



SPOTLIGHT

FOCUS: Global Progress and Hope

In the early 1980s, little was known about HIV when it was then associated with the rare cancer Kaposi's Sarcoma. Since the 108 reported cases of AIDS in the United States in 1981, this disease has turned into a large-scale epidemic. Today, the World Health Organization estimates that there are 40 million people living with HIV and AIDS worldwide. An estimated 16 million men, women, and children have died from the disease—3 million of these deaths occurring in 2003 alone.

Although the statistics are daunting, there has been significant progress in the last 20 years. Critical scientific discoveries and collaborations have resulted in many breakthroughs. Researchers have designed rapid HIV diagnostic tests, mapped HIV transmission pathways, developed antiretroviral drugs to block the transmission of HIV from mother to infant, and tested new genetic delivery systems. These are just a few examples of innovations in AIDS research that have informed HIV prevention and awareness campaigns and have given hope to millions of people living with the disease.

Also encouraging is the global activism and commitment to capacity building by countries that recognize the profound socioeconomic impact of AIDS. Following an emergency special session in June 2001, the United Nations urged heads of state to pledge efforts to implement the strategies and programs detailed in the Declaration of Commitment on HIV/AIDS within an aggressive 5-year timeline. In July 2003, the Secretary-General reported that many countries in the United Nations had already made considerable progress in addressing the provisions of the Declaration. With con-

tinued and consistent commitment from all countries, the task of reversing the devastation caused by the epidemic is now plausible.

Since 1988, the Harvard AIDS Institute, in response to the growing global threat of AIDS, has attacked the epidemic through innovative research, education and partnership. The Institute has led the way in demonstrating how research can directly translate into real world applications. Breakthroughs such as providing the first comprehensive genetic history and transmission patterns of HIV subtype 1C led to the first vaccine trial in southern Africa, and trials using antiretroviral drugs both to block maternal transmission of HIV and to treat the AIDS disease.

Education is the hallmark of the Harvard AIDS Institute. By establishing intensive international training programs, the next generation of AIDS experts is prepared to advance and expand on current research efforts. Training in AIDS care and treatment

programs in Africa, Asia, Latin America and the United States, the Institute cultivates critical knowledge in countries where it is most needed.

The Institute has proven that the best way to sustain the critical infrastructure of local programs is by building long-term partnerships with academic institutions, government, private, and community-based organizations in the individual countries. The Botswana-Harvard AIDS Institute Partnership is exemplary in that the government of Botswana is intimately involved in establishing and maintaining programs that directly benefit its people. Together, over 11,000 HIV-infected patients in Botswana have been treated through the national antiretroviral treatment program and many more HIV-infected patients will be treated in the years to come.

The progress in the more than 20 years since the cause of AIDS was identified has been remarkable. With an anticipated effective HIV vaccine available at some time in the future, effective antiretroviral drugs, continued government and political support, expanded education on HIV prevention and awareness, and sustained pragmatic research and training—the future of a world where AIDS has been defeated should be within reach.

To learn more about the Institute, please visit: <http://aids.harvard.edu>. ●



Healthcare workers in Botswana learn about AIDS treatment and care in the KITSO AIDS Training Program.

is also provided to physicians and nurses in developing countries. With established local HIV and AIDS research and intervention

Sign up for free email updates!

Sign-up to receive free email updates from the Harvard AIDS Institute. Simply send an email to hai@hsph.harvard.edu to receive electronic news and details about upcoming events.

VIEWPOINTS *An Interview with Dr. Edwin Tigerenashe Zishiri*



Dr. Edwin Zishiri,
Oak Foundation research fellow

The Oak Foundation commits its resources to programs that address global, social and environmental concerns and issues, particularly those that have a major impact on the lives of the disadvantaged.

As a student, Dr. Edwin Zishiri participated in community activities such as the Zimbabwe Expanded Program of Immunization, where he actively took part in the drive to help eliminate measles. As a practicing clinician doing his residency at Mpilo Central Hospital in Bulawayo, Zimbabwe, he was overwhelmed by the number of patients that were admitted with complications of HIV infection. The lack of access to antiretroviral medications, financial resources, and the limited number of trained professionals helped him find his purpose.

Dr. Zishiri knew he would need to be more than just a compassionate physician practicing medicine to advance the frontiers of medicine and influence the access that his people need to leading medical technologies.

He decided to join the Oak Foundation Research Fellowship Program at the Harvard AIDS Institute, where he is currently pursuing an advanced research methodology degree at the Harvard School of Public Health. He talks to *Spotlight* about how blessed he is for the opportunities that he has been given, and expressed his desire to give back to society.

Spotlight: Dr. Zishiri, what prompted you to become a Research Fellow?

EZ: I first met Dr. Essex in September of 2000 when he and others from the Harvard AIDS Institute came to Zimbabwe to familiarize people about their work and explore opportunities for future collaboration. I was really impressed by the work and I couldn't believe it when Dr. Essex asked me if I would be interested in coming over to Boston to learn research methods. I decided that I was going to pursue an academic research oriented career in the later years of my medical education because, in addition to an inherent desire to serve humanity, I became fully aware of the inadequacies of medicine. It was this that made me grab the opportunity to participate in the shaping of the future of medicine and science through an academic research career. I feel really

honored to be participating in research that is going to contribute to the stemming of an important disease, HIV.

Spotlight: What things about your work give you the greatest satisfaction?

EZ: The most satisfying aspect about my work is that each and every day presents itself with new challenges and opportunities, which is indeed the beauty of a research career. Also satisfying is working in a time when knowledge in life sciences in general and immunology and infectious diseases in particular are progressing in revolutionary leaps and bounds.

Spotlight: What do you hope others will get from your research in immunology and infectious diseases?

EZ: I have received abundantly from society and I hope I am going to give back through making unique and significant contributions towards the betterment of the human existence in general and the African experience in particular. I hope that my research is going to culminate in real solutions not only for the current HIV epidemic but also for other infectious diseases that have dehumanized the lives of many people. I remember as a clinician I used to lend a helping hand to people one at a time and now with research methodologies added to my arsenal of skills, I am going to be uniquely positioned to help multitudes at a time, including people I will never meet. ●

How You Can Help...

The Institute's efforts depend upon your support. Contributions are tax deductible.

Complete this coupon and mail to:

Harvard AIDS Institute
651 Huntington Avenue
Boston, MA 02115

Or to contribute online, please visit the Harvard School of Public Health giving page at <http://www.hsph.harvard.edu/give/>.

Yes, I want to support the Harvard AIDS Institute to help halt the AIDS epidemic.

I have made a gift of \$ _____ Check enclosed (Checks may be made payable to Harvard AIDS Institute)

Please charge my payment to Mastercard Visa American Express

Account Number _____

Cardholder _____ Expiration Date _____

Cardholder Signature _____

Name _____

Address _____

City _____ State _____ Zip _____ Phone _____

Email _____

This gift is in honor of _____

Milestones of the Harvard AIDS Institute

The history of the Harvard AIDS Institute spans almost two decades. Scientists at the Institute have helped pioneer the field of HIV research in Africa and continue to develop prevention, care and treatment efforts to curb the worldwide epidemic.

- 1988 Harvard AIDS Institute established.
- 1990 Partnership established with Thailand.
- 1992 Partnership established with Tanzania.
- 1994 First symposium in "Vaccine Think Tank" series, designed to focus on research on HIV vaccines for the developing world.
- 1995 First edition of AIDS in Africa published.
- 1996 Partnership with Botswana established. Botswana-Harvard AIDS Institute Partnership for HIV Research and Education is formed.
- 1998 The Enhancing Care Initiative begins work with teams of local experts in Brazil, Puerto Rico, Senegal, South Africa, and Thailand.
- 1998 Training Programs Expanded: Fogarty branch of NIH renews 5 year programs to train AIDS experts from developing countries and the Arthur Ashe Program in AIDS care for medical students from traditionally underrepresented groups begins.
- 1999 Oak Foundation funds Southern African Research and Training program.
- 2000 KITSO AIDS Training Program teaches first course in ARV treatment for physicians in Botswana.
- 2000 "Africa Now! A Leadership Summit to Define Priorities for AIDS in Africa" is held in Cambridge, Massachusetts.
- 2001 AIDS Prevention Initiative in Nigeria is established and funded by the Bill and Melinda Gates Foundation.
- 2001 Botswana-Harvard HIV Reference Laboratory, funded by the government of Botswana, and equipped by the Merck, Secure the Future, and Gates Foundations, becomes the first comprehensive dedicated HIV research lab in southern Africa.
- 2002 The Institute's China Initiative, the first Chinese recipient of an AIDS grant from the US NIH, becomes a component of Chinese National AIDS Program.
- 2002 Tshepo Study, the first large-scale research study that aims to assess the emergence of drug resistance to highly active antiretroviral therapy (HAART) regimens, is launched in Botswana. Funded by Secure the Future.
- 2003 First HIV vaccine trial in southern Africa begins in Botswana.
- 2003 KITSO trains its 1000th healthcare worker in Botswana.

To find out about additional milestones, please visit <http://aids.harvard.edu/history>. ●

RESEARCH & INTERVENTION PROGRAMS

Herpes-Acyclovir Treatment Study

Acyclovir, a commonly used drug to treat Herpes Simplex 2, may prove to be another tool in the prevention of HIV transmission. In a new research initiative due to launch this year, the Harvard AIDS Institute in conjunction with the University of Washington, will determine the efficacy of daily Acyclovir suppressive therapy in reducing the HIV transmission among heterosexual HIV-discordant couples. The multi-site study is funded by the Bill & Melinda Gates Foundation. Among the international sites, the Botswana-Harvard AIDS Institute Partnership will serve as a host; in addition Dr. Saidi Kapiga will host a second site in Tanzania. The study will enroll over 3,600 monogamous couples for a twelve-month observation and look at HIV transmission events among the uninfected partners.

The Study of Hope

The Tshepo ("Tshepo" means "hope" in Setswana) Study's partnership with the Botswana government has enabled the research team to provide life-saving drugs to hundreds of people living with HIV, while studying the effectiveness of using antiretroviral treatments in Botswana and how to best adhere to this life-long therapy. The welcome addition of Dr. Khilly Kurusa, a Motswana doctor who recently graduated from medical school and is now a Fogarty Fellow, has helped the team target patients across the spectrum, increasing the total enrollment to 334 patients.

Mashi Study

The Mashi ("Mashi" means "milk" in Setswana) Study which investigates novel approaches for the prevention of mother-to-

child transmission of HIV, is fully enrolled with the 1200th maternal participant. The study will determine whether exclusive breast feeding for 6 months with an additional 6 months of infant AZT is a safe and effective alternative to formula feeding with 1 month of infant AZT. The study also assesses the risks and benefits of giving a single dose of nevirapine to HIV-infected mothers who are also receiving AZT for the prevention of mother-to-child transmission. "This is a tremendous accomplishment for the Mashi team. Everyone has worked very hard to reach this goal," says Dr. Ibou Thior, one of the principal investigators of the study. Researchers expect to report preliminary results as soon as August 2004.

To learn more about these programs, visit <http://aids.harvard.edu/programs>. ●

Upcoming Institute-related Events

April 8, 2004

"Genetic Variation Among African HIV's: Implications for Vaccines and Drugs"

Max Essex, chair, Harvard AIDS Institute, Boston, Massachusetts (Harvard School of Public Health, Division of Biological Sciences)

April 18-21, 2004

Fourth National Conference on HIV/AIDS

Abuja, Nigeria

(AIDS Prevention Initiative in Nigeria)

April 29- May 1, 2004

HIV Vaccines for Developing Countries: Initiation of Vaccine Trials in Africa

Gaborone, Botswana
(Harvard AIDS Institute)

May 6, 2004

Bridges and Barriers: Emerging Trends in HIV/AIDS

Boston, MA

(Lemuel Shattuck Hospital)

For more information on these events visit: http://aids.harvard.edu/conferences_events

NEWS & EVENTS

"HIV/AIDS in India: Ethical Issues in Social Science Research"

This past spring, Dr. Amar Jesani, a founder of the Forum for Medical Ethics Society spoke at the Harvard School of Public Health on "HIV/AIDS in India: Ethical Issues in Social Science Research".

Dr. Jesani focused on the need to establish functioning mechanisms for ethical review of any research in developing countries. This is particularly important because the rising HIV prevalence in India has accelerated the development of new research programs and many of these programs may not be fully capable of addressing issues relating to patients' rights or provision of possible post-trial benefits to the participants and others. Joint efforts from major international and national organizations, which include the AIDS International Training and

Research Program of the Albert Einstein College of Medicine, and Jawaharlal Nehru Center for Advanced Scientific Research, are currently working together to establish uniform ethical guidelines and regulations.

"Public Health Crisis in Africa"

Over 300 people gathered at the Harvard School of Public Health last fall for "Public Health Crisis in Africa: How May Harvard Help?" The discussion was sponsored by the Africa Health Forum and the Harvard AIDS Institute. This unique event brought together Harvard President Larry Summers, HSPH Dean Barry Bloom, and chair of the Harvard AIDS Institute, Max Essex to discuss Harvard's current and future response to public health issues in Africa. President Summers said "Neglecting to effectively

address global disease would be nothing short of a moral failure." He also pointed out the critical need for Harvard to step forward and use its strengths in training, research, and influence to address the health crisis around the globe. ●

SPOTLIGHT is published by the

Harvard AIDS Institute

651 Huntington Avenue

Boston, MA 02115 USA

Phone: 617-432-4400

Fax: 617-432-4545

Email: hai@hsph.harvard.edu

Web: aids.harvard.edu

Chair: Max Essex

Executive Director: Richard Marlink

PUBLICATIONS STAFF

Editor: Yvonne Ng

Print Designer & Photographer: Paula Telch

Contributing Writers: LeAnna Alderman Sterne, Lydje

Lahens, Patrick Casky, Michelle Schaan

The efforts of the Harvard AIDS Institute depend very much on your support. Contributions to the Harvard AIDS Institute are tax deductible. To learn more, please call Michael Voligny at 617-384-8980.

Harvard AIDS Institute

651 Huntington Avenue
Boston, Massachusetts 02115
USA

NONPROFIT
ORGANIZATION
U.S. POSTAGE
PAID
BOSTON, MA
PERMIT NO. 1636