

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
NATIONAL INSTITUTES OF HEALTH

Fiscal Year 2013 Budget Request

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I am pleased to report landmark advances and opportunities in HIV/AIDS research this year. In December 2011, the journal *Science* named an NIAID-funded international HIV prevention study its *Breakthrough of the Year*, reinforcing that the investment in NIH research continues to pay extraordinary dividends for public health. This study, known as HPTN 052, demonstrated that HIV-infected heterosexual individuals who began taking antiretroviral medicines when their immune systems were still

clinical testing in this area, and insights gained from these studies will guide future HIV vaccine research.

These research advances taken together with the implementation of other evidence-based HIV prevention and treatment strategies make the possibility of an “AIDS-free generation” in the foreseeable future eminently feasible. This July, we will consider strategies to implement these important findings during the International AIDS Society Conference in Washington, D.C.

*Tuberculosis and Malaria.* NIAID continues to invest in basic and clinical research and collaborate with global partners, including the World Health Organization’s Stop TB Partnership, to combat the co-infections that often accompany HIV infection, including tuberculosis (TB) and malaria. Building on these efforts, we now have a substantial development pipeline of TB treatments and vaccines. NIAID

including gastroenteritis caused by rotavirus, pneumonia, hepatitis A, and deadly meningitis caused by *Haemophilus influenzae* type b. These are among the vaccines now being delivered to countries around the world; where they have been deployed, substantial reductions in morbidity and mortality have been observed. NIAID has assumed a major leadership role in the “Decade of Vaccines” initiative, a ten-year collaborative effort coordinated by the Bill & Melinda Gates Foundation, to develop and deliver vaccines to the world’s poorest countries. NIAID will continue research on other urgently needed vaccines, including vaccines for Group B *Streptococci*, Epstein-Barr virus, and hepatitis C virus.

Seasonal and pandemic influenzas remain critical global health and economic threats. NIAID has made significant progress in the development and testing of vaccines to protect people from influenza, including the elderly, young children, and those with asthma. Recently, NIAID researchers demonstrated that a “prime-boost” gene-based vaccination strategy could activate the immune system and lead to broadly neutralizing antibody responses against influenza viruses. This finding and those from other researchers signal that we are closer to developing a “universal” vaccine that could protect against multiple strains of seasonal and pandemic influenza viruses.

This year, in response to the growing public health issue of antimicrobial resistance, NIAID will expand our clinical trials networks developed originally for HIV/AIDS to investigate this important concern. In addition, NIAID will support research to determine how to preserve the effectiveness of current antibiotics.

NIAID’s biodefense research has yielded numerous scientific advances as we have moved from a “one bug-one drug” approach to a more flexible, broad-based

product development strategy that utilizes sophisticated genomic and proteomic platforms to address infectious disease outbreaks, whether they are deliberately introduced or naturally occurring. As part of this effort, NIAID has awarded contracts for the development of broad-spectrum therapeutics against emerging infectious disease and biodefense agents.

## **CONCLUSION**

NIAID basic and clinical research on infectious and immune-mediated diseases will continue to promote the development of vaccines, therapeutics, and diagnostics to improve health and save millions of lives worldwide. NIAID remains committed to supporting highly meritorious research with the goal





Dr. Fauci has made seminal contributions to the understanding of how the AIDS virus destroys the body's defenses leading to its susceptibility to deadly infections. He also has delineated the mechanisms of induction of HIV expression by endogenous cytokines. Furthermore, he has been instrumental in developing highly effective strategies for the therapy of patients with this serious disease, as well as for a vaccine to prevent HIV infection. He continues to devote much of his research time to identifying the nature of the immunopathogenic mechanisms of HIV infection and the scope of the body's immune responses to the AIDS retrovirus.

Dr. Fauci has delivered many major lectureships all over the world and is the recipient of numerous prestigious awards for his scientific accomplishments, including the Presidential Medal of Freedom, the National Medal of Science, the George M. Kober Medal of the Association of American Physicians, the Mary Woodard Lasker Award for Public Service, the Albany Medical Center Prize in Medicine and Biomedical Research, and 36 honorary doctoral degrees from universities in the United States and abroad.

Dr. Fauci is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the Institute of Medicine (Council Member), the American Philosophical Society, and the Royal Danish Academy of Science and Letters, as well as a number of other professional societies including the American College of Physicians, the American Society for Clinical Investigation, the Association of American Physicians, the Infectious Diseases Society of America, the American

