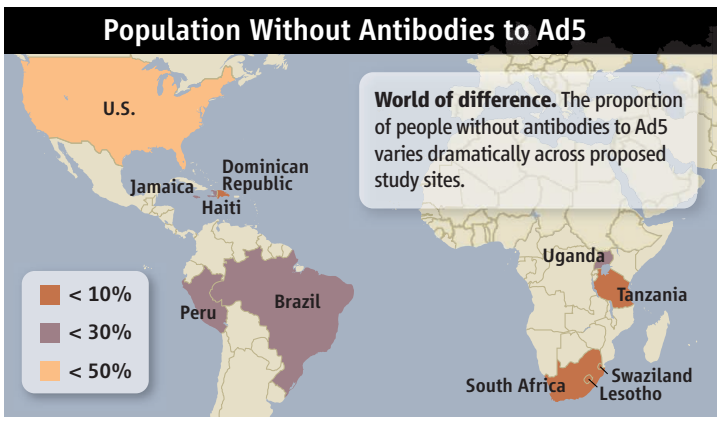
AIDS RESEARCH

Trials of NIH's AIDS Vaccine Get a Yellow Light

POTOMAC, MARYLAND—In late September, the U.S. National Institutes of Health (NIH) in Bethesda, Maryland, at the last minute scotched a massive $130 million trial of an AIDS vaccine made by its researchers. The reason: Much to the dismay of the field, a test of a similar vaccine made by Merck & Co. found that it may have actually increased some people's risk of becoming infected with HIV. Last week, NIH's AIDS Vaccine Research Subcommittee met here to discuss the future of the NIH vaccine. Although no final decision has been made, the consensus was to continue testing the vaccine to see whether it works but in a redesigned study that reduces the chance of doing harm. "Everyone seems to think the products are different enough to warrant further testing," said Peggy Johnston, who heads AIDS vaccine research at NIH. "The issue becomes, what's the trial design going to be, and is that design feasible to carry out?"



The Merck vaccine and that made by Gary Nabel's team at the NIH Vaccine Research Center (VRC) both deliver HIV genes into the body using a cold virus as a vector. The prevalence of this adenovirus 5 (Ad5)—there are more than 50 subtypes—varies greatly, infecting one-third of the population in some locales and nearly everyone in others. In the Merck study, vaccinated people who had high levels of antibody to Ad5 at the trial's start more readily became infected by HIV. Questions remain about the mechanism and whether the finding is even statistically significant (*Science*, 16 November, p. 1048). But out of caution, the group last week argued to exclude people with Ad5 antibodies from the VRC test.

Originally, Scott Hammer of Columbia University planned to lead a test of the VRC vaccine in 8500 people in the Americas and Africa. Now, as Magdalena Sobieszczyk from his group explained, they think it's prudent to enroll only 2000 to 3300 people in the Americas and Africa who are negative for Ad5 antibodies. Sobieszczyk described study designs that would include both heterosexuals and men who have sex with men.

Yet staging a trial of a vaccine that, even if it works, could not be used by people with Ad5 immunity raises ethical quandaries. "It may not be acceptable in regions where two-thirds of people are seropositive [for Ad5]," Hammer conceded. Another option is to change the vector altogether, but that would delay the trial indefinitely.

Some participants argued that the trial should be focused more narrowly—for instance, on men in the United States who have sex with men. Subcommittee member Jeffrey Lifson of SAIC in Frederick, Maryland, cautioned that the Merck results have been befuddling in part because the vaccine was tested in many different populations and locations. "I am really concerned … to show that we can do clear studies," Lifson said.

David Watkins, a primate researcher at the University of Wisconsin, Madison, argued against doing the trial at all, as monkey studies have suggested the VRC vaccine will fail, regardless of the safety issues. "I just don't get it," Watkins told *Science*. "The science seems to be really ignored." Anthony Fauci, head of the National Institute of Allergy and Infectious Diseases, said he doesn't think the field has the luxury of waiting for convincing efficacy data from monkey studies, which could take more than a decade. But Fauci did not offer his opinion during the meeting, explaining, "I'm going to have to make the final decision, and I don't want to preempt anybody." The Columbia team will present a redesigned study to the same subcommittee in January, then Fauci will announce the fate of the VRC vaccine.

–JON COHEN AND BENJAMIN LESTER

SCIENTIFIC PUBLISHING

Bruce Alberts Named *Science* Editor-in-Chief

Bruce Alberts, professor of biochemistry and biophysics at the University of California, San Francisco (UCSF), and president emeritus of the U.S. National Academy of Sciences, has been named the next editor-in-chief of *Science*. A prominent cell biologist best known for his work on the protein complexes that allow chromosomes to be replicated, Alberts has focused in recent years on public issues, especially the improvement of science education.

Alberts's appointment was announced on 17 December by the board of directors of AAAS, publisher of *Science*. AAAS President David Baltimore, who chaired the search committee that nominated Alberts, says his "experience, skill, and interest in all of science make him the ideal person to continue the tradition of superb editors who have made *Science* the premier journal for the scientific community." Alberts will take over the editorship on 1 March 2008 from Donald Kennedy, who announced earlier this year that he would be retiring. Kennedy has served as editor-in-chief since 2000.

Alberts, 69, earned a doctorate from Harvard University in 1965, spent 10 years on the faculty of Princeton University, and moved to UCSF in 1976. He has published more than 150 research papers and is one of the original authors of a leading textbook, *Molecular Biology of the Cell*. He served two terms as president of the National Academy of Sciences, from 1993 to 2005. Then he returned to UCSF to continue working on issues he emphasized during his tenure at the academies: internationalizing science—especially building links to scientists in the developing world and strengthening scientific infrastructures—and improving science education.

Alberts will retain his UCSF faculty position and expects to devote half of his time to *Science*. "I view *Science* magazine as a critical venue for maintaining the standards of science, as well as for spreading an understanding and appreciation for science around the world," says Alberts. "With the tremendous challenges we face today, both of these important aims need constant attention."

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