



# Building Partnerships to End AIDS

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## AIDS IN TODAY'S WORLD

The numbers are staggering: 25 million people have died from AIDS. More than 33 million are living with HIV. Current prevention methods have had a limited impact on the pandemic. In the time it takes to read this paragraph, two more people will become infected. Although access to AIDS treatments has expanded dramatically in recent years, these life-prolonging but costly drugs still reach barely one-third of those in need. When the drugs are available, they serve to mitigate but not end the pandemic. For every two people who receive antiretroviral treatment, five others become infected with HIV.

The pandemic is most severe in developing countries. In many settings, women and girls are especially vulnerable because they lack full control over their bodies and do not have a method of HIV prevention that they can use without a partner's consent.

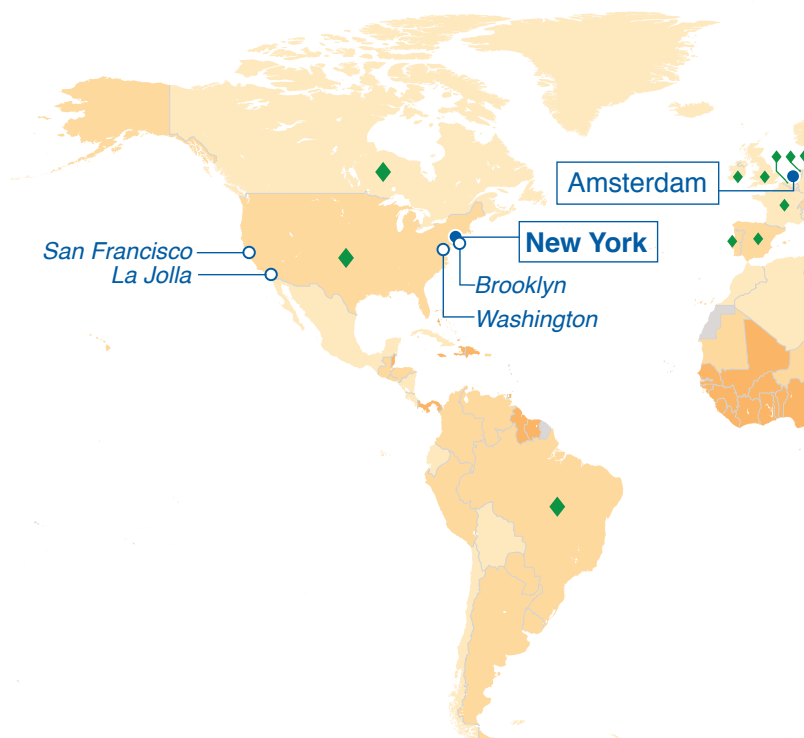
## A VACCINE OFFERS HOPE

Vaccines have proven to be one of the most powerful and cost-effective of all public health tools. Unfortunately, just a small portion of funding for disease-related research and development (R&D) is dedicated to creating new methods of fighting diseases such as AIDS that principally affect developing countries. Of the money spent globally to cope with HIV, only a small percentage is dedicated to vaccine development. The U.S. government, the biggest funder of AIDS research in the world, steers only about three percent of its total AIDS spending toward finding a vaccine. Yet a vaccine offers the best hope of ending the AIDS pandemic and improving millions of lives around the world.

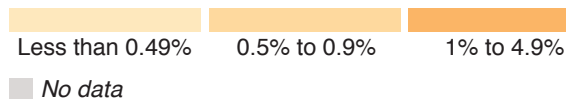
The AIDS problem requires a comprehensive approach, entailing treatment, care and support for people living with HIV, increased access to existing prevention methods to reduce new infections, and the development of better prevention methods such as microbicides and vaccines.

### The IAVI Network

- IAVI main offices
- Country offices, local offices and facilities



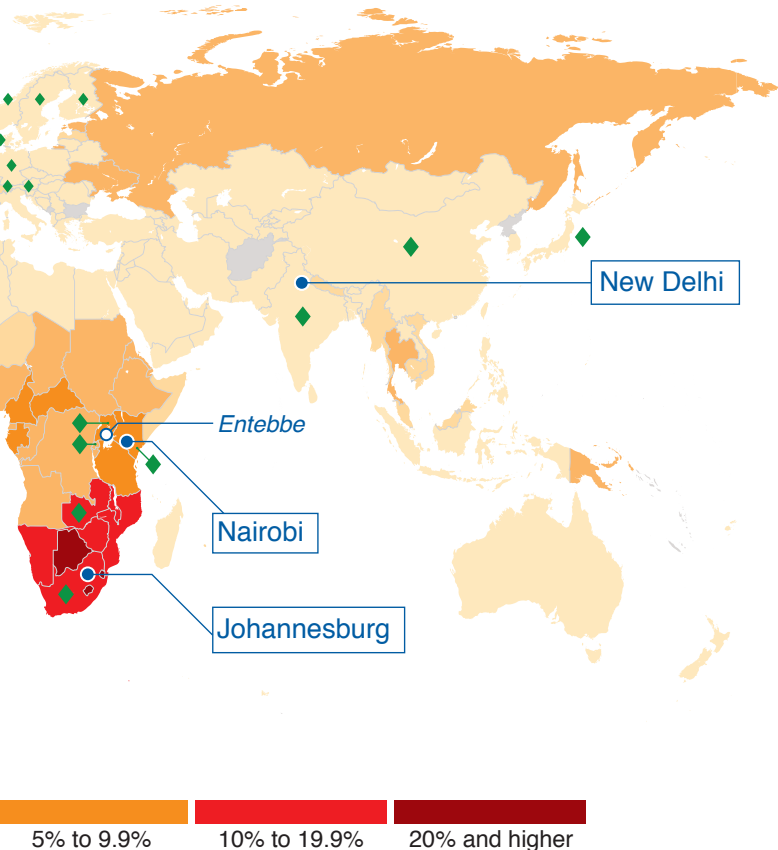
### Percentage of adults living with HIV, 2007



*"The long-term solution to the AIDS epidemic lies in the development of an effective vaccine. Investments for vaccine development must continue alongside efforts to achieve universal access to HIV prevention, treatment, care and support."*

Michel Sidibé  
Executive Director,  
Joint United Nations Programme on HIV/AIDS

◆ Countries in which IAVI has collaborative partnerships with governments, civil society organizations and research institutions



*“At IAVI, research and development is done in, with and for developing countries. This serves science, since an eventual vaccine must suit the needs of the regions where it is most needed. It also creates national ownership of the AIDS vaccine effort and builds long-term scientific capacity in developing countries.”*

Seth Berkley, M.D.  
President and CEO,  
International AIDS Vaccine Initiative

## WHAT MAKES IAVI UNIQUE

Founded in 1996, the International AIDS Vaccine Initiative (IAVI) works in partnership with academia, governments, industry and civil society to develop an AIDS vaccine. IAVI is committed to promoting education about AIDS vaccine development worldwide, engaging communities in the process of testing experimental AIDS vaccines, and improving the clinical research capacity, both physical and intellectual, in areas hit hardest by the epidemic. IAVI has five main offices worldwide (New York, Amsterdam, New Delhi, Nairobi and Johannesburg) and operations in 24 countries. The organization’s AIDS vaccine research and development program is second in size only to that of the U.S. government’s National Institutes of Health.

Local ownership is at the heart of IAVI’s in-country work, which focuses on the needs of developing countries. IAVI’s programs strengthen links between communities, national governments and other stakeholders such as researchers, media and people affected by HIV. A decade ago, AIDS vaccine trials had been conducted in just six countries, only two of which were in the developing world. As of 2009, 16 developing countries have been a part of 23 AIDS vaccine clinical research trials, reflecting dramatic growth in local capabilities. IAVI and its partners were directly involved in 10 of those trials in 6 countries.

A core principle at IAVI is that an AIDS vaccine, once developed, should be made quickly available, as inexpensively as possible, to people in developing countries where the pandemic is most severe. Accordingly, such provisions are included in IAVI’s product-development agreements with scientific partners.





Juliana Thomas Photography

## SCIENTISTS HAVE MADE PROGRESS

Over the past two decades, scientists have learned more about HIV and its disease course than any other pathogen in history. A steady stream of advances has laid a foundation for the AIDS vaccine development efforts now underway around the globe. Important discoveries include:

- HIV's outer protein is the principal target against which to design vaccine candidates capable of neutralizing the virus;
- HIV is enormously variable, which leads scientists to target those regions of the virus that do not change;
- Broadly neutralizing antibodies found in some HIV-infected individuals can protect non-human primates from infection;
- Cellular immunity can control the virus for several years, sometimes even decades;
- Live attenuated vaccines can protect non-human primates from infection with the simian equivalent of HIV.

These leads give researchers vital clues to what an effective human vaccine must do, and have helped shape the path forward.

*"A preventive vaccine is the only long-term sustainable solution to combating HIV. HIV infection is more than 25 years old, and we may spend another 25 years searching for its vaccine, but we have to keep the faith – the same faith that scientists kept for 47 years as they searched and found a vaccine against polio."*

Madame Jeannette Kagame  
First Lady of Rwanda

*“Whether it takes us 15 years, 20 years, 25 years to get an AIDS vaccine, it is what will break the back of the disease.”*

Melinda French Gates  
Co-chair and Trustee,  
Bill & Melinda Gates Foundation



Frederic Courbet

## AIDS VACCINE R&D PROVIDES SECONDARY BENEFITS

Although the ultimate goal of AIDS vaccine R&D is an effective vaccine, this work also produces additional benefits, especially in developing countries. AIDS vaccine trial volunteers gain access to health-care services, particularly voluntary counseling and testing for HIV. Through trials and HIV studies, IAVI and its partners have provided such services to more than 100,000 people in Africa. In many cases, antiretroviral therapy is provided for study participants who become HIV-infected through risky behaviors.

IAVI's partnerships with local institutions also build scientific capacity in developing countries in important ways:

- By giving doctors and researchers vital work in their home countries, vaccine studies help counteract the brain drain that often saps developing countries of promising talent;
- Staffers at AIDS vaccine trial centers gain new skills that can be transferred to other scientific efforts;
- All IAVI-supported clinical research centers have gained or are in the process of gaining accreditation for Good Clinical Laboratory Practices, the legal requirement for conducting clinical trial data analysis in Europe and South Africa;
- Equipment and facilities from vaccine studies remain in place after research projects end and can support other scientific and health-care activities;
- Experience assessing AIDS vaccine trial protocols can strengthen regulatory processes in host countries.

Studies that support AIDS vaccine trials also can provide additional benefits. For example, because many healthy African volunteers were being excluded from AIDS vaccine trials based on blood levels developed for Western populations, IAVI and its partners conducted breakthrough research to define “normal” values for local populations. These standards now enable researchers in Africa in a variety of fields to more accurately screen for healthy volunteers and monitor the well-being of trial participants.









Vanessa Vick

## SUPPORTIVE GOVERNMENT POLICIES ARE NEEDED

Innovative government policies can help accelerate and sustain investment in vaccine R&D. Incentives and creative financing mechanisms such as advance market commitments, expedited regulatory review and tax credits can spur private investment in new health technologies for the developing world. Additional policies are needed to support early-stage innovation, with commitments extending through the point at which a vaccine gains marketing approval.

Reversing the spread of AIDS is one of the eight U.N. Millennium Development Goals that world leaders in 2000 agreed to strive to reach by 2015. The AIDS pandemic, because of its cost in human as well as economic terms, undermines achievement of many of the other goals because it compromises poverty reduction, improvements in child and maternal health and nutrition, gains in basic education and control of other infectious diseases. Supportive policies and funding for new tools like vaccines and microbicides against HIV are essential for achieving these goals and maintaining progress beyond the target date of 2015.

## SCIENCE IS A FORM OF DIPLOMACY

Diplomacy enables a nation to demonstrate its true character, for instance in the way it deploys foreign assistance. The objective of foreign assistance is to improve the health and well-being of citizens in developing countries, and vaccines are one of the most cost-effective means of achieving that. Vaccines not only save lives and improve health, but because they help a workforce remain productive they contribute to economic growth.

Contributing to AIDS vaccine R&D in developing countries serves an additional diplomatic purpose in that it promotes the exchange of science and technology across borders. That, in turn, builds physical and intellectual capacity for scientific research in developing nations that can have a lasting positive influence on their economic future, even as it contributes to the effort to end AIDS for all time.

*“Those of us who were born into a world without AIDS owe it to future generations to leave behind a world that is again free of AIDS.”*

David Kihumuro Apuuli, M.D.  
Director General,  
Uganda AIDS Commission



Margaret McCluskey

## WHO WE ARE

IAVI seeks to ensure the development of safe, effective, accessible, preventive HIV vaccines for use throughout the world. A global not-for-profit, public-private partnership, IAVI researches and develops vaccine candidates, conducts policy analyses and serves as an advocate for the field. IAVI supports a comprehensive approach to HIV and AIDS that balances the expansion and strengthening of existing HIV prevention and treatment programs with investments in new AIDS-prevention technologies.

.....Imagine a World without AIDS.....

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