serving in Congress...”

In order for the NIH to function in the most efficient manner, the agency “has to be able to justify to scientists and the public alike why some research projects are advanced ahead of others,” noted Chairman of the full Committee, Rep. Joe Barton (R-TX). He announced that the Committee would like to write a reauthorization bill for NIH in the next two or three months.

Barton observed that the NIH’s enormous growth has been arbitrary, “usually without benefit of systemic analysis or review of the efficiency of this structure.” This growth, said Barton, “has resulted in an almost random collection of structures in which largely independent institutes and centers are tasked to advance research programs . . . according to diseases, organ systems, or stage of life in which they specialize.”

Commending NIH Director Elias Zerhouni for his accomplishments (i.e., the NIH Roadmap for Medical Research and the new regulations dealing with conflict of interest) during his tenure, Barton noted that he faces “monumental” difficulties. “In order to achieve the fundamental changes that are needed at NIH, Congress must act,” Barton declared. The Chairman identified three changes that he believes will help Zerhouni to better manage resources and increase research investments.

According to Barton, the first change is to expand the authority of the NIH Director, which would allow the Director to transfer a greater percentage of the funds between Institutes and Centers. This includes increasing the working budget of the Office of the Director “to fund more extensive portfolio management projects as well as cross-cutting research initiatives.”

The second change is to better align budget account items. Barton expressed that it was his belief that the Committee should consider “new, creative approaches, such as ‘budget clusters,’ for allocating resources throughout the NIH.”

The third change would create a “new, more transparent reporting system.” He called for the elimination of “unnecessary reporting requirements such as reports on specific diseases.”

## **New Office to Track Portfolio**

In order to change NIH's current management structure, Director Elias Zerhouni outlined the creation of a new organization within the Office of the Director (OD), the Office of Portfolio Analysis and Strategic Initiatives (OPASI), designed to "complement the existing process for determining strategic research initiatives."

Zerhouni told the Subcommittee that the office will be charged "with evaluating the entire Agency research portfolio to ensure that urgent public health needs are addressed in a timely way and that a sound decision support system is established that is based on rigorous and uniform sources of evidence." He has requested \$2 million in funding to establish the office.

NIH needs "a global view of the totality of what we fund in our overall research portfolio," Zerhouni stressed. He explained that an "expanded approach to portfolio analysis will enable NIH to enhance the priority setting process while increasing coordination, identify appropriate cycles of change, maintain proper turnover rates for grants and provide much more accountability to Congress and the public." He explained that the office would have duties and responsibilities similar to the cross-cutting offices within the OD. In particular, he pointed out the legislative authority of the Office of AIDS Research.

According to Zerhouni, his intent in creating OPASI is to "have a transparent process and better decision-support tools..." This includes broad input from the scientific community and the public as well as a process that enhances accountability to Congress, scientists, patients, and the public at large.

The NIH Director observed that there are several challenges that the agency must face in setting its priorities. These include: 1) a shift in the burden of illness from acute, lethal disease to chronic disease; 2) an increased rate of research; 3) a lack of reliable information, including insufficient information on the human and financial costs of disease; and 4) the increasing convergence of science, erasing the disease boundaries which previously differentiated research in the past.

### **Behavioral/Social Research "Taking an Increasingly Important Role"**

While Zerhouni received a number of questions from both sides regarding stem cell research, Rep. Tammy Baldwin (D-WI), who comes from a family

of scientists, insisted that there remains a need to maintain and support behavioral research at the NIH.

Baldwin explained that six of the ten leading causes of death in the United States are based on behavioral factors, including HIV/AIDS, smoking, violence, diet, and substance abuse. She also noted that other behavioral factors are known to increase an individual's risk for disease, disability, and early death. Despite the promise of behavioral research in reducing the burden of illness, said Baldwin, we have seen this research attacked in the media and in the form of attempted legislative interventions and threats.

Agreeing with Baldwin, Zerhouni explained that behavioral factors are a "main driver" of disease burden. He cited the cross-cutting role of the Office of Behavioral and Social Sciences Research (OBSSR) to stimulate and coordinate research across the NIH. He further noted that behavioral science is "a major component" of the NIH Neuroscience Blueprint.

Responding to Baldwin's concerns about the role of behavior in the current obesity epidemic, Zerhouni reiterated the NIH's acknowledgement and recognition of the implications of behavior for combating obesity. He cited the National Institute on Diabetes and Digestive and Kidney Disease's (NIDDK) clinical trials to change behavior as one example of the agency's support. He cautioned, however, that it will take more than the NIH to stop the rising obesity trend and that there is a need for collaboration across the government. He added that there is an additional need to examine such factors as cities and our ability to walk in them, along with diet and exercise factors. It is "very clear that behavioral and social science research is going to take an... increasingly important role," emphasized Zerhouni.

### **Zerhouni: Sex Research Serves Public Health**

Referencing the Toomey (2003) and Neugebauer (2004) amendments to the House Labor, Health, and Human Services appropriation bills, Rep. Fred Upton (R-MI) asked Zerhouni how "bad science" research can be stopped. Last year, Congress voted to defund certain grants that "galvanized the entire research community," Upton related. Some of the projects, such as the behavior of prostitutes at truck stops, do not "measure up," he said. "I voted to stop that" research (see *UPDATE*, July 14, 2003 and September 13, 2004).

Zerhouni explained that he reviewed the issue and asked the NIH staff to explain to him the public health relevance. The public health relevance of this behavior must be examined, Zerhouni further explained. STDs and

HIV/AIDS are significant problems and are not going away, he argued. The prostitution at truck stops is a main mode of transmission. "...not doing research on [this issue] would have been a decision... that would not serve public health," stressed Zerhouni. In addition, he explained, focusing upon a single grant is not a sufficient way to look at the portfolio. We also "need to have a better understanding of the research that is done so that it does not come across as being... without a public health purpose," he argued. Zerhouni emphasized that he did not think the "public health burden of [the research] should be ignored..." either.

Rep. Bobby Rush (D-IL) inquired as to whether the National Center on Minority Health and Health Disparities (NCMHD), which Congress elevated from an office within the OD to a Center in 2002, should be elevated to an institute (see *UPDATE*, March 12, 2001). Zerhouni responded by explaining that the NIH Centers and Institutes operate in the same manner, and that functionally, the name change would make little difference for the NCMHD. He argued that there needs to be one cross-cutting, "competent structure" focusing on health disparities.

## HOUSE SCIENCE COMMITTEE DISCUSSES R&D IN FY 2006 BUDGET

In February, the House Science Committee held a hearing on the FY 2006 budget for federal research and development (R&D), featuring key leaders for the science-related agencies: Samuel W. Bodman, Secretary of Energy; Charles E. McQueary, Undersecretary of Homeland Security for Science and Technology; John Marburger III, Director of the White House Office of Science and Technology Policy (OSTP); Arden Bement, Director of the National Science Foundation (NSF); and Theodore Kassinger, Deputy Secretary of Commerce.

With stinging introductions from Committee Chairman Sherwood Boehlert (R-NY) and Ranking Member Bart Gordon (D-TN) that involved heavy criticism of the Administration's proposed cuts to science research, the witnesses spent the preponderance of their time attempting to prove that the glass was "half-full" for the penny-wise FY 2006 budget proposal. Boehlert: "While the President's budget proposal for research and development can legitimately be seen as a glass half-full or a glass half-empty, no one could describe it as a glass that is filled enough to satisfy the nation's thirst for scientific achievement."

While Boehlert issued many complaints about science R&D budget cuts, he tempered it by repeatedly

emphasizing his understanding for the tight fiscal constraints that characterize the overall FY 2006 budget. Gordon, however, was not so forgiving, explaining that the "current approach of the Administration is short-sighted. It ignores the vital role that research performed today plays in our quality of life and our world position tomorrow." He added that the lack of investment in science innovation "will come home to roost later."

### Is the Glass Half-Full?

Marburger placed enormous emphasis on the sacrifices that must be made in order to win the war on terrorism, and that the Administration has "maintained strength in priority areas such as nanotechnology, information technology, and hydrogen initiative and space exploration." Outlining the brighter sides of each department's R&D budget, Marburger defended the President's choices throughout his testimony. While admitting that non-defense R&D was put on the chopping block, he attempted to show how national security-related science and technology could indirectly benefit and drive the civilian economy.

Bement defended the FY 2006 budget choices for the NSF, emphasizing increases and minimizing the potential impacts of cuts to divisions such as the Education and Human Resources (EHR) Directorate, which is down 12.4 percent from FY 2005, and the failure to fund any new major research equipment or facilities construction projects.

And while Kassinger spoke extensively about the National Oceanic and Atmospheric Administration (NOAA) and the National Institutes of Science and Technology (NIST), there was no talk of needs at the Bureau of the Census. In his written testimony, however, Kassinger pointed out that the Department of Commerce was requesting an increase of \$5.5 million for economic and social science research to expand data collection capabilities at NOAA, which is especially important in the area of fisheries management. Much of the Undersecretary's focus remained upon NOAA, NIST, and the newest efforts to build more reliable tsunami warning systems.

The final witness, McQueary, also emphasized the strides that his Department of Homeland Security's (DHS) Science and Technology Directorate has made since its establishment, and touted the education and research efforts of DHS. These included: adding over 100 graduate and undergraduate students in 2004 for research assistance; the success of the three existing Homeland Security Centers of Excellence as well as plans for more Centers; and issuing ten major R&D solicitations and over 200 research contracts.

## Subcommittee Members Decry Cuts and Argue for Investment

The question and answer period brought forth several of the issues that were raised by Gordon and Boehlert in their opening remarks. Almost every member, with the notable exception of Rep. Dana Rohrabacher (R-CA), voiced complaints about the decreases in R&D funding. Boehlert brought up the significant cuts that were made to NSF's science and math education programs, which were allegedly siphoned off into the Department of Education. "Is this a stealth effort to get it out of NSF and over exclusively in Education? Because if it is, we've detected the effort and we're going to vigorously oppose it," added Boehlert. After Bement made an effort to emphasize the Administration's support for NSF's education programs, Boehlert cut him off at the pass: "I know about some of your successes... And I know that there are some within the Administration... who would want to put everything in science and math in the Department of Education. Well, that hasn't worked."

Gordon came on a bit stronger with his criticism of the witnesses' testimony, especially with respect to the OSTP's claims of overall R&D increases: "Dr. Marburger, throughout your testimony, you sort of factored out... congressional earmarks to make the figures look better. Let me point out that the entire Administration's budget is an earmark. And it would seem that as an equal partner in government that the legislative branch might have some good ideas also." Gordon went on to compare funding in each R&D area to the level of inflation, contending that most of the increases fail to keep pace with it. He did, however, make a point of emphasizing his understanding for each witness's position; that they were simply trying to make the best of the hand they had been dealt by the Administration.

Gordon and several other members, including Rep. Vernon Ehlers (R-MI), also made much ado about the \$48 million in NSF's budget for Coast Guard icebreakers that would not be used exclusively for science (*see related story on NIH Funding, Page 1*). Bement, however, appeared to clear up some confusion about the funding and its uses. Ehlers went on to list a series of complaints, the most heated of which involved the "penny-wise and pound-foolish" practice of failing to invest enough resources into science research and education. He emphasized that better math and science education would be necessary for Americans to compete with foreign workers in the future, and that to "rob" NSF of its education funding was "absurd."

The hearing came full circle when the issue of tight fiscal constraints was again raised by Rohrabacher, who scolded witnesses and Members for not centering the discussion around what measures have been taken to *cut* spending. He went through a laundry list of programs that, according to his personal research over the last decade, were found to be inefficient. He pressed the witnesses to prove how programs such as fusion energy and NOAA-owned ships were contributing to each agency's progress. The witness panel, however, deftly deflected much of his criticism with explanations of each program's purpose.

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