I

109TH CONGRESS
1ST SESSION

H. R. 4596

To authorize appropriations for basic research and research infrastructure in science and engineering, and for support of graduate fellowships, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

DECEMBER 16, 2005

Mr. GORDON introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Financial Services, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

---

A BILL

To authorize appropriations for basic research and research infrastructure in science and engineering, and for support of graduate fellowships, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Sowing the Seeds Through Science and Engineering Research Act''.

SEC. 2. AUTHORIZATION OF APPROPRIATIONS FOR BASIC RESEARCH ACTIVITIES.

(a) NATIONAL SCIENCE FOUNDATION.—There are authorized to be appropriated to the National Science Foundation for support of basic research activities in the physical sciences, mathematics and computer sciences, and engineering, $2,114,100,000 for fiscal year 2007, $2,325,510,000 for fiscal year 2008, $2,558,060,000 for fiscal year 2009, $2,813,870,000 for fiscal year 2010, and $3,095,260,000 for fiscal year 2011.

(b) DEPARTMENT OF ENERGY.—There are authorized to be appropriated to the Department of Energy's Office of Science for support of basic research activities in the physical sciences, mathematics and computer sciences, and engineering, $2,205,400,000 for fiscal year 2007, $2,425,940,000 for fiscal year 2008, $2,668,530,000 for fiscal year 2009, $2,935,380,000 for fiscal year 2010, and $3,228,920,000 for fiscal year 2011.

(c) NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.—There are authorized to be appropriated to the National Aeronautics and Space Administration for support of basic research activities in the physical sciences, mathematics and computer sciences, and engineering, $1,669,700,000 for fiscal year 2007, $1,836,670,000 for fiscal year 2008, $2,020,340,000 for fiscal year 2009,

$2,222,370,000 for fiscal year 2010, and $2,444,610,000 for fiscal year 2011.

(d) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—There are authorized to be appropriated to the National Institute of Standards and Technology for support of basic research activities in the physical sciences, mathematics and computer sciences, and engineering, $86,240,000 for fiscal year 2007, $94,860,000 for fiscal year 2008, $104,350,000 for fiscal year 2009, $114,780,000 for fiscal year 2010, and $126,260,000 for fiscal year 2011.

(e) DEPARTMENT OF DEFENSE.—There are authorized to be appropriated to the Department of Defense for support of basic research activities under budget category 6.1, $1,784,750,000 for fiscal year 2007, $1,963,220,000 for fiscal year 2008, $2,159,540,000 for fiscal year 2009, $2,375,490,000 for fiscal year 2010, and $2,613,000,000 for fiscal year 2011.

(f) HIGH-RISK RESEARCH.—Of the amounts authorized to be appropriated in each of subsections (a) through (e), not less than 8 percent shall be available for high-risk, potentially high-payoff research as determined by technical program managers at the respective agencies.

SEC. 3. EARLY CAREER SCIENTISTS AND ENGINEER AWARDS.

In addition to amounts currently available for support of the Presidential Early Career Award for Scientists and Engineers program, the following amounts are authorized to be appropriated for the designated agencies:

(1) For the National Science Foundation, $8,200,000 for fiscal year 2007, $16,400,000 for fiscal year 2008, $24,600,000 for fiscal year 2009, $32,800,000 for fiscal year 2010, and $41,000,000 for fiscal year 2011.

(2) For the National Institutes of Health, $4,800,000 for fiscal year 2007, $9,600,000 for fiscal year 2008, $14,400,000 for fiscal year 2009, $19,200,000 for fiscal year 2010, and $24,000,000 for fiscal year 2011.

(3) For the Department of Energy, $3,600,000 for fiscal year 2007, $7,200,000 for fiscal year 2008, $10,800,000 for fiscal year 2009, $14,400,000 for fiscal year 2010, and $18,000,000 for fiscal year 2011.

(4) For the Department of Defense, $2,400,000 for fiscal year 2007, $4,800,000 for fiscal year 2008, $7,200,000 for fiscal year 2009, $9,600,000 for fiscal year 2010, and $12,000,000 for fiscal year 2011.

(5) For the National Aeronautics and Space Administration, $1,000,000 for fiscal year 2007, $2,000,000 for fiscal year 2008, $3,000,000 for fiscal year 2009, $4,000,000 for fiscal year 2010, and $5,000,000 for fiscal year 2011.

SEC. 4. GRADUATE SCHOLAR AWARDS IN SCIENCE, TECHNOLOGY, ENGINEERING, OR MATHEMATICS (GSA–STEM).

(a) IN GENERAL.—The National Science Foundation shall institute a program, to be known as the Graduate Scholar Awards in Science, Technology, Engineering, or Mathematics program, or the GSA–STEM program, to award graduate fellowships in science, technology, engineering, or mathematics to individuals following the criteria and procedures of the Foundation's Graduate Research Fellowship program, except as provided in subsection (b).

(b) SPECIAL REQUIREMENTS.—

(1) FELLOWSHIP AMOUNT.—Fellowships awarded under the GSA–STEM program shall provide an annual stipend of $30,000 to the recipient and $15,000, in lieu of tuition, to the institution of higher education at which the recipient is enrolled.

(2) ADVISORY BOARD.—(A) The Director of the National Science Foundation shall establish a board

of advisors for the program. The board shall identify areas of national need for which shortages of scientific and engineering personnel with advanced academic degrees are anticipated.

(B) The members of the advisory board established under subparagraph (A) shall be selected from among the principal Federal agencies that support research and development activities in science, technology, engineering, and mathematics.

(3) SELECTION CRITERIA.—The criteria for fellowship awards used in the Foundation's Graduate Research Fellowship program shall be applied to the GSA–STEM program. An additional criterion for awards under the GSA–STEM program shall be whether an applicant proposes to pursue an advanced degree in an area of national need, identified by the advisory board under paragraph (2)(A).

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the National Science Foundation for the purposes of this section, $225,000,000 for fiscal year 2007, $450,000,000 for fiscal year 2008, and $675,000,000 for each of fiscal years 2009 through 2011.

SEC. 5. PRESIDENTIAL INNOVATION AWARD.

(a) ESTABLISHMENT.—There is hereby established a Presidential Innovation Award, signified by a medal which shall be of such design and materials and bear such inscriptions as the President, on the basis of recommendations submitted by the Director of the Office of Science and Technology Policy, may prescribe.

(b) AWARD.—The President shall periodically award the medal, on the basis of recommendations received from the Director of the Office of Science and Technology Policy or on the basis of such other information as the President considers appropriate, to individuals who develop one or more unique scientific or engineering ideas in the national interest at the time the innovation occurs.

(c) PURPOSE.—The awards under this section shall be made to—

(1) stimulate scientific and engineering advances in the national interest;

(2) illustrate the linkage between science and engineering and national needs; and

(3) provide an example to students of the contribution they could make to society by entering the science and engineering profession.

(d) CITIZENSHIP.—An individual may not be awarded a medal under this section unless at the time such award is made the individual—

(1) is a citizen or other national of the United States; or

(2) is an alien lawfully admitted to the United States for permanent residence who—

(A) has filed an application for petition for naturalization in the manner prescribed by section 334 of the Immigration and Nationality Act (8 U.S.C. 1445); and

(B) is not permanently ineligible to become a citizen of the United States.

(e) PRESENTATION.—The presentation of the award shall be made by the President with such ceremonies as he may deem proper, including attendance by appropriate Members of Congress.

SEC. 6. NATIONAL COORDINATION OFFICE FOR RESEARCH INFRASTRUCTURE.

(a) IN GENERAL.—The Office of Science and Technology Policy shall establish a National Coordination Office for Research Infrastructure, which shall identify and prioritize deficiencies in research facilities and instrumentation in academic institutions and in national laboratories and shall make recommendations for the allocation of resources provided under subsection (e).

(b) STAFFING.—The Director of the Office of Science and Technology Policy shall appoint individuals to serve

in the office established under subsection (a) from among the principal Federal agencies that support research in the sciences, mathematics, and engineering, and shall at a minimum include individuals from the National Science Foundation and the Department of Energy.

(c) USE OF FUNDS.—The amounts authorized by subsection (e) shall be available on a competitive, merit-reviewed basis for construction and maintenance of research facilities at institutions of higher education or national laboratories, including instrumentation, computing and networking equipment, and other physical resources necessary for performing leading-edge research.

(d) REPORT.—The Director of the Office of Science and Technology Policy shall provide annually a report to Congress at the time of the President's budget proposal describing the research infrastructure needs identified in accordance with subsection (a) and a list of infrastructure projects proposed for funding using the resources authorized by subsection (e).

(e) AUTHORIZATION OF APPROPRIATIONS.—

(1) NATIONAL SCIENCE FOUNDATION.—There are authorized to be appropriated to the National Science Foundation for the purposes of this section, $333,000,000 for each of fiscal years 2007 through 2011.

(2) DEPARTMENT OF ENERGY.—There are authorized to be appropriated to the Department of Energy for the purposes of this section, $167,000,000 for each of fiscal years 2007 through 2011.

○