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## Federal Funding for Biological Weapons Prevention and Defense, Fiscal Years 2001 to 2009

### Introduction

Since the 2001 terrorist attacks on the United States, the U.S. government has spent or allocated nearly \$50 billion among 11 federal departments and agencies to address the threat of biological weapons. For Fiscal Year 2009 (FY2009), the Bush Administration proposes an additional \$8.97 billion in bioweapons-related spending, approximately \$2.5 billion (39%) more than the amount that Congress appropriated for FY2008. New U.S. funding for bioweapons-related activities focuses primarily on research, development, and acquisition of medical countermeasures. Additionally, significant biodefense funding goes to purchasing protective equipment, enhancing medical surveillance and environmental detection of biological weapons agents, and improving state, local, and hospital preparedness. The increase in bioweapons related funding in FY2009 is primarily attributed to Project BioShield, a ten-year program to acquire medical countermeasures to biological, chemical, radiological and nuclear agents for civilian use, which will receive an additional \$2.175 billion as a result of FY2004 legislation. However, a notable change in funding also appears in the Biomedical Advanced Research and Development Authority (BARDA) within the Department of Health and Human Services, which more than doubles in FY2009. Finally, funding for activities aimed at prevention has more than doubled since FY2007. Further strengthening of prevention efforts, including a commitment to broad cooperative international action, is essential for improving our nation's security.

Annual bioweapons-related funding for the following departments and agencies from FY2001 to FY2009 is summarized in Table 1: the Departments of Agriculture (USDA), Commerce, Defense (DOD), Energy (DOE), Health and Human Services (DHHS), Homeland Security (DHS), State, Veterans Affairs (VA), and the Environmental Protection Agency (EPA), the National Science Foundation (NSF), and the United States Postal Service (USPS). Table 1 also includes funding for Project BioShield. As illustrated in Figure 1, annual bioweapons-related spending grew rapidly from FY2001 to FY2005. Excluding Project BioShield and one-time funding for the US Postal Service in FY2005, federal bioweapons-related funding has remained roughly steady at approximately \$6.6 billion/year since FY2004.

Cumulative total funding by agency for the entire FY2001 to FY2009 period (\$56.96 billion if the FY2009 request is funded in full) is illustrated in Figure 2, with DHHS funding broken down into its constituent agencies and offices (Food and Drug Administration (FDA), Health Resources and Services Administration (HRSA), the Centers for Disease Control (CDC), National Institutes of Health (NIH), and the Office of the Secretary (OS). Over 90% of all bioweapons-related funding goes to three lead departments: Health and Human Services, Defense, and Homeland Security (through which Project BioShield is funded).

In contrast to other preparedness efforts, biodefense research, development, testing, and evaluation (RDT&E) can be dual-use in nature: scientific knowledge, methods, and materials that can be used to protect against biological weapons can often also be used to develop biological weapons. The dual-use problem has become a significant national and international policy concern. In the United States, the National Science Advisory Board for Biosecurity (NSABB) has been established under the auspices of the NIH, with *ex officio* representation from 16 Federal departments, agencies, and offices, in order to "provide advice, guidance, and leadership regarding biosecurity oversight of dual use research" to the Secretary of DHHS, the Director of the NIH, and the "heads of all federal departments and agencies that conduct or support life science research."<sup>1</sup>

Cumulative funding for biodefense RDT&E from FY2001 through FY2009 is over \$23.6 billion, over 40% of all bioweapons-related funding since FY2001 (Table 2). Of this, approximately \$2.4 billion has thus far been spent, allocated, or requested for improving existing or building at least 20 new high containment research facilities around the country, including 7 new biosafety level 4 (BSL-4) facilities for conducting work on dangerous pathogens such as the Ebola viruses and other hemorrhagic fever viruses. The Departments of Defense and Homeland Security are expected to request up to another \$1 billion over the next five

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<sup>1</sup> biosecurityboard.gov

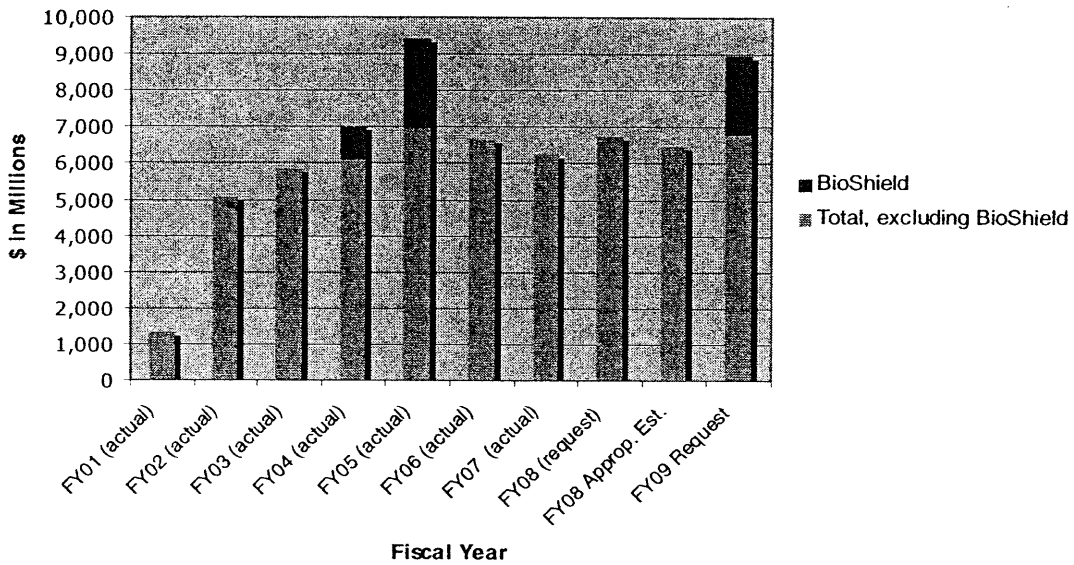
years for two of these BSL-4 facilities.

In contrast, cumulative funding for efforts to prevent the development, acquisition, and use of biological weapons is expected to reach approximately \$1.13 billion in FY2009 (Table 3). This is less than 5% of the total funding for biodefense RDT&E during the same time period. FY2009 sees a \$32 million increase from the FY2008 appropriation for prevention efforts. In FY2008, \$218 million was appropriated by Congress for prevention activities, \$31 million more than the request. Funding for prevention activities as a percentage of total bioweapons-related funding is 3.4% in FY2008 and 3.7% in FY2009, returning to levels not seen since FY2001. Approximately 90% of prevention funding is allocated to the Departments of Defense, Energy and State for Cooperative Threat Reduction efforts, primarily in states of the former Soviet Union but increasingly also in other countries, particularly in South and Southeast Asia. Other prevention-related funding is provided to the Department of Commerce for Export Controls on materials and equipment that could be used to develop biological weapons, and to the Select Agents programs at the CDC and USDA which regulate the possession, use, and transfer of potential biological weapons pathogens and toxins. The NSABB also receives roughly \$1 million per year for its activities.

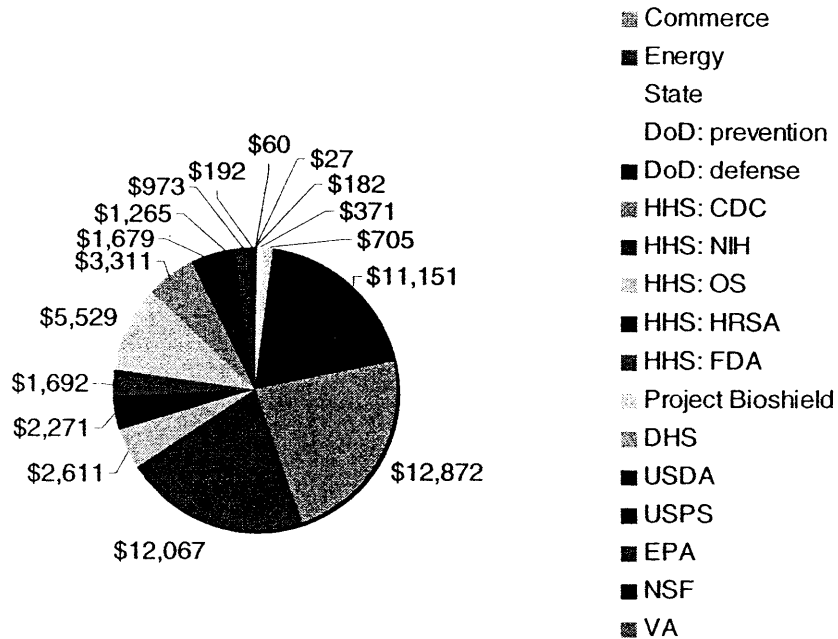
**Table 1. Federal Funding for Bioweapons Prevention and Defense, by Department or Agency, FY2001 – FY2009 (in \$ millions)**

Department or Agency	FY2001-FY2006 Total	FY2007 actual	FY2008 request	FY2008 estimate	FY2009 request	FY2001-FY2009 Total
Agriculture (USDA)	1,029	186	340	186	277	1,678
Commerce (DOC)	15	4	4	4	4	27
Defense (DOD)	7,009	1,447	1,674	1,677	1,723	11,856
Energy (DOE)	160	7	5	8	7	182
Health and Human Services (DHHS)	19,280	4,063	4,151	3,999	4,171	31,513
Homeland Security (DHS)	2,167	354	366	387	403	3,311
DHS - Project BioShield	3,354	0	0	0	2,175	5,529
State (DOS)	238	35	36	49	48	370
Veterans Affairs (VA)	59	1	0	0	0	60
Environmental Protection Agency (EPA)	597	103	136	123	150	973
National Science Foundation (NSF)	124	28	25	25	15	192
U.S. Postal Service (USPS)	1,265	0	0	0	0	1,265
<b>Total</b>	<b>35297</b>	<b>6,228</b>	<b>6,737</b>	<b>6,459</b>	<b>8,973</b>	<b>56,956</b>
<b>Total, excluding BioShield</b>	<b>31943</b>	<b>6,228</b>	<b>6,737</b>	<b>6,459</b>	<b>6,798</b>	<b>51,427</b>

**Figure 1. Total Federal Funding for Bioweapons Prevention and Defense FY2001 - FY2009**



**Figure 2. Total Federal Funding for Bioweapons Prevention and Defense by Agency FY2001-FY2009 (\$ in millions)**



**Table 2. Funding for Biodefense Research, FY2001 – FY2009 (in \$ millions)**

Research	FY2001-FY2006 Total	FY2007 actual	FY2008 request	FY2008 estimate	FY2009 request	FY2001 - FY2009 Total
<b>Facilities</b>						
Agriculture (USDA)	359	0	16	3	13	377
Defense (DoD)	21	29	150	150	209	409
Health and Human Services (DHHS)	1083	25	0	0	0	1108
Homeland Security (DHS)	242	88	72	72	100	502
<i>Facilities, Subtotal</i>	<i>1705</i>	<i>142</i>	<i>238</i>	<i>225</i>	<i>322</i>	<i>2394</i>
<b>Programs</b>						
USDA	104	34	81	34	62	234
DOD: Army	13	0	0	0	0	13
DARPA	906	100	99	72	66	1144
CDBP	3282	813	827	846	880	5821
<i>DOD, Subtotal</i>	<i>4201</i>	<i>913</i>	<i>926</i>	<i>918</i>	<i>946</i>	<i>6978</i>
DHHS: FDA	272	57	57	56	67	452
CDC	118	12	0	8	8	146
NIH	6130	1624	1628	1633	1635	11022
OS/BARDA	40	104	189	102	250	496
<i>DHHS, Subtotal</i>	<i>6560</i>	<i>1797</i>	<i>1874</i>	<i>1799</i>	<i>1960</i>	<i>12116</i>
DHS <sup>a</sup>	791	136	134	133	146	1206
DOE	131	0	0	0	0	131
VA	59	0	0	1	0	60
EPA	152	46	67	53	69	320
NSF	124	28	25	25	15	192
<i>Programs, Subtotal</i>	<i>12122</i>	<i>2954</i>	<i>3107</i>	<i>2963</i>	<i>3198</i>	<i>21237</i>
<b>Research, Total</b>	<b>13827</b>	<b>3096</b>	<b>3345</b>	<b>3188</b>	<b>3520</b>	<b>23631</b>

<sup>a</sup> FY2003-FY2006 figures calculated by subtracting funding for Facilities and BioWatch from total Chemical and Biological Division funding and adding funding for University Programs. If precise information for BioWatch funding is unavailable for a given year, it is assumed that 60% of Chemical and Biological Division funding is dedicated to research programs. FY2007-FY2009 figures were calculated by adding the total funding for the Biological and Chemical Division (less funding for BioWatch) to funding for University Programs, Transition, Innovation, and Testing & Evaluation and Standards.

**Table 3. Funding for Bioweapons Prevention Activities, FY2001 – FY2009 (in \$ millions)**

Department or Agency	FY2001-FY2006 Total	FY2007 estimate	FY2008 request	FY2008 estimate	FY2009 request	FY2001 - FY2009 Total
USDA: APHIS: Select Agents - Plants and Animals	6	3	7	4	6	19
DOD: CTR	291	72	144	158	184	705
DHHS: CDC: Select Agent Program <sup>a</sup>	30	5	5	5	5	45
NIH: NSABB	3	1	1	1	1	6
State: Nonproliferation Programs	169	24	25	38	43	274
Commerce: Export Controls	15	4	4	4	4	27
DOE: NIS Programs	29	7	5	8	7	51
<b>Prevention, Total</b>	<b>543</b>	<b>116</b>	<b>187</b>	<b>218</b>	<b>250</b>	<b>1127</b>

<sup>a</sup> Unlike USDA, HHS and CDC do not specifically provide this data. This is an estimate based on USDA data and on FY2002 data from GAO Report [GAO-03-315R "CDC Select Agent Program" \(11/22/02\)](#).