

ANTITERRORISM S&T

The President is committed to leveraging the capabilities of our nation's scientific and engineering communities in countering new threats to our homeland and our national security. The President's 2003 Budget represents an escalation in the Administration's strong support for research and development aimed at defeating these dangers to our way of life.

Research and development funding for homeland security and combating terrorism (including protecting critical infrastructure) will rise from nearly \$1 billion in 2002 to an estimated \$3 billion in 2003. These funds will be used to develop new or improved capabilities for protecting our nation from terrorism and its consequences. Some examples are provided below.

Confronting Weapons of Mass Destruction

The Office of Homeland Security has coordinated a major multi-agency research effort that will lead to improved techniques for timely detection of biological attacks on our nation, and for minimizing the consequences of an attack. In the Department of Health and Human Services and the Department of Defense (DOD), funding for bioterrorism R&D is increased from a pre-9/11 level of just over \$300 million to more than \$2.4 billion—more than a factor of seven increase.

\$1.75 billion is provided to the National Institutes of Health (NIH) to perform fundamental research leading to the development of rapid identification and monitoring technologies, diagnostic tests, new vaccines and therapeutics, including an improved anthrax vaccine. An additional \$49 million would be provided to the Food and Drug Administration (FDA) for research and drug approval.

Aside from a variety of other research activities, the DOD will dedicate \$420 million to ensure rapid detection of biological agents, devise countermeasures, and to study and model the technology and tactics of bioterrorists.

The Environmental Protection Agency (EPA) will receive \$75 million to develop improved techniques and procedures for coping with biological and chemical incidents.

Additionally, investments are being made to enhance the nation's capability for detecting the use of chemical and radiological weapons. The Department of Energy (DOE), for example, will demonstrate a multi-station prototype of a chemical agent detection and response system in the Washington, D.C. Metro system.

Detecting Potential Danger

A collaborative effort between the Department of Justice, the Federal Bureau of Investigations, the National Institute of Standards and Technology (NIST), and DOE will investigate the reliable identification of specific individuals, even when attempts have been made to alter appearance, by measuring the "biometric" signatures of people passing through, for example, airports. The effort will range from development of surveillance sensors to algorithms that interpret their data and automatically alert operators to potentially dangerous people.

Explosives Detection

The Federal Aviation Administration, DOE, and the Technical Support Working Group (jointly sponsored by the State Department and DOD) will research improved methods for detecting conventional explosives in luggage, in airports and other transportation portals, at the borders, and in high population density areas.

Setting Standards

There will be a coordinated multi-agency effort for setting appropriate standards in homeland security; these agencies include NIST, EPA, the Centers for Disease Control and Prevention, and the Nuclear Regulatory Commission. Areas of focus will include setting standards for equipment used by first responders, and setting decontamination thresholds for determining when an area can be reoccupied after an attack.

Basic Research

Fundamental investigative efforts will be funded at several agencies to provide basic scientific data for the war against terrorism. These efforts include \$27 million for fundamental work at the National Science Foundation for sequencing the genomes of pathogens, so that more effective detection schemes and defenses might be developed, and work at NIH on developing candidate products that could become the next generation vaccines.