

Kennedy-Collins SMART Amendment
Fiscal Year 2006 Department of Defense Authorization Act

The Kennedy-Collins SMART amendment's goal is to ensure that our national defense forces remain globally competitive by building the corps of civilian scientists and engineers at the Department of Defense and increasing funding for research and development efforts that help create new science to ensure our military remains the best in the world. The amendment doubles funding (\$10 million) for the existing Department of Defense SMART Scholars program and increases funding for basic research by \$40 million.

SMART SCHOLARS PROGRAM:

Need for Increased Funding for the SMART Scholars Program:

A Large Percentage of Defense Department Lab Scientists Are Nearing Retirement Age.

Currently, nearly one in three Department of Defense (DoD) civilian science, technical, engineering, and mathematical (STEM) employees is eligible to retire. Seven years from now, twice as many, nearly 70 percent of DoD civilian STEM employees will be of retirement age. At least 13,000 DoD laboratory scientists are projected to retire within the next decade. [Source: RAND Corporation, 2004]

The Defense's Department's Civilian Labor Pool is Not Being Replenished with New American Scientists.

The number of science, technology, engineering, and mathematics Ph.d's awarded annually in the United States is down 4 percent over the last decade. [Source: National Science Foundation, 2004] More than one-third of all science and engineering doctorates awarded at U.S. universities go to foreign nationals ineligible for sensitive Defense Department work. [Source: National Science Foundation Science & Engineering Indicators, 2004]

Future DoD Lab Scientists are Not Likely to Come From Private Industry. A recent survey reveals that there are over 5,000 unfilled science and engineering positions in the Defense-related fields. These private industry jobs include programmers, engineers, mathematicians, and electronic intelligence specialists. National demand for STEM employees is projected to rise by 10 percent by 2010. [Source: Bureau of Labor Statistics, 2001]

The Existing SMART Program

The Defense Department Has a Small Scale Civilian Scientist Recruitment Program.

Modeled on a successful National Security Agency scholarship program, sponsored by Senator Roberts, the Department of Defense last year began a SMART scholars program that provides full cost of education scholarships to highly talented undergraduate and graduate students in science and engineering who are willing to commit to civilian Defense Department work after graduation.

The Defense Department SMART Scholarship Program Began Last Year and had Sufficient Funding for Only Approximately One in Five Qualified Applicants. The SMART Scholars program only served 35 students last year. In its first year and with only four weeks notice before the submission deadline, SMART attracted over 160 applications last year. Approximately 100 applications were "highly rated."

The Senate Reported Fiscal Year 2006 DoD Bill Funds 50 SMART Scholars

– **Half the Number of "Highly Rated" Applications From 2005.** Defense officials estimate that approximately 50 SMART Scholars will be supported at the Senate Committee-Reported bill

level of \$10.3 million – a marked increase over Fiscal Year 2005 funding, but still a level that DoD believes falls short of agency need and anticipated growth in student demand as more prospective applicants become aware of the SMART program in its second year.

The Kennedy-Collins Amendment

Doubles the Senate Committee-Reported Funding Level for the DoD SMART Scholars Program to \$20 Million in Fiscal Year 2006 – Still Only One-Third of Defense Department Officials Requested Level. Provides sufficient funding for full cost of college scholarships and graduate fellowships to approximately 100 star science, technology, engineering and math undergraduate and graduate students. Students will receive funding for their full cost of attendance, summer internships, laboratory materials, undergraduate and graduate level research.

Includes Carry Over Authority into Fiscal Year 2007 Should an Insufficient Number of Students Apply. In the highly unlikely event that less than 100 high-quality students apply for the SMART Scholars program, unobligated fiscal year 2006 funds may be carried over to fund a new cohort of students in Fiscal Year 2007.

Fully Offset by a Reduction in Defense-Wide Administrative Funding. Reduces Defense-wide operations and maintenance fund executed by the Office of the Secretary of Defense. The Defense-wide administrative fund does not cover operations and maintenance of Army, Navy, or Air Force programs. The fund includes the Secretary's business management budget, which the Committee-reported bill increases by over \$2 billion, despite a Government Accountability Office finding that the agency's approach to business and financial management transformation is a "high-risk" area.

RESEARCH AND DEVELOPMENT FUNDING:

Need for Increased Research and Development Funding in Basic Research:

Research Matters: Investments by DOD in science and technology through the 1980s helped the US win the Cold War. DOD-sponsored research resulted in new nuclear technologies, spy satellites, precision-guided munitions, stealth materials and advanced radar. It also generated technology that served the civilian economy such as microelectronics, global positioning satellites, supercomputing, the Internet, composite materials and magnetic resonance imaging.

Funding for basic research in the physical sciences, math and engineering has not kept pace with research in other areas. Federal funding for life sciences has increased four-fold since the 1980s. Over the same period, appropriations for the physical sciences, engineering, and mathematics have remained essentially flat. Funding for basic research fell from FY1993 to FY2004 by more than 10% in real terms. [Source: National Research Council]. Between 1980 and 2005, DOD's focus on basic research fell from 20% of total S&T funds to less than 12%. [Source: Council on Competitiveness.]

The defense mission has always pushed the envelope of technology, but particularly those that rely on advances in the physical sciences, math and engineering. Over the last 50 years, the most dramatic increases in research have been in the life sciences - with a fourfold increase in federal funding for life sciences research. But, the growth in the physical sciences and engineering has been virtually static in inflation-adjusted dollars. This has created a tremendous skew in the nation's research portfolio with worrying implications for future advances in defense

The lack of attention to basic research at DoD spills over into the workforce. Because graduate students tend to follow the research dollars, there have been steady declines in the number of students pursuing degrees in the physical sciences and engineering.

Current Funding for Science and Technology Research:

Defense Science Board (DSB) has recommended that funding for Science and Technology (S&T) reach 3% of total Defense spending. The Administration and Congress have adopted this goal in the past. They also recommend that 20% of that amount be dedicated to basic research. The Administration's budget authorizes \$10.5 billion for S&T research, which is approximately \$2 billion short of the 3% goal and a \$2.5 billion cut compared to last year. The proposed funding level for basic research is \$1.318 billion, which is \$1.2 billion short of the 20% goal. \$195 million cut compared to last year.

The President's FY06 budget cuts S&T funding by 20% from last year's appropriated level, and 20% from last year's president's request. Funds for basic research are cut by 12%.

The pending authorization bill would cut funding for science and technology research by 17%. It provides \$398 million for research and development.

Kennedy-Collins Amendment:

Increases funding for research, development, test and evaluation in the Science and Technology areas through university research initiatives. Increases are directed to the Army, Navy, Air Force, National Defense Education Program and the DARPA University Research Program in Computer Science and Cybersecurity.

Includes a Sense of the Senate that the Department of Defense set a goal to invest 15% of its science and technology budget in basic research programs.

Fully Offset by a Reduction in Defense-Wide Operations and Maintenance Fund for Information Technology. Reduces Defense-wide operations and maintenance fund executed by the Office of the Secretary of Defense. The Defense-wide administrative fund does not cover operations and maintenance of Army, Navy, or Air Force programs. The fund finances the Secretary's business management budget, which the Committee-reported bill increases by over \$2 billion, despite a Government Accountability Office finding that the agency's approach to business and financial management transformation is a "high-risk" area.