

# AIDS: No Time for Complacency

*Teenagers learn that HIV infection is still a virtual death sentence in most of the world, and that it is up to their generation to help keep up the fight.*

THE YEAR 2007 WAS A ROLLER COASTER FOR THE HIV/AIDS COMMUNITY, with great strides and bitter disappointments in the fight against HIV. The United Nations dropped its estimate of the number of HIV-infected people worldwide by 7 million, and a new class of anti-HIV drugs made it to market. At the same time, trials of a prom-

ising HIV vaccine ended early in a shocking failure, and new surveys found that about 1 in 20 people in Washington, D.C., are infected with HIV—the highest rate for any city in the United States.

Worldwide, 33.2 million people are infected with HIV. Sub-Saharan Africa has

been hardest hit by far, with 22.5 million people infected.

It was against this backdrop that HHMI investigator Bruce D. Walker and his colleague Bisola O. Ojikutu delivered the 2007 Holiday Lectures on Science—“AIDS: Evolution of an Epidemic”—at HHMI’s

Chevy Chase, Maryland, headquarters. An annual event, the lectures are presented to high-school students from the Washington, D.C., metropolitan area and to a live Webcast audience.

In the United States and other developed countries, HIV infection has been transformed from a death sentence to a manageable chronic illness. But Walker and Ojikutu, who split their time between the Boston area and the KwaZulu-Natal province of South Africa, emphasized that HIV remains devastating for over 70 percent of the world’s HIV-infected people, who lack access to the best treatments. The lecturers noted that the combined efforts of scientists, clinicians, and public-health professionals—both present and future—will be needed to successfully fight this epidemic.

Ojikutu, director of the Office of International Programs of the Division of AIDS at Harvard Medical School, reviewed the rapid scientific advances since the discovery of HIV and development of an HIV antibody test. Then she demonstrated an HIV test by being tested herself along with Zinhle Thabethe, training coordinator of iTEACH—an organization that aims to improve HIV and tuberculosis education and care at Edendale Hospital in KwaZulu-Natal. Thabethe’s test was positive, but “this is not new for me,” the 30-year-old told her audience. “When I was 25 years old, I discovered I had HIV. I



*High school students from the Washington, D.C., area were encouraged to get involved by HIV/AIDS researchers, healthcare workers, and patient advocates during two days of presentations and discussion.*

was only a little bit older than you are now when I was infected.”

Walker, who is director of the Partners AIDS Research Center at the Massachusetts General Hospital, explained in his lecture how the virus attacks the immune system by infecting CD4 cells, which ordinarily help to keep invading disease organisms at bay. Over time, HIV kills off enough CD4 cells that viral levels rise and the HIV-positive person becomes susceptible to opportunistic infections such as tuberculosis.

Walker noted that some individuals—about 1 in 300 infected people—have immune systems that keep the virus at very low, sometimes-undetectable levels. “They seem to be living with HIV without it causing disease,” he said. Walker’s research group is working to discern the genetic makeup of such individuals to get clues about new treatment approaches and vaccines.

In two discussion sessions following the lectures, one focusing on HIV/AIDS research opportunities outside the United States and the other on patient advocacy, panelists expressed concerns that the developed world

has become complacent about the epidemic. And they emphasized the need to fight HIV not only through scientific advances but also by preventing HIV infection in the first place. This means educating people to make good choices—whether being abstinent, using safer-sex practices, or getting tested.

Panelist Phill Wilson, executive director of the Black AIDS Institute, based in Los Angeles, challenged the students to get involved in the fight against HIV by wearing T-shirts, provided by his organization, emblazoned with “Got AIDS?” on the front and “How do you know?” on the back. “To stop this epidemic,” he said, “you

need to get informed, get tested, seek treatment or advocate for access to treatment, and get involved.”

“This is a tremendous problem we are facing,” added Walker. “And it’s your generation that is going to be called upon to answer the many [still-unanswered] questions.”

Thabethe—one of the fortunate few in KwaZulu-Natal to have had access to the cocktail of drugs that virtually cleared the AIDS wards in the developed world when they were first made available in 1996—sees a silver lining to HIV because it has forced tremendous advances in science worldwide and in healthcare in her native South Africa. For her own silver lining, HIV obliged her, she said, to “redesign my life in a positive way and do all the good that I can.” ■

—LISA SEACHRIST CHIU

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BRUCE WALKER



*Students learned about a quick HIV antibody test and multi-drug regimens for treating HIV/AIDS during demonstrations by Bruce Walker and Bisola Ojikutu (far right).*

FOR MORE INFORMATION: The 2007 Holiday Lectures on Science can be viewed at [www.hhmi.org/biointeractive/lectures](http://www.hhmi.org/biointeractive/lectures). Free DVDs of the lectures, with resources for teachers added, will be available through the HHMI catalog in spring 2008.