

**U.S. Funding of Japanese Priority R&D Areas,
and U.S. Priorities in R&D**

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U.S. federal government funding of R&D has expanded dramatically this decade, totaling a projected \$571 billion from 2001-2005, because of large budget increases for biomedical research, national defense, and homeland security. Increases in these areas have resulted in the U.S. government R&D/GDP ratio increasing during this decade after decades of decline. The paper examines trends in U.S. federal R&D investments in the four Japanese priority areas of life sciences, information technology, nanotechnology and materials, and environmental S&T over the past decade, along with trends in investments in four other focus areas. The paper also examines prospects for future U.S. investments in these areas and in overall federal support of R&D as revealed in congressional authorizations and in analyses of the latest U.S. budget projections to 2009. All indications are that U.S. federal investments in the second half of the decade will be severely constrained by other commitments and the U.S. budget deficit, and that even the high priority areas of national defense and homeland security will face harsh competition for resources. In examining basic research, especially competitively awarded research grants, the paper finds that past budget growth has stalled and could decline in the future, although a policy commitment to competitive awards and basic research will continue. Finally, the paper examines emerging or new priority areas for U.S. R&D funding, including homeland security with particular attention to biodefense, a renewed focus on high-performance computing, and hydrogen energy and related technologies.