

THE UW/FRED HUTCH CENTER FOR AIDS RESEARCH

Leading the Fight to End AIDS

A Network of Expertise, a Record of Success

The UW/Fred Hutch Center for AIDS Research.

One of the first and now one of the largest CFARs in the nation in a network of 19 centers, founded in 1988. CFAR is based in the UW School of Medicine and administered by the Department of Global Health.

Consortium Institutions. The University of Washington, Fred Hutch, Seattle Children's, and Infectious Disease Research Institute.

Director. Jared Baeten, MD, PhD, distinguished HIV researcher with a focus on HIV prevention in Africa. Conducted a ground-breaking study which led to the FDA approval of Truvada pills for preventing HIV acquisition. He is a physician at UW Medicine's Harborview Medical Center, where he cares for patients with HIV in Seattle.

Vision. Our CFAR will make a meaningful global impact on the lives of people living with and at risk for HIV by providing our multidisciplinary investigators with the most innovative and cutting-edge expertise and technology, and fostering an enabling environment where the next generation of HIV research leaders will flourish and make tomorrow's breakthrough discoveries.

Members. Over 700, including faculty, research scientists and pre-and post-doctoral trainees.

National and International Collaborators.

- Ten major international HIV/AIDS research and related clinical infrastructure facilities in Kenya, Uganda, Ethiopia and Peru.
- Seattle-area community leaders in the field of HIV/AIDS: nonprofit executives, public health specialists and social workers.
- Other affiliated local, regional and national institutions with HIV/AIDS programs: Public Health Seattle & King County, the Bill & Melinda Gates Foundation, Lifelong AIDS Alliance, PATH and the University of Hawaii.

HIV IS THE EPIDEMIC OF OUR LIFETIMES,

one that affects the entire world – men and women and children, rich and poor. The scientific progress in HIV research in the past 30 years has been remarkable, transforming HIV from a death sentence to manageable chronic illness. The progress is a testament to the power of research and medicine – life-saving treatment and prevention were developed with a speed never before seen in science, turning the tide of the epidemic, something no one thought possible in its early years.

But significant challenges remain in the fight against HIV. It is a quickly evolving virus that knows how to adapt to our best therapies and hide in reservoirs to avoid total elimination from the human body. Our best and brightest scientists are searching for the answers to a vaccine and a cure, but they will only prevail in the fight against HIV with sustained funding for their ambitious research.

HIV's complexity is not only biological but social, political, and cultural. Stigma, poverty, and unequal access to healthcare means that the greatest burden of HIV rests with the most vulnerable in society. To end the epidemic, we need creative solutions to make sure our scientific breakthroughs can reach the entire population of people living with HIV – in Washington and across the globe.

The University of Washington/Fred Hutch CFAR has been at the cutting edge of HIV science and care from the beginning of the global epidemic. The work of CFAR investigators reflects the complex reality of the HIV epidemic: their research is innovative, interdisciplinary, strategically targeted, and leads the world in HIV prevention and treatment, and in the search for a vaccine and cure.

We hope that you will consider supporting this work and, in so doing, help to make a difference in the lives of those affected by HIV worldwide.

AN OPPORTUNITY FOR PREVENTION.

Medical advances in HIV treatment from the past 30 years are extraordinary – but they have created a false impression that the HIV epidemic is under control. Many people with HIV are still not on treatment and the need for medical care far exceeds the available funding.

An estimated 620,000 people living with HIV in the United States and 16 million globally are not on HIV treatment. Another 11 million have not been tested and do not even know that they have HIV. Worldwide, infection rates are falling in some populations but increasing in others, such as adolescent girls.

Research shows that HIV-positive individuals who start HIV treatment right away have the best health outcomes and quality of life. Those on treatment who have successfully suppressed the virus in their blood cannot infect others. This gap in testing and treatment represents an opportunity to improve health outcomes and reduce the number of new HIV infections. CFAR researchers are working hard to address these continuing challenges, toward our ultimate goal of an AIDS-free generation.

CFAR'S LOCAL, REGIONAL AND GLOBAL IMPACT ON HIV CARE

Research by CFAR investigators and the work of CFAR programs has directly improved the continuum of care for individuals with HIV around the world, from encouraging those at risk to be tested, to improved diagnostics, earlier treatment, better care and more effective prevention. Improved care, in turn, strengthens these prevention efforts, as individuals on anti-retroviral therapy are much less likely to infect others. These effects are being seen locally, regionally and globally:

- Because of Public Health Seattle-King County's connection to CFAR, King County has a multi-pronged approach to getting people with HIV diagnosed and into care. As a result, we have the best coverage for vulnerable populations with HIV of any county in the U.S. and were the first major metropolitan region in the nation to achieve the World Health Organization's 90-90-90 goal: 90% of residents infected with HIV know their infection status, 90% are on HIV antiretroviral treatment, and 90% are virally suppressed.
- Pre-Exposure Prophylaxis (PrEP) is one of the most important breakthroughs in HIV research in the past decade. Through a daily regimen of pills, HIV-negative individuals can protect themselves from infection even when they are exposed to the virus. UW/Fred Hutch CFAR Director Jared Baeten led a 2012 University of Washington study that proved the efficacy of PrEP in preventing HIV infection. These findings led to the FDA approval of tenofovir-based pills for HIV prevention.
- The International Infrastructure Awards fund the development of research infrastructure in low-resource settings. Funds go to the purchasing of research equipment, renovation of old buildings, and development of laboratory and research space.



Named after one of Africa's top medical researchers, the Ndiya-Achola Building in Mombasa, Kenya, was funded in part by CFAR, and supports collaborative research and training.



CFAR supported the installation of solar panels to power computer and laboratory equipment in a small research building at the Ahero sub-district hospital in rural Western Kenya, where power outages are common.



Hope Center HIV
Treatment Program

Coptic Hospital

Nairobi, Kenya

January 2009

AN AIDS-FREE FUTURE: OUR RESEARCH PRIORITIES

The UW/Fred Hutch CFAR envisions a world where everyone has access to HIV/AIDS prevention, diagnosis and treatment. **Ultimately, we envision an AIDS-free generation.** To make this vision a reality, CFAR must continue to support established interdisciplinary investigators, while training the next generation of HIV researchers. Over the coming years, CFAR will focus on two strategic research priorities:

1. **Catalyze multidisciplinary HIV research** to achieve impact on the global epidemic, with work from bench to bedside to populations.
2. **Grow new researchers, research leaders, infrastructure, and resources** to expand innovative multidisciplinary work to change the trajectory of the global HIV epidemic.

From mentoring early-career researchers to disseminating the latest findings, from providing international laboratory support for clinical research to collaborating with investigators at partner institutions in pursuit of a cure via gene therapy, CFAR is at the forefront of innovative responses to the HIV/AIDS epidemic.

CFAR's Accomplishments

- **ADVANCING CARE.** CFAR researchers have conducted ground-breaking research illustrating the life-saving benefit of starting ART early, the effectiveness of PrEP in decreasing HIV transmission and acquisition, and the effectiveness of bed nets and water filters in delaying HIV progression in Africa.
- **CREATING LEADERS.** For CFAR-funded projects completed in the last 10 years, 96% of early-stage awardees published their research results (and, during the most recent five years, awardees had 101 publications), 75% have had subsequent HIV funding, and all have acquired academic, non-profit, or government positions.
- **RETURN ON INVESTMENT.** From 2007 - 2017, we awarded \$5.9 million to researchers who then received \$77.7 million in grants from NIH, a return on investment of **1320%**.

INVESTING IN CFAR — FOR ALL OF US

An investment in CFAR is an investment in the health and well-being of all of us.

Understanding HIV contributes to our knowledge of other diseases, such as tuberculosis, cancer, heart disease, kidney disease, brain disease, and women's health conditions – to name only a handful. The control of HIV/AIDS is essential for global progress in other key sectors, including education, poverty reduction, international security, economic growth and international relations.

Because HIV is a global epidemic, it needs a global response. The UW/Fred Hutch CFAR has global reach and impact, but private funding is needed to fill the gap between federal funding and our international goals, including:

- **Pilot project funding** to support proof-of-concept research, particularly by early-career investigators, that can be leveraged for federal grants;
- **Building international HIV research facilities** to revolutionize HIV prevention and treatment across the world;
- **Support for scientific working groups** to develop emerging areas of research.

CFAR awards provide funding and mentorship to promising HIV investigators, helping them move forward to successful and prolific careers in research. There is an urgent need to support new investigators who will make up the next generation of HIV/AIDS researchers, as the decrease in federal funding for early-career biomedical researchers is discouraging talented scientists from entering the field — which represents a tragic loss for those living with or at risk for HIV.

With private investment, CFAR hopes to improve prevention of HIV, make advances in treating HIV and HIV-related chronic morbidities, and develop a cure. We invite you to partner in this vital work: ending the HIV/AIDS pandemic.

For more information, visit cfar.washington.edu. To support CFAR, contact Megan Ingram, assistant dean for advancement for the UW School of Public Health, at 206.616.7197 or mkingram@uw.edu. Chris Thompson, senior director for corporate and foundation relations for UW Medicine, at 206.543.8203 or csthomp@uw.edu. Thank you for your interest in the Center for AIDS Research.

The Power of Investments: Creating and Leveraging

Recent private investment in CFAR has enabled:

- The creation of a fund to support basic research in HIV/AIDS.
- Support for twelve exceptional early-career investigators in HIV/AIDS research. They subsequently received 20 grant awards totaling almost \$21.3 million.
- Beginning construction on an HIV/AIDS clinic in Kenya, which received follow-on funding for completion and now serves thousands of patients.



*Pharmacists from the Hope Center HIV Treatment Program
Coptic Hospital – Nairobi, Kenya - January 2009*