CONTACT SCIENCE

Letters to the Editor
May be submitted via e-mail (at science_letters @aaas.org), fax (202-789-4669), or regular mail (*Science*, 1200 New York Avenue, NW, Washington, DC 20005, USA). Letters are not routinely acknowledged. Full addresses, signatures, and daytime phone numbers should be included. Letters should be brief (300 words or less) and may be edited for clarity or space. They may appear in print and/or on the Internet. Letter writers are not consulted before publication.

Subscription Services
For change of address, missing issues, new orders and renewals, and payment questions, please contact AAAS at Danbury, CT: 800-731-4939 or Washington, DC: 202-326-6417, FAX 202-842-1065. Mailing addresses: AAAS, P.O. Box 1811, Danbury, CT 06813 or AAAS Member Services, 1200 New York Avenue, NW, Washington, DC 20005 • Other AAAS Programs: 202-326-6400

Member Benefit Contacts
For Credit Card: MBNA 1-800-847-7378; Car Rentals: Hertz 1-800-654-2200 CDP#343457, Dollar 1-800-800-4000 #AA1115; AAAS Travels: Betchart Expeditions 1-800-252-4910; Life Insurance: Seabury & Smith 1-800-424-9883; Other Benefits: AAAS Member Services 1-202-326-6417.

Reprints
Ordering/Billing/Status 800-407-9190; **Corrections** 202-326-6501 **Permissions** 202-326-7074, FAX 202-682-0816

Internet Addresses
science_editors@aaas.org (for general editorial queries); science_news@aaas.org (for news queries); science_letters@aaas.org (for letters to the editor); science_reviews@aaas.org (for returning manuscript reviews); science_bookrevs@aaas.org (for book review queries); science@science-int.co.uk (for the Europe Office); membership@aaas.org (for member services); science_classifieds@aaas.org (for submitting classified advertisements); science_advertising@aaas.org (for product advertising)

Information for Contributors
See pages 99 and 100 of the 1 January 1999 issue or access www.sciencemag.org/misc/con-info.shtml.

Editorial & News Contacts
North America 1200 New York Avenue, NW, Washington, DC 20005 Editorial: 202-326-6501, FAX 202-289-7562 News: 202-326-6500, FAX 202-371-9227 • Bureaus: Berkeley, CA: 510-652-0302, FAX 510-652-1867, San Diego, CA: 760-942-3252, FAX 760-942-4979, Chicago, IL: 312-360-1227, FAX 312-360-0537
Europe Headquarters: Bateman House, 82-88 Hills Road, Cambridge, UK CB2 1LQ; (44) 1223-326500, FAX (44) 1223-326501 Paris Correspondent: (33) 1-49-29-09-01, FAX (33) 1-49-29-09-00
Asia News Bureau: Dennis Normile, (81) 3-3335-9925, FAX (81) 3-3335-4898; dnormile@twics.com • Japan Office: Asca Corporation, Eiko Ishioka, Fusako Tamura, 1-8-13, Hirano-cho, Chuo-ku, Osaka-shi, Osaka, 541 Japan; (81) 6-202-6272, FAX (81) 6-202-6271; asca@os.gulf.or.jp • China Office: Hao Xin, (86) 10-6255-9478; science@public3.bta.net.cn • India correspondent: Pallava Bagla, (91) 11-271-2896; pbagla@ndb.vsnl.net.in

Confronting the HIV Pandemic

Neal Nathanson and Judith D. Auerbach

In 1998, approximately 30 million people worldwide were living with HIV/AIDS, of whom about 5 million became infected just that year. The epidemic continues to expand, with an estimated doubling time of 10 years, so that AIDS has now surpassed tuberculosis and malaria as the leading infectious cause of death. Even in the United States, where the death rate from AIDS is declining because of effective drug therapies, HIV infection rates continue to climb in a number of population groups, such as women and racial and ethnic minorities.

To address this domestic and international public health crisis, the National Institutes of Health (NIH) is complementing its long-standing commitment to developing effective HIV therapies with an expanded program in HIV prevention research. This initiative has required a novel effort to cross traditional disciplinary boundaries that have impeded development and dissemination of effective prevention strategies. Thus, the NIH prevention science agenda encompasses three key components, integrated wherever appropriate: vaccines, behavioral and social interventions, and nonvaccine biomedical technologies. The intent is to develop interventions for immunizing uninfected people and for reducing the risk of transmission by sexual, parenteral, or perinatal routes. Because the NIH vaccine research effort has received substantial attention in *Science* and elsewhere, we concentrate here on other prevention strategies.

NIH has expanded its HIV prevention science agenda.

HIV prevention strategies already have demonstrated their efficacy in the United States and internationally, including in developing countries. Behavioral- and social science–based interventions have significantly reduced the incidence of unprotected intercourse, reduced the number of sex partners, delayed sexual initiation, reduced the incidence of sexually transmitted diseases, diverted individuals from injection drug use into drug treatment programs, and reduced needle sharing and the frequency of drug injection. Safer sex practices have reduced the annual incidence of HIV infection from >15% to <5% among some groups of gay men in the United States. Programs combining addiction treatment of injecting drug users with needle exchange have reduced the incidence of HIV infection by >30% in some settings. Even in resource-poor countries, such as Thailand, Uganda, and Senegal, national strategies based on behavioral interventions have reduced HIV prevalence by as much as 50% over a few years' time. Biomedical strategies also have demonstrated effectiveness in HIV prevention. Screening the blood supply has reduced the risk of transfusion-associated transmission of HIV by >99.9% in the United States. The use of antiretroviral therapy during pregnancy and birth has reduced transmission by about 90% under optimal conditions.

The recently expanded HIV prevention science agenda at NIH looks simultaneously at the biomedical, behavioral, and social dimensions of HIV transmission and prevention. To advance a more cross-disciplinary and innovative program, the Office of AIDS Research has established a priority-setting process that involves advice from extramural scientists and community advocates and identifies areas that require concerted support because of trends in the epidemic, as well as developments in scientific knowledge. Current priorities include microbicides for women; culturally appropriate interventions for racial and ethnic minorities; validating biological and behavioral outcome measures; international prevention research; and legal and ethical issues in prevention research, programs, and policy.

As we continue to develop the science of HIV prevention, the effective dissemination of proven interventions to more populations and settings remains a major challenge. To address this challenge globally, NIH is increasing its international collaborations to help develop prevention research capacity in other countries and to learn from their successes. The scientific community throughout the world must work to persuade public health decision-makers to institute community-based prevention programs based on research findings. Only then will we realize the full potential of prevention science to help stem the HIV/AIDS epidemic in the United States and around the world.

N. Nathanson is director and J. D. Auerbach is prevention science coordinator in the Office of AIDS Research, NIH, U.S. Department of Health and Human Services, Bethesda, MD 20892, USA.