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Defense and Homeland Security Are R&D Winners

Before leaving for the August recess, Congress made significant progress on fiscal year (FY) 2004 research and development (R&D) appropriations, proposing substantial increases for the overall federal R&D portfolio. The House of Representatives, taking the lead, would provide nearly \$126 billion in R&D; however, 99 percent of the proposed increase would go to R&D programs in just three agencies: the Department of Defense (DOD), the new Department of Homeland Security (DHS), and the National Institutes of Health (NIH).

After Congress returns in September, it faces the daunting task of completing the FY 2004 appropriations process with just four weeks before the start of the new fiscal year. Before leaving Washington, the House drafted all 13 appropriations bills, and approved 11 of them. The Senate managed to draft 9 out of 13, but found time to debate and approve only four. None of the appropriations bills has been signed into law.

In the House plan, the federal R&D portfolio would reach another all-time high of \$125.9 billion in FY 2004 (see table on page 2) representing an \$8.4 billion or 7.2 percent increase over this year's funding level and \$3.6 billion more than the Bush Administration's request of \$122.4 billion. All the other R&D funding agencies collec-

tively would see their R&D funding remain flat next year, with modest increases for some agencies offset by cuts in others.

The House would boost DOD R&D by \$7.2 billion or 12.3 percent for a total of \$66.0 billion, bringing DOD R&D to another all-time high. DOD weapons systems development would account for nearly all of the increase (up \$6.1 billion to \$53.6 billion), but the chamber would also reward DOD's "S&T" activities with a 9.7 percent increase to \$12.3 billion. The newly created DHS

would see its R&D portfolio surge by 57.5 percent or \$385 million to \$1.1 billion as DHS ramps up its S&T capabilities.

After five years of annual 15 percent increases, NIH budget growth would slow down considerably in FY 2004. The House would match the president's request exactly with a 2.7 percent increase for NIH's R&D portfolio. Though NIH R&D would rise modestly in percentage terms, the sheer size of the NIH portfolio means the House proposal

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NIH Research Under Scrutiny

The House of Representatives came within a razor-thin margin of passing an amendment that would have eliminated funding for five peer-reviewed National Institutes of Health (NIH) grants during a July 10 floor debate of the Labor-HHS appropriations bill (H.R. 2660). Rep. Pat Toomey (R-PA), the amendment's lead sponsor, cited the research grants as objectionable because they are "much less worthy of taxpayer funding than the kind of research the NIH is generally doing to cure... devastating diseases." The Toomey amendment, co-sponsored with Rep. Chris Chocola (R-IN), failed by only two votes (212-210).

The five research grants in question all involve subjects that relate to public health. The majority touch on sexual behavior, including sexual risk-taking, the health of transgender American Indians, HIV-AIDS and prostitution, sexual dysfunction in older men, and the relationship between human population and the environment in China. Rep. Toomey decried, "Mr. Chairman, I ask my colleagues, who thinks this stuff up? And, worse, who decides to actually fund these sorts of things?"

Rising to the defense of the nation's largest nondefense research agency was Labor-HHS subcommittee chairman Rep. Ralph Regula (R-OH) who warned his colleagues that

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"The day we decide which grants are going to be approved on the basis of a 10-minute horseback debate ... is the day we will ruin science research in this country."

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Congressional Action on R&D in the FY 2004 Budget (Budget authority in millions of dollars; August 19, 2003)

	FY 2003 Estimate	FY 2004 Request	Action by House				
			FY 2004 House	Chg. from Request		Chg. from FY 2003	
				Amount	Percent	Amount	Percent
Defense (military)	58,724	62,821	65,953	3,132	5.0%	7,228	12.3%
(<i>"S&T" 6.1,6.2,6.3 + Medical</i>)	11,232	10,297	12,316	2,019	19.6%	1,085	9.7%
(<i>All Other DOD R&D</i>)	47,493	52,524	53,636	1,112	2.1%	6,143	12.9%
National Aeronautics & Space Admin.	10,999	11,025	11,096	71	0.6%	97	0.9%
Energy	8,225	8,535	8,606	72	0.8%	381	4.6%
(<i>Office of Science</i>)	3,075	3,066	3,208	141	4.6%	133	4.3%
(<i>Energy R&D</i>)	1,281	1,289	1,353	64	5.0%	72	5.6%
(<i>Atomic Energy Defense R&D</i>)	3,869	4,180	4,045	-134	-3.2%	176	4.6%
Health and Human Services	27,566	28,203	28,204	1	0.0%	638	2.3%
(<i>National Institutes of Health</i>)	26,245	26,946	26,947	1	0.0%	702	2.7%
National Science Foundation	3,927	4,035	4,171	136	3.4%	244	6.2%
Agriculture	2,276	1,943	2,064	121	6.2%	-212	-9.3%
Homeland Security	669	907	1,054	148	16.3%	385	57.5%
Interior	627	633	666	33	5.2%	39	6.2%
Transportation*	702	693	597	-96	-13.9%	-105	-15.0%
Environmental Protection Agency	643	607	634	27	4.5%	-9	-1.5%
Commerce	1,248	1,100	980	-120	-10.9%	-268	-21.5%
(<i>NOAA</i>)	684	675	582	-92	-13.7%	-102	-14.9%
(<i>NIST</i>)	527	410	368	-43	-10.4%	-159	-30.2%
Education	315	275	327	52	19.1%	12	3.9%
Agency for Int'l Development	267	275	272	-3	-1.2%	5	1.7%
Department of Veterans Affairs	800	822	822	0	0.0%	22	2.8%
Nuclear Regulatory Commission	59	60	60	0	0.0%	1	1.7%
Smithsonian	128	127	127	0	0.2%	-1	-0.6%
All Other	340	330	314	-16	-4.8%	-26	-7.6%
Total R&D	117,517	122,391	125,948	3,557	2.9%	8,431	7.2%

	FY 2003 Estimate	FY 2004 Request	Action by Senate				
			FY 2004 Senate	Chg. from Request		Chg. from FY 2003	
				Amount	Percent	Amount	Percent
Defense (military)	58,724	62,821	64,823	2,002	3.2%	6,099	10.4%
(<i>"S&T" 6.1,6.2,6.3 + Medical</i>)	11,232	10,297	11,764	1,467	14.2%	532	4.7%
(<i>All Other DOD R&D</i>)	47,493	52,524	53,059	536	1.0%	5,567	11.7%
Energy*	8,225	8,535	8,765	230	2.7%	540	6.6%
(<i>Office of Science</i>)*	3,075	3,066	3,111	44	1.5%	36	1.2%
(<i>Energy R&D</i>)*	1,281	1,289	1,396	107	8.3%	115	9.0%
(<i>Atomic Energy Defense R&D</i>)*	3,869	4,180	4,258	79	1.9%	389	10.1%
Health and Human Services*	27,566	28,203	28,575	372	1.3%	1,009	3.7%
(<i>National Institutes of Health</i>)*	26,245	26,946	27,254	308	1.1%	1,008	3.8%
Agriculture*	2,276	1,943	2,105	162	8.3%	-171	-7.5%
Homeland Security	669	907	1,001	95	10.4%	332	49.6%
Interior*	627	633	668	35	5.5%	41	6.5%
Education*	315	275	295	20	7.1%	-21	-6.5%
Agency for Int'l Development*	267	275	293	18	6.6%	26	9.8%
Nuclear Regulatory Commission*	59	60	60	0	0.0%	1	1.7%
Smithsonian*	128	127	130	3	2.3%	2	1.5%

AAAS estimates of R&D in FY '04 appropriations bills. Includes conduct of R&D and R&D facilities. FY '03 figures adjusted to reflect appropriations in the FY '03 supplemental bill (P.L. 108-15) and AAAS estimates of final FY '03 appropriations in the FY '03 omnibus bill (PL 108-7).

*Denotes Appropriations Committee-approved funding levels, which may be amended by the full House or Senate. All other funding levels have been approved by the full House or Senate. The Senate has not yet drafted appropriations for NASA, NSF, Transportation, EPA, Commerce, or VA.

Energy Department to Change Approach to Lab Contracts

In recent years, the national weapons labs have seemed to be enveloped in a constant swirl of controversy. Los Alamos National Laboratory in particular has been the subject of sharp criticism, and in April, the Department of Energy (DOE) announced that for the first time it will compete the next contract it awards for management and operation of Los Alamos when the current contract with the University of California (UC) expires in 2005. Before breaking for the August recess, the House went a step further by adding a rider to an appropriations bill that requires competition for a handful of other DOE labs as well.

A host of problems has brought intense public scrutiny upon the labs. Allegations of espionage, lost hard drives containing classified information, and most recently,

Los Alamos benefitted from the university's ability to draw talent, even as it worked on such an inherently governmental function as the development of nuclear weapons.

accusations of financial mismanagement have hit Los Alamos. Lawrence Livermore National Laboratory, which is also managed by UC, has faced controversy over alleged security lapses and cost overruns during construction of the National Ignition Facility.

In an attempt to shore up security of classified weapons programs, Congress created in 2000 the National Nuclear Security Administration, a semi-autonomous agency within DOE, to oversee the nation's nuclear weapons complex, including Los Alamos and Livermore. However, the reorganization failed to quell controversy about the labs, and criticism flared up late last year when allegations of financial abuses at Los Alamos prompted the resignation of the lab's director, and management reviews by both UC and DOE.

The origin of the relationship between UC and DOE dates back to 1942, when Los Alamos was founded by J. Robert

Oppenheimer, a UC Berkeley physicist who led the Manhattan Project, the secret federal research program to develop an atomic bomb. The following year, UC agreed to manage the facility for the federal government. Thus, a partnership was created to run Los Alamos as a government-owned, contractor-operated (GOCO) laboratory. The partnership allowed the lab to benefit

from the university's ability to draw talent, even as it worked on such an inherently governmental function as the development of nuclear weapons. The GOCO model was considered widely successful and adopted at numerous other government labs.

Ever since UC took over Los Alamos in 1943 and Livermore in 1952, the manage-

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R&D *Continued from page 1*

would add \$702 million to NIH R&D for a total of \$26.9 billion.

The National Science Foundation (NSF) would enjoy a budget increase, but would fall well short of a five-year doubling plan signed into law in the 107th Congress. The House would provide \$4.2 billion for NSF's R&D activities (excluding education, training, and overhead programs), an increase of 6.2 percent. The agency's total budget of \$5.6 billion would be nearly \$1 billion short of the \$6.6 billion authorized for FY 2004 by H.R. 4664, which put the NSF budget on a doubling track between fiscal years 2002 and 2007.

The remaining agencies in the federal R&D portfolio would receive some modest increases offset by steep cuts in other areas. The Department of Energy's (DOE) Office of Science would receive a modest boost to \$3.2 billion for its R&D programs in the House, an increase of 4.3 percent; NASA's R&D portfolio would edge up 0.9 percent to \$11.1 billion, but the House plan would mostly be a placeholder until the investigation of the Columbia shuttle disaster and subsequent restructuring of the NASA budget is complete. There would be steep cuts in the R&D portfolios of other agencies: R&D in the U.S. Department of Agriculture (down 9.8 percent), the Department of Transportation (down 15.0 percent), and the Department of Commerce (down 21.5 percent) would all fall sharply in the House appropriations bills.

The House's focus on defense and homeland security would result in overall defense R&D (including DOD, DOE defense activities, and a large part of the DHS R&D portfolio) to rise \$7.4 billion or 11.8 percent to \$70.5 billion for a record total driven largely by substantial boosts to defense-related development activities in DOD and DHS. After several years of near-parity between defense and nondefense R&D around the turn of the century, defense R&D would pull ahead decisively to 56 percent of total federal R&D.

The Senate would follow the House closely in providing large increases for defense and homeland security, modest increases for health, and flat funding overall for all other R&D programs in the appropriations it has drafted so far. The Senate has not yet acted on key R&D funding agencies such as NASA, NSF, EPA, and Commerce, but would stick closely to House action on the agencies it has completed. The Senate would provide \$11.8 billion for DOD "S&T", a 4.7 percent increase that would be more modest than the House plan but in sharp contrast to the administration's request for steep cuts. The Senate would provide a modest 1.2 percent increase to R&D in DOE's Office of Science, again less than the House but in contrast to a requested cut in the Bush Administration budget. The Senate would provide slightly more than the House and the administration request for NIH R&D for a \$1.0 billion or 3.8 percent increase to \$27.3 billion.

Although the House, the Senate, and President Bush have agreed on an overall spending total for appropriations of \$785 billion, the total is divided among the 13 bills in differing ways and there are thousands of program-level funding differences to resolve next month. If past years are any indication, the likelihood that Congress and the White House will be successful in reaching a uniform consensus by the end of September is slim. ●●●

—Kei Koizumi, Director, AAAS R&D Budget and Policy Program

FOR MORE INFORMATION:

AAAS R&D Website: www.aaas.org/spp/rd

Energy Department Lab Contracts

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ment contracts between the university and the government have always been renewed. But in the aftermath of each scandal, critics have called for opening the contracts up to competition.

"Periodic competition should be normal," said Rep. Billy Tauzin (R-LA), the chairman of the House Energy and Commerce Committee, at a May 1 hearing. "[But] the pressure of competitive bidding, one of the most powerful cleansers of management problems, has never really bore down on those responsible for the [Los Alamos] lab's contract."

Senator Pete Domenici (R-NM), a staunch supporter of the labs, has also expressed recent support for competition. "We all know that the present manner in which the laboratory is managed must change in ways that are inevitable," he said in an April speech at Los Alamos. "... I worry that the attacks on Los Alamos will only intensify if we do not take dramatic action to improve the lab's management and reputation. ... As a result, ... I will support an effort by the Secretary [of Energy] to conduct a competition to solicit the very best proposals on how the laboratory could be managed."

Others, however, worry that the uncertainty surrounding competition and the possibility of losing UC's generous employee benefits could lower morale at the lab and cause a wave of retirements, hindering the lab's scientific work. Recognizing these concerns, Domenici said he would only support competing the contract if all current employees, aside from the most senior officials, are retained and current compensation and retirement benefits are kept in place.

On April 30, shortly after Domenici's speech, Energy Secretary Spencer Abraham announced DOE's intention to compete the Los Alamos contract in 2005, while endorsing conditions similar to Domenici's. "Given ... the widespread nature of the problems uncovered at Los Alamos," Abraham said, "I intend to open the management of Los Alamos to full competition when the current contract expires. ... I direct that any future competition include provisions to retain the existing Los Alamos workforce and to preserve the culture of scientific skepticism and peer review." Abraham also promised to ensure that pension benefits

of current employees would be protected.

UC itself has expressed reluctance about participating in the upcoming competition. "We want to compete—and we want to compete hard," UC President Richard C. Atkinson said in written testimony before the Energy and Commerce Committee. "... [W]e believe, with every fiber of our institutional being, that continued UC management is in the absolute best interests of the nation's security. But there is another question at stake here, and that is whether the University of California should compete. The answer to that is less clear, and it goes to the fundamental nature of these particular government laboratories and the historical reasons why the university was first asked to manage them. ... It is one thing to manage the national weapons laboratories at the request of the federal government because of the unique scientific capabilities of the University, and quite another to actively pursue what could now be interpreted as a business venture. I am not sure our faculty or the people of California would support such action."

Some observers have expressed concern about the overall health of DOE's GOCO partnerships. Dr. Sig Hecker, a former director of Los Alamos, recently lamented the lack of trust that has grown between DOE and its contractors. Speaking at a June 24 hearing before the Energy and Natural Resources Committee, he said that DOE's "relationship with the laboratories, driven to a large extent by pressure from Congress, [has] changed ... from one of partnership to an arms-length government procurement." DOE has appointed a blue ribbon commission to study these concerns, which is expected to issue a report in the coming months.

Thus, when Rep. David Hobson (R-OH), the chairman of the Appropriations Subcommittee on Energy and Water Development, inserted a clause into DOE's fiscal 2004 funding bill (H.R. 2754) regarding lab management, he added a new element to an already complicated debate. The clause requires a competitive bidding process for all DOE contracts that have not been competed in the last fifty years. This would affect several labs, including Los Alamos and Livermore; Lawrence Berkeley, which is also operated by UC; Argonne, which is run by

the University of Chicago; and Ames which is managed by Iowa State University.

While the clause appears to be designed primarily to force competition at Livermore, which just celebrated its fiftieth anniversary, the other labs affected have generally received good grades for their operation, and some critics suggest that competing such contracts will cost more money than it will save. In the case of Ames, the lab contract may be unattractive to other potential bidders because it is located on the

"The pressure of competitive bidding, one of the most powerful cleansers of management problems, has never really bore down on those responsible for the [lab]."

Iowa State campus. Opponents of Hobson's rider argue that DOE should retain the authority to make competition decisions on a case-by-case basis.

The clause also includes a requirement that no conditions be imposed "that may have the effect of biasing the competition in favor of the incumbent contractor." According to report language accompanying the bill, this provision is intended to prevent Secretary Abraham from requiring that the existing Los Alamos workforce be protected.

Sen. Domenici, who is chairman of the Senate Energy and Water Appropriations Subcommittee, included no such provisions regarding lab contracts in his version of the funding bill, and will likely weigh in with his own views, drawing on his committee's oversight hearings, when the bills go to conference this fall. ●●●

FOR MORE INFORMATION:

Senate testimony of Dr. Sig Hecker:
www.senate.gov/~energy/hearings/testimony.cfm?id=821&wit_id=2285

Transcript of House Energy and Commerce hearing: <http://energycommerce.house.gov/108/action/108-14.pdf>

UC Labs: <http://labs.ucop.edu>
NNSA: www.nnsa.doe.gov

CONGRESSIONAL RESEARCH SERVICE

Copies of CRS reports for congressional use are available by calling 202/707-7132.

- **Department of Homeland Security: Issues Concerning the Establishment of Federally Funded Research and Development Centers (RS21542)**
This report provides a historical overview of FFRDCs since they were first established during World War II. It highlights criticisms raised by some in Congress over the continuing need for such centers, the diversification into areas beyond the centers' original missions, and oversight of FFRDC activities by sponsoring agencies.
- **Biodiesel Fuel and U.S. Agriculture (RS21563)**
This report provides an overview of the advantages and disadvantages of renewable, agriculture-based fuels, commonly known as biofuels (including ethanol and biodiesel). It provides a comparison of the costs associated with various sources of biofuels, highlights environmental concerns, and summarizes public laws that support the production and use of biofuels.
- **Agriculture Biotechnology: The U.S.-EU Dispute (RS21556)**
This report provides an overview and background behind a formal challenge initiated by the United States and several other countries before the World Trade Organization (WTO) of the European Union's moratorium on approving new agricultural biotechnology products. In addition, it discusses the different regulatory approaches of the U.S. and EU, consumer perspectives, and issues regarding labeling and traceability.

GENERAL ACCOUNTING OFFICE

Copies of GAO Publications are available online at www.gao.gov or by calling 202/512-6000.

- **Border Security: New Policies and Increased Interagency Coordination Needed to Improve Visa Process (GAO-03-1013T)**
This report assesses the effectiveness of the visa process as an antiterrorism tool. It found that the Departments of State, Homeland Security, and Justice could more effectively manage the visa process if they had clear and comprehensive policies and procedures and increased agency coordination and information sharing.
- **Major Management Challenges and Program Risks: NASA Challenges and Risks (GAO-03-849T)**
In this testimony before the Columbia Accident Investigation Board, the GAO identifies four challenges facing NASA: (1) strengthening strategic human capital management, (2) improving contract management, (3) controlling International Space Station costs, and (4) reducing space launch costs.
- **Technology Transfer: Agencies' Rights to Federally Sponsored Biomedical Inventions (GAO-03-536)**
This report examines: (1) who is eligible to use and benefit from the government's license to federally funded biomedical inventions, (2) the extent to which the federal government has licenses to those biomedical inventions it procures or uses most commonly, and (3) the extent to which federal agencies and authorized federal funding recipients have actually used or benefited from these licenses. The analysis focuses on the VA, DOD, and NIH.
- **Enhancing the Vitality of the National Institutes of Health: Organizational Change to Meet New Challenges (ISBN: 0-309-08967-0)**
This report is the product of a congressionally-requested study on the organizational structure of the NIH. It finds that NIH should be restructured in order to devote additional resources to innovative interdisciplinary research that reflects strategic objectives and cuts across all of the agency's institutes and centers. It recommends combining the National Institute on Drug Abuse with the National Institute on Alcohol Abuse and Alcoholism, and the National Institute of General Medical Sciences with the National Human Genome Research Institute. Furthermore, it states that Congress should establish a formal process to review and act on specific proposals for these changes. Finally, NIH-sponsored clinical research should be consolidated under a new entity called the National Center for Clinical Research and Research Resources, which would build upon the current National Center for Research Resources.
- **Financing Vaccines in the 21st Century: Assuring Access and Availability (ISBN: 0-309-08979-4)**
This report addresses methods for sustaining the development and production of vaccines in the future. It recommends changing the government's role from buying vaccines to assuring immunization. A three-part plan made up of a federal government mandate, subsidy, and voucher should be implemented to ensure that everyone has access to recommended vaccines. The mandate would require that vaccine benefits be included in all private and public insurance plans, including Medicare, Medicaid, and the State Children's Health Insurance Program. The federal government also should provide a subsidy per vaccine to reimburse health plans and providers for the purchase costs and administration fees created by the mandate. Lastly, it should offer vouchers so that anyone not covered by insurance has access to immunizations, and clinicians who administer vaccines are reimbursed for their expenses.

THE NATIONAL ACADEMIES

Government offices may obtain single complimentary copies by calling the Office of Congressional and Government Affairs at 202/334-1513. Others may order copies from the National Academy Press (800/624-6242, www.nap.edu).

scientific definitions

1. The act of making clear and distinct.
2. the act of stating a precise meaning or significance.

ELECTRICITY TERMS

ENERGY The capacity for doing work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatt-hours (kWh), while heat energy is usually measured in British thermal units (Btu).

POWER The rate at which energy is transferred. Usually measured in watts (W).

LOAD The amount of electric power delivered or required at any specific point or points on a system. The requirement originates at the energy-consuming equipment of the consumers.

SUBSTATION Facility equipment that switches, changes, or regulates voltage.

SWITCHING STATION Facility equipment used to tie together two or more electric circuits through switches. The switches are selectively arranged to permit a circuit to be disconnected, or to change the electric connection between the circuits.

FEDERAL ENERGY REGULATORY COMMISSION (FERC) A quasi-independent regulatory agency within the Department of Energy having jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification.

INDEPENDENT SYSTEM OPERATOR An independent, federally-regulated entity that coordinates regional transmission in a non-discriminatory manner and ensures the safety and reliability of the electric system.

REGIONAL TRANSMISSION GROUP A utility industry concept that the Federal Energy Regulatory Commission embraced for the certification of voluntary groups that would be responsible for transmission planning and use on a regional basis.

TRANSMITTING UTILITY A regulated entity which owns wires used to transmit wholesale power. It may or may not handle the power dispatch and coordination functions. It is regulated to provide non-discriminatory connections, comparable service, and cost recovery. Includes any electric utility, qualifying cogeneration facility, qualifying small power production facility, or federal power marketing agency which owns or operates transmission facilities used for the sale of electricity at wholesale.

RESTRUCTURING The process of replacing a monopoly system of electric utilities with competing sellers, allowing individual retail customers to choose their electricity supplier but still receive delivery over the power lines of the local utility. It includes the reconfiguration of the vertically-integrated electric utility.

VERTICAL INTEGRATION An arrangement whereby the same company owns all aspects of making, selling, and delivering a product or service. In the electric industry,

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NIH Research Under Scrutiny

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defunding federal research "would set a dangerous precedent and put a chill on medical research if we start to micromanage individual NIH grants."

Rep. David Obey (D-WI), ranking Democrat on the Appropriations Committee, was decidedly more blunt in his criticism of the amendment. "The day that we politicize NIH research, the day we decide which grants are going to be approved on the basis of a 10-minute horseback debate in the House of Representatives with 434 of the 435 Members in this place who do not even know what the grant is, that is the day we will ruin science research in this country. We have no business making political judgments about those kinds of issues."

In fiscal year 2003, the NIH received \$26.2 billion in federal funds making it the second largest supporter of federal research after the Department of Defense. Subcommittee chairman Regula noted that NIH manages a two-tiered peer-review system that is mandated by the Public Health Service Act and receives over 120,000 research grant applications. The 27 distinct institutes and centers that comprise the NIH campus created to support the nation's public health research fund only 30 percent of these proposals. Regula urged his colleagues "to resist the temptation to select a few grants for defunding because they do not like the sound of them based on one paragraph."

Given the closeness of the roll call vote, the temptation was apparently difficult to withstand. One member said, "I would suggest that there is a lot of funding out there from people like Larry Flynt or others, but we should not be asking the American taxpayer to fund this kind of thing." Obey countered that he "would rather trust the judgment of 10 doctors sitting around a table than 10 politicians sitting around a table when we decide how to allocate taxpayer money for those grants."

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FOR MORE INFORMATION:

Congressional Record, 7/10/03,
pp. H6573-6: www.gpo.gov

Consortium of Social Science Associations:
www.cossa.org/toomey.htm

OMB and Peer Review

On August 29, the Office of Information and Regulatory Affairs (OIRA) within the White House Office of Management and Budget (OMB) issued a draft proposal to standardize the process that federal agencies utilize when conducting peer-review of scientific information that will be used in setting regulations and policies. The proposed guidelines, which were featured in a number of news articles in the *Washington Post*, *New York Times*, and *Wall Street Journal*, have been met with a wide spectrum of reactions.

In the press release announcing the standards, OIRA administrator Dr. John D. Graham stated, "Peer review is an effective way to further engage the scientific community in the regulatory process. A more uniform peer review policy promises to make regulatory science more competent and credible, thereby advancing the Administration's 'smart-regulation' agenda. The goal is fewer lawsuits and a more consistent regulatory environment, which is good for consumers and businesses."

The OMB draft guidelines attempt to lay out a process for federal agencies to select peer reviewers, manage the review process, and access scientific information used in setting regulations or policies.

For example, OMB recommends that agencies scrutinize scientists for "real or perceived conflicts of interests" in order to

be sure that the individual can approach the subject in an "open-minded and unbiased manner." In this regard, federal agencies should consider whether the individual "(i) has any financial interests in the matter at issue; (ii) has, in recent years, advocated a position on the *specific* matter at issue; (iii) is currently receiving or seeking substantial funding from the agency through a contract or research grant (either directly or indirectly through another entity, such as a university); or (iv) has conducted multiple peer reviews for the same agency in recent years, or has conducted a peer review for the same agency on the same *specific* matter in recent years."

In an article in the *Washington Post*, a representative of the Center for Regulatory Effectiveness (CRE) stated the OMB proposal would "put additional teeth in what is meant by peer review." CRE further suggested that this would provide an opportunity to require federal agencies to reevaluate environmental and dietary guidelines.

The guidelines do state that "[a]gencies need not, however, have peer review conducted on studies that have already been subjected to adequate peer review." Furthermore, it states that when considering significant regulatory information, "peer review undertaken by a scientific journal may generally be presumed to be adequate."

However, it also notes that, "[t]his presumption is rebuttable based on a persuasive showing in a particular instance," leaving a window of opportunity open to a reevaluation as suggested by CRE.

OMB Watch, a non-profit organization that follows public right-to-know, budget and regulatory issues, expressed concern that the proposal could create a centralized system "dangerously vulnerable to political manipulation." For example, it cites a clause in the guidelines that would allow federal agencies to retain an outside entity to manage peer-review. OMB Watch expressed concern that such direct control over the peer process by a non-government organization could result in undue influence over regulations by industry groups.

The draft proposal, which was not published in the Federal Register but issued as an OMB Bulletin, is open for public comment on or before October 28, 2003, and is to take effect in January 2004. ●●●

FOR MORE INFORMATION:

Office of Management and Budget:
www.whitehouse.gov/omb

OMB Watch: www.ombwatch.org

Center for Regulatory Effectiveness:
www.thecre.com

Scientific Definitions *Continued from previous page*

refers to the historically common arrangement whereby a utility owns its own generating plants, transmission system, and distribution lines to provide all aspects of electric service.

SOURCES: Department of Energy:
www.eere.energy.gov/distributedpower/glossary.html

North American Electric Reliability Council:
www.nerc.com/glossary/index.html

SEE ALSO: IEEE-USA Spotlight on the Northeast Blackout of 2003:
www.ieeeusa.org/forum/blackout.asp

AAAS NOTES

- SCIENCE AND NATIONAL SECURITY IN THE POST-9/11 ENVIRONMENT
AAAS has launched a new project to study the impacts of post-9/11 security policies on science. Visit the project website to learn more:
www.aaas.org/spp/post911

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Frontiers in Science



Potential Therapy for ALS • New research marks another step toward a potential therapy for amyotrophic lateral sclerosis (ALS), the devastating neuromuscular condition also known as Lou Gehrig's disease. Researchers at the Salk Institute for Biological Studies and Johns Hopkins University studied mice that exhibit symptoms similar to those of human ALS patients and carry a genetic mutation known as SOD1. The scientists found that, by injecting a viral vector combined with a neurotrophic factor into the muscles of the mutant mice, the progression of the disease was delayed, and the mice survived significantly longer than those untreated. The key to the treatment's effectiveness was the delivery method. The viral vector was capable of "retrograde transport" up the entire length of a nerve cell from the muscle to the nucleus of the motor neurons in the spinal cord bypassing the "blood-brain barrier" that makes conventional delivery of drugs to the central nervous system difficult.

---> *Science, August 8, 2003*

Zapping Radioactive Waste • A scientist at the University of Strathclyde in the U.K. has, for the first time, transformed iodine-129, an element found in nuclear waste, into the much more benign isotope iodine-128. Iodine-129 is created in nuclear reactor fuel rods during the fission of uranium atoms and has been linked to cancer of the thyroid, the region of the body where ingested iodine-129 tends to concentrate. The scientists focused a powerful laser on a lump of gold, and generated a stream of gamma rays that, when directed on a sample of iodine-129, knocked out a neutron and created iodine-128. Until now, transmutation has required large particle accelerators coupled to nuclear reactors. Though promising, the researcher points out that the process at this time is likely to be expensive and difficult to employ widely.

---> *Journal of Physics D: Applied Physics, September 7, 2003*

A Frozen Mars? • Scientists at Arizona State University in Tempe, analyzing data from the orbiting Mars Global Surveyor spacecraft, have found less mineral carbonate on the planet Mars than would be expected on a former wet planet. They estimated that only 2-3 percent of Martian soil is comprised of carbonate deposits, much lower than the 20 percent that wet weathering would produce. This and other recent data suggest that the Martian climate may have been perpetually frozen and never capable of sustaining life. Several new Mars missions, however, may provide the final evidence. This winter, two NASA and one European spacecraft will land on the red planet to search for signs of life and water.

---> *Science, August 22, 2003*