

# The Fogarty International Center at NIH advances science for global health

he wish to be free from illness—to be healthy— unites us all. Fogarty International Center, as part of the U.S. National Institutes of Health, is committed to global health, which aims to improve well-being and to achieve access to health care for all people worldwide. Fogarty's work consists of preparing the next generation of scientists to respond to current and future disease threats. The center provides training, facilitates collaborations among researchers, and supports promising health studies in low- and middle-income countries.

Fogarty funds approximately 500 projects annually involving more than 100 U.S. universities each year. Fogarty also convenes the best scientific minds to address critical global health research problems such as pandemic response, antimicrobial resistance and strengthening research capacity in partner countries.

#### Simply put, Fogarty invests in people—global health researchers—who develop scientific expertise in countries with limited access to health research training.

In the 21st century, health research is increasingly complex, requiring a joint effort among researchers with a range of backgrounds and expertise. Many important diseases cannot be studied in the United States alone, while some might be better studied abroad where they are more prevalent. To solve global health problems, multinational teams that are sensitive to cultures and communities are needed. Fogarty's role is to help build these scientific partnerships, which could lead to discoveries that benefit one and all.

More than 7,500 scientists, worldwide, have received significant research training through Fogarty since its establishment in 1968.



Photo courtesy of Neerja Vashist

### Fogarty research and training programs

#### Research

Ecology and Evolution of Infectious Diseases Initiative (EEID) Global Brain and Nervous System Disorders Research across the Lifespan

HIV/AIDS Prevention, Treatment & Care in Low- & Middle-Income Countries

Interventions for Stigma Reduction to Improve HIV/AIDS Prevention, Treatment and Care in Low- and Middle- Income Countries Mobile Health Technology and Outcomes

#### **Research Training**

Chronic, Noncommunicable Diseases and Disorders Research Training (NCD-Lifespan) Global Environmental and Occupational Health Global Infectious Disease Research Training Harnessing Data Science for Health Discovery and Innovation in Africa (DS-I Africa) HIV Research Training International Bioethics Research Training Program Launching Future Leaders in Global Health Research Training Program (LAUNCH) Trauma and Injury Research Training

#### **Career Development**

Emerging Global Leader Award International Research Scientist Development Award

#### **Education Development**

International Research Ethics Education and Curriculum Development  $\ensuremath{\mathsf{Award}}$ 

Fogarty weaves dissemination studies and implementation research through all its programs, because a scientific discovery only has impact when it reaches people and improves lives. In 2016, Fogarty's Center for Global Health Studies launched an Implementation Science Toolkit that provides successful models, frameworks, strategies, and approaches to help scientists translate their work into policy and practice. This toolkit continues to average 1,800 page views per month.

#### NATIONAL INSTITUTES OF HEALTH

DEPARTMENT OF HEALTH AND HUMAN SERVICES

# **Fogarty develops leaders**

Fogarty's Global Health Program for Fellows and Scholars has provided support for hands-on, clinical research training to more than 800 fellows (postdoctoral students and MDs) and 650 scholars (current PhD and MD students) in low- and middle-income countries. In 2022, the program was rebranded as LAUNCH (Launching Future Leaders in Global Health Research Training) and expanded to encourage participation by individuals from underrepresented U.S. populations. When Fogarty-trained scientists perform key roles in other countries, U.S. influence is extended across the globe. Many Fogarty trainees have gone on to become global health leaders. Past and current leadership roles held by former trainees include: Uganda's Minister of Science, Technology and Innovation, Peru's Minister of Health, WHO's Pan American Health Organization's infectious diseases chief and the Director General of the Indian Council of Medical Research.

### Unique research opportunities can accelerate discovery

The key to preventing Alzheimer's disease—which is expected to strike one in three Americans and cost \$1 trillion annually by 2050—may be in studying an extended family with hereditary, early-onset Alzheimer's in rural Colombia. Fogarty has provided critical scientific training so that local Colombian researchers can perform brain scans, genetic analysis and other sophisticated approaches. Their work has already enabled a clinical trial of a U.S. manufactured drug that might help stop Alzheimer's at its earliest stage. Another example comes from rural Brazil where scientists trained by Fogarty to investigate Chagas disease redirected their research skills to examine Zika when an outbreak began in 2015. Zika infections, which are primarily transmitted by mosquito bites, are generally mild, yet those that occur during pregnancy can cause birth defects, including microcephaly, a type of neurological disorder. Currently Zika is not circulating within the U.S., yet local transmission occurred in Texas and Florida during past seasons.

## Creating overseas sentinels protects health at home

NIH

As the COVID-19 pandemic taught us, diseases do not respect borders or obey timelines. By stopping outbreaks where they occur, we are more likely to prevent them from spreading across nations and the globe. Fogarty's programs aim to ensure there is a local workforce and a local infrastructure in place, in all settings, ready to detect pandemics at their point of origin and capable of containing an outbreak, thereby minimizing disease impact.

Fogarty grantees and trainees played major roles in the research response to COVID-19 in various countries, including China, Haiti, Peru, and South Africa. Former Fogarty grantee Dr. Christian Happi of Nigeria was the first to sequence the full COVID-19 viral genome in Africa while former Fellow Dr. Sikhulile Moyo of Botswana was the first to discover the Omicron variant. Dr. Andrew Kambugu, who received advanced training in infectious disease research in the U.S. with Fogarty support, established a global health security program at Uganda's Infectious Disease Institute in 2016. Later, this enabled him to contribute to his nation's COVID-19 response. Meanwhile, in-house, Fogarty's Division of International Epidemiology and Population Studies continues to support pandemic preparedness through its ongoing research plus the training and tools it provides in the areas of epidemiological modeling and genomic epidemiology.



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