Global Crisis | Global Solution | Global Leader

iavi
International AIDS Vaccine Initiative

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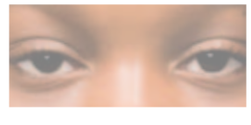

The International AIDS Vaccine Initiative
www.iavi.org info@iavi.org *Twitter*: @AIDSvaccine

IAVI has received a four-star rating from Charity Navigator for nine consecutive years.

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60 more people

will be infected with HIV

Every 12 seconds someone is newly infected with HIV.

Every 20 seconds someone dies of an AIDS-related illness.

Every two minutes a child dies because of AIDS.

Every hour, every day.

AIDS affects every country on earth and exacts its harshest toll on the world's most vulnerable people.

A preventive vaccine for everyone could end this tragedy and change history. The International AIDS Vaccine Initiative is dedicated to making this happen.

JEAN-MARC GIBOUX/GETTY IMAGES

The Need

Slightly more than half of all people living with HIV are women and girls. In sub-Saharan Africa, women 15 to 24 years old are as much as eight times more likely than men of the same age to be infected, and HIV is the leading cause of death and disease among women of reproductive age.

More than 33 million people are living with HIV, the virus that causes AIDS. In the quarter-century since HIV was discovered, nearly 30 million people have died because of it—a number equal to the combined populations of Cairo, London and Mumbai.

About two-thirds of all new HIV infections and nearly three-quarters of all AIDS-related deaths are in sub-Saharan Africa. Although great strides have been made in treating those living with HIV, AIDS continues to ravage communities, with no end in sight.

AIDS doesn't just steal lives, it steals the future hopes of millions by perpetuating poverty, threatening maternal and child health and draining development resources from communities, nations and the world. Robust testing, treatment and care efforts are essential. At the same time, ending this pandemic requires revolutionary change.

At the International AIDS Vaccine Initiative, we believe an AIDS vaccine can be that revolution. HIV is a formidable opponent, and the fight has been long and difficult. But recently, tremendous gains have re-energized the battle. Scientists around the world have been armed with new clues and new strategies to win the battle.

The International AIDS Vaccine Initiative is integral to this global imperative. We are committed to ensuring the development of safe, effective, preventive AIDS vaccines, and to making sure those vaccines reach all who need them. A science organization principally, we are also much more. We are advocates, catalysts, innovators and bridge-builders, bringing together the best minds in many fields to make our vision of a world without AIDS a reality.

We can't do it alone. Please join us.

science

Antiretroviral drugs have revolutionized AIDS treatment, but treatment alone is not a sustainable strategy for defeating AIDS. For every person who begins such treatment, two others become infected. A vaccine would change that equation.

IAVI is positioned to advance every phase of AIDS vaccine development through proof of efficacy. Focused, grounded, nimble and collaborative, we are built for the job:

- HIV is the most formidable pathogen ever encountered by science, so we have created scientific collaborations, global networks of leading researchers and industry-style laboratories to attack each aspect of creating a vaccine.

- AIDS hits hardest in the developing world, particularly in sub-Saharan Africa, so we have established a network of top-flight partner laboratories and clinical research centers in the region, where a solution is needed most.

- Accelerating the creation of an AIDS vaccine means expediting progress from the academic lab to the product-development stage to clinical trials, so we have created a seamless partnership model to guarantee the most promising candidates move quickly.

- AIDS vaccine research demands fresh ideas and cutting-edge technologies, so we have established an Innovation Fund to seek out and nurture the best ideas from beyond the HIV field. This effort, a partnership with the Bill & Melinda Gates Foundation, already has made key contributions to recent discoveries.

partners

IAVI brings together the best aspects of the public and private sectors, academia and biotech to speed the development of an AIDS vaccine. This integrated collaboration means information is shared quickly and promising avenues can be swiftly followed from the lab to the clinic.

VANESSA VICK

speed

The recent antibody discoveries were a signal achievement on their own, but because of IAVI's seamless network, researchers could immediately set to work using these antibodies in the next stage of vaccine development—the creation of immunogens, the active ingredient in vaccines.

JULIANA THOMAS PHOTOGRAPHY

impact

Vaccine development takes resources, persistence and time, and the science of HIV, discovered only in 1983, is still relatively young. The polio vaccine took almost 50 years to develop. The vaccine for rotavirus took 33. Recent discoveries have given new energy to the AIDS vaccine quest.

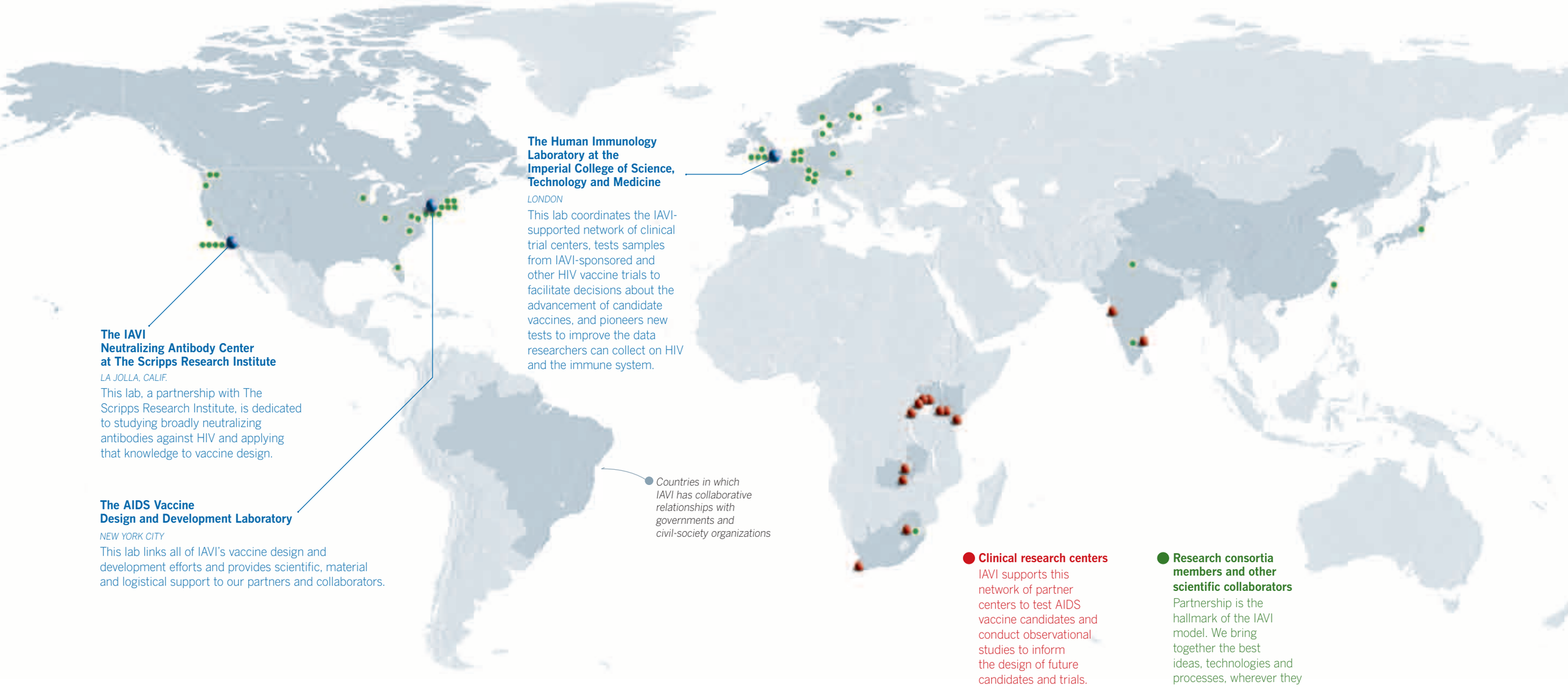
Nothing illustrates the IAVI model of global collaboration better than the recent discovery of new broadly neutralizing antibodies against HIV that point to potential vulnerabilities of the virus itself.

Most vaccines are thought to work by inducing antibodies that stop invading pathogens. HIV is highly variable and elusive to the immune system, yet some people infected with the virus produce these rare antibodies that are capable of neutralizing a broad range of the HIV variants in circulation.

In the decade before this discovery, researchers had only a handful of such antibodies to study, all of them from a type of the virus that circulates primarily in the Americas, Europe and Australia. Finding more of these antibodies gives researchers important new clues to designing an effective vaccine.

IAVI tapped its network on five continents, collecting nearly 2,000 blood samples—most from Africa—and sending them to diverse partners who each employed different methods to detect and isolate the rare antibodies. One small biotech firm brought into the effort through IAVI's Innovation Fund was the first to succeed. Since then, several more antibodies have been isolated, leading to additional targets for vaccine design, and the work is continuing.

These findings, along with other recent discoveries, have revitalized the AIDS vaccine field and given new momentum to the quest to rid the world of AIDS. With sustained commitment and investment, IAVI and partners are poised to capitalize on this work and bring us ever closer to that goal.



THE IAVI SCIENTIFIC NETWORK AND ITS GOALS

IAVI's research and development program is pursuing multiple paths to the development of an AIDS vaccine. In all, IAVI has forged roughly four dozen research partnerships—with collaborators ranging from academic labs to small biotech firms to pharmaceutical manufacturers. In each case, we construct our agreements to ensure that a vaccine, once developed, will be available to all at a reasonable price.

IAVI works to have a continual flow of vaccine candidates that we can advance to human trials, as there's no certainty any one will succeed. For the near term, the organization is accelerating the development of some of the most exciting of current-generation candidates.

For the medium term, we are designing back-up candidates that offer potential benefits over the current generation of experimental vaccines. These novel candidates are based on replicating vectors—modified viruses that serve as delivery vehicles of HIV genes and that reproduce, tricking the body into generating strong and long-lasting immune responses against HIV.

Finally, our longest term and most exciting effort is to design vaccine candidates based on the study of potent antibodies, found in HIV-infected individuals, that neutralize a broad range of HIV variants. This is the focus of our Neutralizing Antibody Consortium and other scientific partnerships.

Challenge

AIDS vaccine research brings multiple benefits to developing countries: It helps to counteract the brain drain that often saps developing countries of promising talent; it builds skills that can be transferred to other efforts; it strengthens health-care and regulatory processes in host nations.

IAVI's founding principle is a commitment to ensuring that an AIDS vaccine is developed and made available throughout the world, including where it is needed most—in developing countries, where three-quarters of all new HIV infections occur.

When IAVI was established in 1996, many believed AIDS vaccine trials wouldn't succeed in, for example, sub-Saharan Africa or India, or that they could work only if all samples were sent for analysis to Europe or North America. IAVI saw another path: Engage the countries hit hardest by AIDS, encourage them to take ownership of the research process, provide the tools and the training to build a robust research infrastructure, and partner with them.

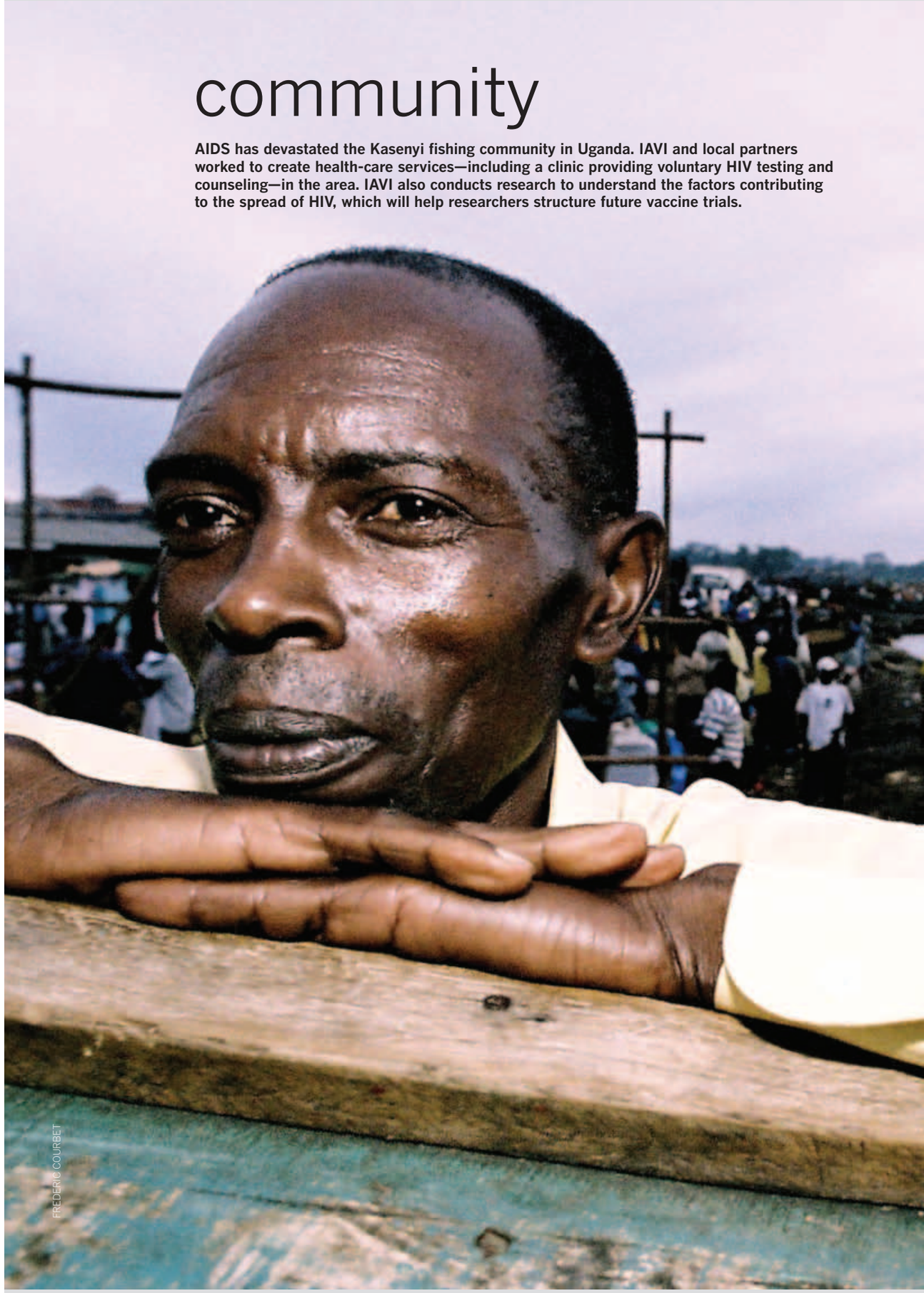
Today, IAVI has helped to establish a vital network of clinical research centers across sub-Saharan Africa and in India—centers that conducted the first HIV vaccine trials in Kenya, Rwanda, Zambia and India. These centers are the face of HIV vaccine research seen by the people who need it most.

And this engagement flows two ways: While IAVI and its partners build and maintain the physical and intellectual resources for scientific efforts, they also undertake social research to facilitate that work, and engage community groups to educate surrounding populations, raise awareness and cultivate support for the AIDS vaccine mission. In turn, voices from those communities inform the clinical efforts and sensitize scientists to the needs of local populations.

IAVI also works with local, national and regional governments to develop AIDS response plans and to analyze and promote sound policies that will speed the development of an AIDS vaccine.

community

AIDS has devastated the Kasenyi fishing community in Uganda. IAVI and local partners worked to create health-care services—including a clinic providing voluntary HIV testing and counseling—in the area. IAVI also conducts research to understand the factors contributing to the spread of HIV, which will help researchers structure future vaccine trials.



FREDERIC COURBET

JEAN-MARC GIBOUX/GETTY IMAGES

Action

A clinical trial in Thailand showed the world in 2009 that an AIDS vaccine is possible. This first demonstration of a modest protective effect against HIV in humans, together with recent discoveries by IAVI, its partners and others, underscores the imperative to sustain and enlarge investment in AIDS vaccine science.

Since its founding, IAVI has pursued its unwavering goal. IAVI began as an advocacy organization, filling scientific gaps where needed. Over time, as the need for more applied research became clear, IAVI has evolved and expanded to meet that challenge.

According to an independent evaluation by the World Bank, *"IAVI has innovated in the manner of how it conducts research, making important early investments in consortia of talented researchers, directing their work toward solving specific problems, and ensuring that there is a commercial path forward."* The report went on to say that *"IAVI has added significant value to the quest for an HIV vaccine"* and *"retains the ability to work more flexibly and quickly and to take more risks than many other actors in the field."*

Ending AIDS is not just a humanitarian imperative, it's a weapon against poverty, a boon to maternal and child health and ultimately a way to free precious development resources for other aims. But no single organization can deliver an AIDS vaccine alone. That's why IAVI connects individual researchers, academic organizations, companies, governments, political leaders, communities, non-governmental organizations, donors and ordinary individuals who want to make a difference. The result is an integrated scientific, policy and advocacy program, and a commitment to partnership, flexibility and innovation.

Right now, years of persistence, insight, creativity and investment are paying dividends. New discoveries have given researchers vital clues and new momentum. We know an AIDS vaccine is possible. Together, we can make it happen. We can end AIDS.

commitment

"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."

—Dr. David Kihumuro Apuuli,
Director General, Uganda AIDS Commission

"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

"IAVI represents our best chance to make an AIDS vaccine."

—Peter C. Doherty,
Nobel Laureate

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And many other generous individuals from around the world

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International AIDS Vaccine Initiative
www.iavi.org info@iavi.org