

ADVANCE (Accelerate the Development of Vaccines and New Technologies to Combat the AIDS Epidemic) is a 10-year cooperative agreement with the U.S. Agency for International Development (USAID), through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).

Successful HIV prevention requires increased contribution to research efforts by those countries and regions hardest hit by the epidemic

This visionary US\$340+ million program will run until June 2026 and is part of IAVI's 22-year collaboration with USAID that has significantly impacted the field of HIV vaccine R&D while accelerating the search for innovative biomedical prevention tools, including a safe and globally effective HIV vaccine. USAID's long-term investment and willingness to foster advances in science to benefit the world's most at-risk populations have enabled IAVI's unique model in Africa and India. Sub-Saharan Africa remains the region most severely affected, with 25 million adults and children living with HIV and AIDS and where researchers find the most genetically diverse HIV subtype infections in the world.

Committed to developing a safe, effective HIV vaccine and biomedical prevention products for global use

Worldwide, 38 million people are living with HIV, and HIV/AIDS killed 690,000 people in 2019. Despite advances in treatment and prevention, about 1.7 million people contract HIV every year. Experts warn that these numbers could increase significantly due to demographic changes and most recently challenges brought on by COVID-19. We need new ways to stop HIV transmission — HIV poses a unique challenge to scientists because of its ability to mutate and evade the body's immune system. Although some highly effective HIV prevention tools are available, the epidemic continues. This is partly due to the challenges people face when trying to adhere to effective prevention options. But it's also because key populations — men who have sex with men, people who inject drugs, sex workers, and adolescent girls and young women, who account for nearly half of all new infections — are less likely to access existing treatment and prevention services. We need new ways to stop the spread of HIV while ensuring that HIV biomedical prevention tools are accessible to those most in need.

A unique model of worldwide collaboration

The ADVANCE partner network includes state-of-the-art African and Indian clinical research centers, and extensive laboratory and research capabilities are available including the IAVI-Human Immunology Laboratory, based at Imperial College London; IAVI's Neutralizing Antibody Center, based at Scripps Research in La Jolla, California; and the HIV Vaccine Translational Research Laboratory at the Translational Health Science and Technology Institute, based in Faridabad, Haryana, India.

ADVANCE strategic framework

Goal: Safe and globally effective HIV vaccine and biomedical prevention products developed with leadership by African and Indian stakeholders that are available and accessible for populations at risk of infection.

- Strategic Area 1:** Translational research and observational epidemiology studies
- Strategic Area 2:** Clinical development and experimental epidemiology studies
- Strategic Area 3:** Capacity strengthening for HIV vaccine and biomedical prevention research



Sustainable and self-reliant CRC network
African Translational Research Consortium
Safe and globally effective HIV vaccine

Partnership is key to ADVANCE success

The ADVANCE partner network drives regional collaboration, capacity strengthening, and research to test promising HIV vaccine candidates and biomedical prevention products, while seeking a clearer understanding of the epidemic in Africa and India. ADVANCE links African and Indian researchers with global collaborators and innovative technologies throughout all stages of HIV vaccine and biomedical discovery, design, and development — including access to key populations; community engagement; laboratory, manufacturing, pharmacy, data management, regulatory, quality assurance and training functions; and vital efficacy trial experience to test whether a vaccine or biomedical prevention product demonstrates a health benefit over a placebo or other intervention.

ADVANCE – IAVI in partnership with:

Africa

- Aurum Institute
- Center for Family Health Research (Rwanda)
- Center for Family Health Research (Zambia)
- Desmond Tutu HIV Foundation
- KAVI Institute of Clinical Research (KAVI-ICR)
- Kenya Medical Research Institute (KEMRI)-Wellcome Trust Research Programme
- Medical Research Council (MRC)/Uganda Virus Research Institute (UVRI) – London School of Hygiene and Tropical Medicine (LSHTM)
- National Institute for Communicable Diseases
- Uganda Virus Research Institute-IAVI
- University of KwaZulu-Natal, HIV Pathogenesis Programme

Indo-Africa

- Government Hospital of Thoracic Medicine
- Indira Gandhi Institute of Child Health
- National AIDS Research Institute
- Y.R. Gaitonde Centre for AIDS Research and Education

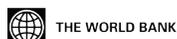
Technology transfer to accelerate HIV vaccine research in Africa

ADVANCE provides a platform to transfer technologies and enhanced laboratory research capacities that enables African research institutions and scientists to play key roles in the design of novel vaccine candidates using promising technologies such as broadly neutralizing antibodies as well as B cell and T cell-mediated immune responses. Examples include a B-cell center of excellence at KEMRI and KAVI-ICR (Kenya); a molecular virology center of excellence at the MRC/UVRI and LSHTM (Uganda); as well as a mucosal immunology center of excellence at KAVI-ICR that enables understanding early HIV immunological responses within genital tract mucosal surfaces.

ADVANCE accomplishments 2016-2020

- **17** HIV vaccine and other biomedical prevention candidates (tested by 2026).
- **17** epidemiological and other population-based studies provided data for HIV vaccine and biomedical prevention design and clinical evaluation.
- **1,538** researchers and specialists trained in good clinical practice, good clinical laboratory practice, quality and operational management.
- **42** individuals from IAVI CRC partners in Africa received fellowships to further their related studies (master's and Ph.D.).
- **28** early career African and Indian scientists received research funding.
- **73** papers/peer-reviewed scientific articles published with ADVANCE support have an Africa or India-based lead author (70% of total).
- **8** health policies, plans, and practices benefited from ADVANCE epidemiological and other population-based studies or data from ADVANCE research.

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And many other generous individuals and partners around the world

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iavi.org
info@iavi.org

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