

# HIV Vaccine Strategy Is Not Dead

*A CRADA between NCI and Sanofi Pasteur leads to the first clinical trial for a preventive HIV vaccine regimen to show efficacy.*

Once thought to be a dead end for tackling HIV, vaccines are showing the first signs of success in clinical trials. Through a Cooperative Research and Development Agreement (CRADA) with Sanofi Pasteur, NCI scientists, in the largest HIV intervention trial to date, have helped to develop a vaccine approach that reduced the risk of HIV infection.

The novel two-pronged regimen known as RV144 uses Sanofi Pasteur's canarypox vector-based candidate ALVAC-HIV to prime the immune response, followed by a boost to the system with AIDSVAX B/E, a genetically engineered version of HIV's gp120 surface protein. Genoveffa Franchini, M.D., Senior Investigator in the Vaccine Branch at CCR, led the preclinical studies that spawned this vaccine approach, which has been patented by the NCI.

Researchers from the U.S. Military HIV Research Program, the Ministry of Public Health in Thailand, and the NIH published the results of their phase 2b trial—involving more than 16,000 Thai volunteers—in the December 3, 2009 issue of *The New England Journal of Medicine*. At the conclusion of the six-year trial, the prime-boost regimen reduced the risk of HIV infection by about 31 percent.

Dr. Franchini's group plans to investigate the immune system factors that correlate with RV144's protective effects in nonhuman primate models in order to identify and boost the beneficial immune response. "Then," said Dr. Franchini, "we will perform more direct experiments that determine the contribution of different arms of the immune system and test methods to improve these vaccines."

*To learn more about Dr. Franchini's research, please visit her CCR Web site at <http://ccr.cancer.gov/staff/staff.asp?Name=franchini>.*

(Photo: E. Branson)



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