

### HOUSE RESEARCH PANEL DISCUSSES NSF FUNDING

“Intellectual excitement at the frontiers of knowledge, contributions to national priorities, and capabilities of American universities for research and education” are the three factors that should decide funding for the National Science Foundation (NSF), according to Irwin Feller, Professor of Economics at Penn State University.

Feller, who chairs NSF’s Social, Behavioral, and Economic Sciences Directorate’s Advisory Committee, testified on March 13 before the House Basic Research Subcommittee, chaired by Rep. Nick Smith (R-MI). He noted that “intellectual excitement and merit characterize the research frontier in the domains of science and technology that receive support from NSF.”

The members of the subcommittee agreed and all present argued for increasing NSF’s proposed FY 2003 budget. Rep. Sherwood Boehlert (R-NY), Chairman of the full Science Committee, called himself “an unabashed cheerleader” for NSF. The House Budget Committee was apparently listening, since in its version of the FY 2003 budget resolution it increased NSF’s proposed funding to \$5.2 billion, resulting in an increase of \$425 million, instead of \$240 million. The budget committee’s action will provide a guideline to the appropriators when they make their funding decisions later this year.

As an example of the intellectual excitement in the research NSF supports, Feller cited behavioral and cognitive scientists who are generating new theories and understandings of language, learning, and perception that have the potential to lead to speech recognition machines that produce and understand natural-sounding running speech. Feller also remarked that economics is “experiencing a high level of intellectual productivity.” In particular, Feller referred to “the application of principles derived from basic game theory and theories of incentives, contracting, and governance, into the design of new and revised market arrangements for a myriad of private sector commodities.”

Focusing on difficulties with NSF’s level of funding, Feller noted that the low average size and duration of awards, especially in the social, behavioral, and economic sciences, is “inadequate to attract the energies and talents of experienced, usually senior, researchers.” This will lead them to turn to other sources, particularly the National Institutes of Health, which has fared much better than NSF during recent funding cycles. In addition, low levels of NSF funding also “induce limited research horizons,” and force scientists to adjust their research agendas.

Also testifying at the hearing were Stephen Director, Dean of Engineering at the University of Michigan, who included a description of the Panel Study of Income Dynamics in his written testimony; Karen Harp, Assistant Professor of Geology at Colgate University, representing the Independent Colleges Office, a national consortium of private liberal arts colleges; and Scott Donnelly, Senior Vice President of Corporate Research and Development at General Electric. All argued for increased funding for NSF, with Donnelly calling for a “mission” to drive investment in science.

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## NIH APPEARS BEFORE APPROPRIATORS

On March 13, Acting National Institutes of Health (NIH) Director Ruth Kirschstein received a warm welcome and enthusiastic praise from both Republicans and Democrats on the House Labor, Health and Human Services, and Related Agencies Appropriations Subcommittee (L-HHS) and its chairman, Rep. Ralph Regula (R-OH). Regula told Kirschstein, "millions of lives have been improved because of you."

Looking beyond the FY 2003 proposed budget that completes NIH's five-year doubling, Rep. David Obey (D-WI), the ranking Democrat on the appropriations committee, expressed his disappointment with the President's budget proposal for future NIH funding. The current proposal would provide only a 2.1 percent (roughly \$500 million) increase in funding for NIH in FY 2004. He queried Kirschstein on the impact of such a drastic reduction in budget increases. Kirschstein said it would be possible to maintain this year's budget at that level. Obey voiced his skepticism, noting that the year-to-year renewals are considerably more than the 2.1 percent proposed.

### 'From Bench to Bedside and Beyond'

The subcommittee, continuing the format of "theme hearings" developed last year, heard from a

panel of NIH directors the following day. The theme was "From Bench to Bedside and Beyond," conceived to highlight translational research and illustrate the progress from basic discovery to the patient's bedside and, in some areas, to the public as a whole. Kirschstein was accompanied by five institute directors: Andrew von Eschenbach (Cancer), Anthony Fauci (Allergy and Infectious Diseases), Allen Spiegel (Diabetes and Digestive and Kidney Diseases), Richard Hodes (Aging), and Audrey Penn (Neurological Disorders and Stroke). They all presented examples of clinical advances made through NIH-supported research.

Allen Spiegel, Director of the National Institute of Diabetes and Digestive and Kidney Diseases, enthusiastically reported the "impressive results from a major, multi-center clinical trial, the Diabetes Prevention Program (DPP)," sponsored by his institute. The program, Spiegel explained, "demonstrates that modest improvements in diet and exercise can prevent or delay the onset of type 2 diabetes in at-risk individuals." According to Spiegel, these lifestyle changes reduced the risk of developing type 2 diabetes (once referred to as adult-onset diabetes) by 58 percent in a study population that reflected the diversity of the American public.

He emphasized that it is "now imperative to translate these striking results to lifestyle changes of the 20 million Americans who are at high risk for type 2 diabetes due to their impaired glucose intolerance." Researchers are seeking cost-effective means of targeting successful implementation of these prevention strategies to those who can most benefit from them, he said. Translation efforts will also target children and adolescents to prevent or reduce obesity and its metabolic effects, including type 2 diabetes, an emerging problem in children.

### Attention to Behavior Needed

Reps. John Peterson (R-PA) and Don Sherwood (R-PA) expressed their frustration at the pace of translating NIH-supported discoveries to the public. Citing diabetes as an example, Sherwood shared his concern over the time it takes to move new knowledge into practice.

Turning to obesity, Spiegel said that it is important to realize it is a health, not cosmetic, problem. An environment more conducive to exercise requires a national effort, he asserted.

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The Consortium of Social Science Associations (COSSA), an advocacy organization for federal support for the social and behavioral sciences, was founded in 1981 and stands alone in Washington in representing the full range of social and behavioral sciences.

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“NIH keeps coming up with wonderful new data and at the same time Americans are unhealthier than ever,” Peterson lamented. There is a disconnect between what we are learning and what the public is doing, he said.

In response, Hodes suggested that they take a step back and look at the broad statistics. There is extremely positive data, he said. For example, in 1982, 25 percent of the elderly population was disabled. That number has dropped to 19.6 percent. Hodes also pointed out that the factor most strongly correlated with health is education, which manifests itself in many different ways. The challenge, he conceded, is to implement the findings and communicate them to the public.

Von Eschenbach noted that in FY 2002, the National Cancer Institute (NCI) will be supporting health communications research on why people tend not to acknowledge lifestyle limits and how to get the message across to the public. NCI, he said, will spend about \$1 million on health behavior research.

Rep. Nancy Pelosi (D-CA) noted that communication is just one facet of the problem. It extends, she said, to the lack of health care by many. She observed that the Administration’s proposed budget cut the chronic disease funding for the Center for Disease Control and Prevention by \$57 million (8 percent). “A foolish act,” Pelosi charged. Prevention is the least costly way to improve health, it contributes to quality of life, and it saves money; we have to make it a priority across the board, she challenged.

## **ADMINISTRATION PROPOSES JUSTICE PROGRAMS’ OFFICE REORGANIZATION**

The prospect of reorganizing the Office of Justice Programs (OJP), which works to prevent and control crime, is once again on the table. Concerns about overlap, inefficiency, and redundancy moved Congress in 1999 to hold hearings on a reorganization proposal, but it did not develop into legislation. A similar plan is now being considered in Congress, and the House Crime Subcommittee, chaired by Rep. Lamar Smith R-TX, recently held three oversight hearings at which the issue featured prominently.

The goals of the reorganization, according to Deborah Daniels, Assistant Attorney General for

OJP, are to improve responsiveness, eliminate duplication and overlap, ensure measurable grant and program outcomes, and enhance communication, cooperation, coordination, and efficiency.

Part of the Congressional concern about the activities of OJP relates to a perceived ineffectiveness of some of its programs. To focus resources on “what works,” according to Tracy Henke, Principal Deputy Assistant Attorney General at OJP, there will be an increased emphasis on measuring the results of programs funded by OJP. The Office now requires evaluation components in all discretionary grant programs, and ten percent of program funding is set aside for evaluation. To increase efficiency and reduce redundancy, the reorganization proposal calls for the institution of an OJP-wide grant management system.

Also to reduce redundancy, the proposal would consolidate all research into the National Institute of Justice (NIJ), and all statistics into the Bureau of Justice Statistics (BJS).

Many in the juvenile justice community question the transfer of research from the Office of Juvenile Justice and Delinquency Prevention (OJJDP) into NIJ, arguing it would diminish OJP’s commitment to juvenile justice research. At one of the hearings, David Mitchell, Executive Director of the National Council of Juvenile and Family Court Judges, reminded the committee that Congress created specialized offices like OJJDP because important issues like juvenile crime and domestic violence were not receiving enough attention.

## **Threat to NIJ and BJS Independence**

Potentially more threatening to research, however, is a provision that would consolidate all authority in the Attorney General in order to centralize management at OJP. Scientists in the criminal justice field fear this could open up avenues for political interference in the research and statistics OJP performs, sacrificing the independence that Congress mandated in the Safe Streets Act of 1968. That legislation vested final authority for all grants, cooperative agreements, and contracts in the directors of NIJ and BJS.

While expressing general support for a reorganization, Laurie Robinson, former head of OJP and distinguished senior scholar at the

University of Pennsylvania's Jerry Lee Center of Criminology, asserted that the integrity of knowledge-building functions should be maintained "so that research and statistics work continues to be viewed as objective and credible."

Most of the witnesses at the hearings expressed support for the idea of reorganizing OJP, but Rep. Bobby Scott (D-VA) cautioned the committee that they might do better to ensure the offices achieve their goals rather than simply reorganize and expect improvement to follow. Scott informed the members and audience that the research community is starting to make its voice heard, and that social science organizations are cautioning the committee not to reorganize OJP so much that the independence of research is sacrificed. "The cure may be worse than the disease," he warned.

## **RESTRUCTURING OF EDUCATION RESEARCH UNDERWAY IN HOUSE**

With the President's major education reform bill signed into law, Congress can now move forward on the overdue reauthorization of the federal government's education research programs. Reauthorization of the Office of Educational Research and Improvement (OERI) is advancing, thanks to the House Education Reform Subcommittee's favorable reporting of H.R. 3801 to the full committee on March 13.

The bill represents an effort, spearheaded by Subcommittee Chairman Rep. Michael Castle (R-DE), to remedy some of the oft-cited weaknesses in education research and its federal support (see *Update*, December 10, 2001). Passing the subcommittee by voice vote with strong bipartisan support, the bill, Castle promised, "ensures that tried and true scientific information – not fads or fiction – form the basis for setting education policy and improving education practice."

The bill would replace the current OERI with a more autonomous Academy of Education Sciences, located within the Department of Education but functioning separately under the direction of a National Board for Education Sciences. The director of the Academy would be appointed by the President and confirmed by the Senate, and serve a six-year term. Among other duties, the director would be responsible for proposing priorities for research, evaluation, and statistics to the Board.

Three main centers would comprise the Academy, each headed by a commissioner appointed by the director. The National Center for Education Research would replace the five existing research institutes. Its commissioner would be responsible for developing and carrying out a research agenda, in consultation with the director, based upon priorities identified by the director and the Board.

The bill aims to improve the quality of education research by establishing new standards of quality for education research. The language defines scientifically-based research standards with a list of characteristics of research design, data quality, application, and peer review.

The second center, the National Center for Education Statistics (NCES), would look much like the current NCES, and would continue to collect and analyze education information and statistics. In addition to collecting educational data, the bill requires NCES to gather statistics on the incidence and nature of violence in schools, including information on the relationship between victims and perpetrators and the type of weapons used.

The bill also aims to improve the quality of evaluation the Department performs, in part, by moving all evaluation into a separate National Center for Education Evaluation, the third center within the Academy.

The subcommittee passed by voice vote two amendments at the markup session. One of these sought, among other goals, to bring the amount of financial resources available to the Academy more in line with the research investments of other federal agencies. The reported bill would nearly double the current fiscal year 2002 funding for research and statistics, authorizing the new Academy at \$400 million for these programs in FY 2003. It provides \$112 million for assessment, but does not specify the amount for the regional education labs.

The issue of the labs served as the only significant point of contention at the markup. Several members wanted to ensure that the labs in their districts would not face elimination as a result of the legislation. Castle, however, made clear that the bill does not eliminate the labs; rather, they would see their current contracts through, after which time the regional entities created by the Secretary would award competitive contracts for technical assistance and dissemination.

Castle expressed his desire to move the bill through quickly. It could be in full committee (House Committee on Education and the Workforce) as soon as this week.

## COMINGS AND GOINGS

### Zerhouni to Lead NIH?

During the week of March 8, the national press began reporting that President Bush was about to announce the nomination of Elias Zerhouni as the next director of the National Institutes of Health. So far, no official announcement has been made.

Zerhouni is currently the Martin Donner Professor and Chairman of Radiology and Vice Dean for Research at the Johns Hopkins University School of Medicine. Relatively unknown to those outside of the magnetic resonance imaging world, Zerhouni was instrumental in creating a new institute at Hopkins to help advance that work.

Ironically, Hopkins has been a pioneer in embryonic stem cell research, an area where the Bush Administration has placed limits on research. Zerhouni's views on this issue are not widely known, although some have made clear that any NIH director would have to support the Administration's policy.

Senators Tom Harkin (D-IA) and Arlen Specter (R-PA), Chair and Ranking Member, respectively, of the Senate Labor, Health and Human Services Appropriations Subcommittee, have already expressed their concern with the possible nomination of Zerhouni as NIH director. Both strongly support expanding federal funding of embryonic stem cell research.

### Cassman and Koplan Continue Exodus

In the meantime, the exodus of public health officials continues. Marvin Cassman, Director of the National Institute of General Medical Sciences, announced that he will leave NIH later this year to go to the University of California. This would bring the number of Institutes without non-acting directors to six. Jeffrey Koplan, head of the Centers for Disease for Control and Prevention, has also announced that he will leave on March 31.

## Political Scientist to Head HRSA

On March 6, Health and Human Services (HHS) Secretary Tommy Thompson named Elizabeth M. James Duke to serve as Administrator of the Health Resources and Services Administration (HRSA). Duke has been Acting Administrator since March 2001.

HRSA, a diverse agency with programs that range from directly providing health care to supporting the nation's health care structure, is the second largest among the eight agencies of the U.S. Public Health Service. The agency's FY 2002 budget is \$6.5 billion.

Before coming to HRSA, Duke served as Deputy Assistant Secretary for Administration in HHS' Administration for Children and Families from 1997 to 2001. From 1986 to 1997, she was Principal Deputy Assistant Secretary for Management and Budget at HHS. She earned a bachelor's degree in political science from Douglas College of Rutgers University, a master's degree in political science and African studies from Northwestern University, and a doctorate in political science from George Washington University.

## AHRQ Administrator Dies

On March 10, Agency for Healthcare Quality and Research (AHRQ) Administrator John M. Eisenberg died at his home in Potomac, Maryland, after a year-long battle with brain cancer.

Eisenberg served as the director of AHRQ from 1997 to 2002. He spearheaded efforts by the federal government to reduce medical errors and improve patient safety in health care. He also worked to increase research in areas that have been relatively neglected in the past, including health care disparities, improving health care quality, and translating evidence-based medicine into improved health care.

## CENSUS AND JUVENILE JUSTICE NOMINATIONS MOVE FORWARD

With full Senate confirmation still to come, the nominations of Louis Kincannon for Director of the Census Bureau and J. Robert Flores for Administrator of the Office of Juvenile Justice and

Delinquency Prevention recently moved through Senate committees.

Chaired by Joseph Lieberman (D-CT), the Senate Governmental Affairs Committee questioned Kincannon on a range of issues related to the Census, most notably that of adjustment (see *Update*, October 22, 2001). Kincannon expressed confidence in adjustment for larger geographic areas, and said that any adjustment must be able to stand up to scientific review and legal standards. His nomination was reported out of committee favorably.

Flores appeared before the Senate Judiciary Committee. Senator George Allen (R-VA) described Flores as a tireless advocate on behalf of children and families, and able to work with both parties. Referring to the role of ideology in crime control, Senator Joseph Biden (D-DE) asked Flores to look honestly at what works and what does not. And "if you find something that works . . . be an advocate." The committee has not yet reported out the nomination.

## HILL BRIEFING FOCUSES ON STRESS AND HEALTH

There is increasing evidence that behavioral and social influences can have far-reaching effects on health and disease outcomes. To explore the latest research in this area, the Coalition for the Advancement of Health Through Behavioral and Social Science Research (CAHT-BSSR) sponsored a briefing on *Promoting Health in a Stressful World* on February 11. The briefing was co-sponsored by Rep. Connie Morella (R-MD). Angela Sharpe, COSSA's Associate Director for Government Affairs, co-chairs the coalition.

Stress affects the development and course of heart disease, hypertension, and stroke. In addition, social relationships – both positive and negative – can have a significant effect on health. Scientists are just beginning to explore the underlying mechanisms linking biology and the social world. How we cope with stress also influences our future health.

The National Institute of Health's Office of Behavioral and Social Sciences Research (OBSSR) has spearheaded the research on such linkages. Six reports from the Institute of Medicine and the National Research Council have highlighted the

importance addressing these linkages for NIH's research agenda in the social and behavioral sciences (see *Update*, January 28, 2002). The reports aimed at setting priorities for NIH research in the social and behavioral sciences are:

- *New Horizons in Health: An Integrative Approach* (2001)
- *Health and Behavior: The Interplay of Biological, Behavioral, and Societal Influences* (2001)
- *Promoting Health: Intervention Strategies from Social and Behavioral Research* (2000)
- *Cells and Surveys: Should Biological Measures be Included in Social Science Research* (2001)
- *From Neurons to Neighborhoods: The Science of Early Childhood Development* (2000)
- *Bridging Disciplines in the Brain, Behavioral, and Clinical Sciences* (2000)

The briefing also highlighted NIH's report on its June 2000 conference, *Toward Higher Levels of Analysis: Progress and Promise in Research on Social and Cultural Dimensions of Health*.

Speaking at the briefing were Neil Schneiderman, Professor of Psychology, Medicine, Psychiatry, and Behavioral Sciences at the University of Miami; Curtis McMillen, Associate Professor in the George Warren Brown School of Social Work at Washington University, St. Louis; and Christine Bachrach of the National Institute of Child Health and Human Development. Raynard Kington, Director of OBSSR and Acting Director of the National Institute of Alcohol Abuse and Alcoholism, was the moderator. Due to illness, Linda K. George, Department of Sociology, Center for the Study of Aging and Human Development at Duke University, could not attend, but provided written testimony ([www.cossa.org/caht-bssr.htm](http://www.cossa.org/caht-bssr.htm)).

Schneiderman noted that large-scale epidemiological studies have demonstrated associations between psychosocial factors and diseases. For example, depression is clearly associated with increases in hypertension and coronary heart disease and also increases the risk of death for men with cancer and women with breast cancer.

One pathway between psychosocial factors and adverse health effects, Schneiderman explained, is through behavior. Smoking, overconsumption of calories, and a sedentary lifestyle can lead to coronary heart disease. A second pathway that may relate to stress involves low levels of brain serotonin and circulating levels of stress hormones, which can have major impacts upon the immune system and disease progression. This is evidenced in studies of HIV/AIDS patients.

Thus, psychosocial interventions may ameliorate disease, Schneiderman declared. As an example, he cited the Recurrent Coronary Prevention Trial, which found that group therapy reduced hostility and depression in patients after a heart attack and reduced recurrence of a second heart attack by more than 40 percent. He did admit that not all psychosocial interventions have been successful, since some are carried out on patients whose disease is too advanced.

Schneiderman's research on those directly affected by Hurricane Andrew also provided a view of how stress relates to illness and what could be done to reduce people's vulnerability. The most important finding of the study was that high levels of resources, together with high levels of social support and low use of denial and alcohol as coping mechanisms, predicted faster recovery for those who suffered from post-traumatic stress syndrome and reduced immune function.

### **The Positive Aspects of Adversity**

McMillen addressed the positive by-products of adversity. Although he has been called upon many times since September 11, he noted that his earlier research focused on disasters such as the Northridge, California earthquake and the Oklahoma City Murrah Building bombing, as well as spinal cord injuries.

In what may be a surprise, 88 percent of respondents directly affected said that something good came out of the Oklahoma City bombing. These included increased compassion, increased family closeness, increased self-efficacy, and increased spirituality. In addition, unique adversities also yield unique positive by-products, McMillen explained. These are: increased ability to help other people, increased faith in people, increased knowledge about a kind of event, increased self-

knowledge, decreased naïveté, and sometimes, financial gain.

McMillen said that the research is still unclear about the correlates of these by-products. He noted that personality theorists believe it all depends on the personality of the people experiencing the event. The relationship of optimism, extraversion, and other such traits needs further exploration. Other possible variables that affect these positive outcomes are social support, gender, and religious coping activities.

Further research in this area, McMillen suggested, could focus on the durability of these positive by-products. What elements of the process are most potent in promoting growth and recovery? How can others assist in this process?

Finally, Bachrach focused on the results of the NIH Conference, *Toward Higher Levels of Analysis: Progress and Promise in Research on Social and Cultural Dimensions of Health*, held in June 2000. The conference was designed to: 1) highlight the contributions of social and cultural factors to health and illness to achieve a better understanding of the interdependence of social, behavioral, and biological levels of analysis in health research; 2) examine the state of science in the area of sociocultural constructs like race, ethnicity, socioeconomic status, and gender; 3) examine the influences of social and cultural factors as well as interpersonal, neighborhood, and community influences on prevention, treatment, and use of health services; 4) examine the current status of issues related to health justice and ethics and perspectives for global health; and 5) provide recommendations for future research directions.

A summary of the conference can be viewed on the web at [http://obssr.od.nih.gov/Conf\\_Wkshp/higherlevel/conference.html](http://obssr.od.nih.gov/Conf_Wkshp/higherlevel/conference.html).

OBSSR and 15 Institutes and Centers of NIH are currently soliciting applications for research examining the social and cultural dimensions of health (PA-02-043). The program announcement is based on the recommendations submitted to NIH (see *Update*, July 10, 2000). For more information see <http://grants.nih.gov/grants/guide/pa-files/PA-02-043.html>. Direct general inquiries regarding the scope and content of the PA to Ronald P. Abeles (301/496-7859 or [abeles@nih.gov](mailto:abeles@nih.gov)).