DR. PATRICIA GARCIA AND UNIVERSIDAD PERUANA CAYETANO HEREDIA, PERU

One of the best examples of Fogarty's contribution to research capacity-building can be found in Peru, at the Universidad Peruana Cayetano Heredia (UPCH). UPCH shares a unique relationship with both NIH and Fogarty, and has been receiving NIH funding for nearly 40 years. UPCH began with a single research grant from Fogarty in 1970, followed by a succession of additional grants in different disciplines over a period of decades. By 2005, UPCH had received 16 NIH grants totaling $3 million, for a variety of research and research training initiatives. The diversity of the Fogarty grants greatly broadened the research base at UPCH, as different investigators were brought on rather than the same researchers applying for every grant. Many of the UPCH students trained in Fogarty-supported programs are now senior researchers and administrators at the university or with governmental or non-governmental organizations nearby.

One of the driving forces behind the UPCH's leadership in research and training is **Dr. Patricia Garcia**, who serves in a senior role at the university. Early in her career, Dr. Garcia was a trainee in Fogarty's AIDS International Training and Research Program (AITRP), which allowed her to earn a Master's degree in public health at the University of Washington. Dr. Garcia currently serves as the principal or co-investigator on three Fogarty grants. Most notably, she was recently appointed director of Peru's National Institutes of Health, the first woman to hold that position in the nation's history.

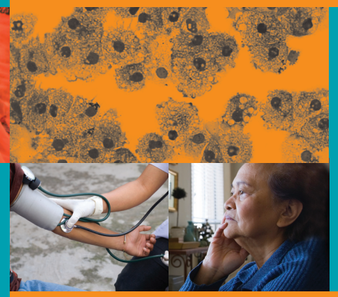
Early in her medical training, Dr. Garcia became interested in research areas related to educating women and preventing sexually transmitted diseases. "I was very lucky to receive Fogarty funding to do research in my own country," said Dr. Garcia. "It got me interested in areas I had never considered before." Following her Master's degree, she went on to design an intervention system that used the internet to reach male populations at high risk for HIV/AIDS, as well as a study designed to improve the training of Peruvian pharmacists in the recognition, management and prevention of STDs.

She has mentored to young researchers and medical students and has witnessed her pupils enjoying successes similar to her own. One of her Fogarty-supported trainees in Peru recently designed a groundbreaking medical informatics program that uses cell phone technology to improve adherence to antiretroviral therapy in HIV patients. She likens Fogarty's capacity-building programs to rich soil in which talented researchers can grow and bear fruit, in the form of new grants and programs.

Dr. Garcia's hope is to continue training generations of Peruvian health scholars and cultivate global health expertise that is not currently available in-country. She views the partnerships developed using Fogarty support as crucial to the advancement of this goal, both for Peru and for the global community. Dr. Garcia credits her early Fogarty support for much of her career development, emphasizing her years of exposure to research training. "Writing grants, negotiating funding, implementing programs, handling laboratory issues—all of these have been essential," she said. "Now, as chief of the National Institutes of Health for Peru, I have the opportunity to create a bridge between research and policy, and maybe make some of the changes needed. It's why I decided to take the job."

Vision

The Fogarty International Center's vision is a world in which the frontiers of health research extend across the globe and advances in science are implemented to reduce the burden of disease, promote health, and extend longevity for all people.



Mission

The Fogarty International Center is dedicated to advancing the mission of the National Institutes of Health by supporting and facilitating global health research conducted by U.S. and international investigators, building partnerships between health research institutions in the U.S. and abroad, and training the next generation of scientists to address global health needs.

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ADVANCING SCIENCE FOR GLOBAL HEALTH

THE JOHN E. FOGARTY INTERNATIONAL CENTER
ADVANCING SCIENCE FOR GLOBAL HEALTH

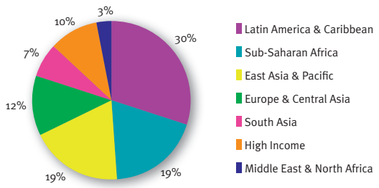
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

ABOUT THE FOGARTY INTERNATIONAL CENTER

Fogarty supports basic, clinical and applied research and training for U.S. and foreign investigators working in low- and middle-income countries. The Center is the international component of the NIH, addressing global health challenges through innovative and collaborative programs and international partnerships.

Over the past 40 years, support for international biomedical and behavioral research and training by the Fogarty International Center has grown from modest roots—its first year budget totaled $500,000—to the current $67 million that supports research, training, and capacity-building enterprise in over 100 countries and involving some 5,000 scientists.

Fogarty Spending by World Region
(Average FY2004–FY2005)



Fogarty is the only NIH Center whose exclusive mission is to focus on global health. Over the past two decades, Fogarty support has built significant expertise in training foreign health scientists and building research and public health capacity in low- and middle-income countries. Fogarty partners with 20 Institutes and Centers across the NIH to develop and fund these unique initiatives.

Fogarty International Center, Major Research and Training Sites
• 60 U.S. Institutions • 100 Foreign Institutions

INTERNATIONAL PORTFOLIO

Health research in the 21st century is increasingly a team effort. Interdisciplinary research teams have been prime movers in the development of low-cost diagnostics and cost-efficient ways to prevent or treat disease. Such teams are best suited to address global health issues when the investigators are multi-national and sensitive to culture and context. Building such teams in local institutions across the world is precisely the strategy Fogarty has employed for decades in funding its research and research training programs.

Fogarty programs to build the research pipeline are anchored to peer-reviewed research grants and designed to be **collaborative, long-term, and flexible**. Fogarty currently funds some 400 projects awarded to both foreign and U.S. institutions. Approximately 20% of Fogarty awards are made directly to robust research institutions in low- and middle-income countries. The remaining 80% support U.S. institutions, which in turn collaborate with colleagues in foreign institutions.

About one-third of Fogarty grants focus on scientific discovery; the remaining two-thirds provide support to train research scientists in global health. Each of these training initiatives, which are intended to be long-term, provides research training at a U.S. or foreign academic institution. Newly trained foreign scientists who are trained at U.S. institutions are encouraged to return home with the skills that allow them to conduct their own research and to mentor and train the next generation of scientists.

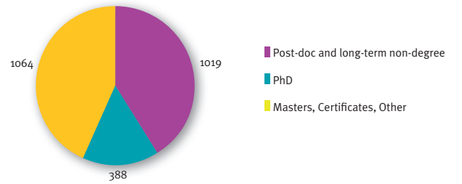
Ten Countries Account for Sixty Percent of FIC Training Effort (FY2005)

RETURN ON INVESTMENT

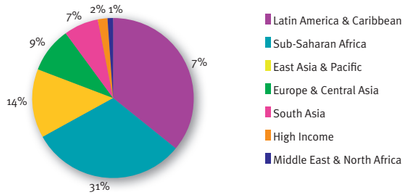
Over the past 15 years, more than 2,700 scientists from low- and middle-income countries have received long-term training through support by Fogarty programs. The Fogarty model has built a **sustainable research enterprise through investing in people**—a critical mass of trained local scientists that can train the next generation of researchers at home.

This scientific depth and diversity of expertise in low- and middle-income country institutions can address complex global health challenges and attracts additional scientific talent. Cross-cutting programs lay the foundation for a sustainable research enterprise (e.g., local ethical review capacity, informatics resources and training).

Numbers of Long Term Trainees Who Receive Additional Credentials Through FIC Supported Training
(FY1998–FY2006)



Percentage of FIC Supported Trainees by World Region
(FY 2005)



SUCCESS STORIES

Trainees have gone on to become scientific leaders in their home countries, and many have advanced into senior policymaking positions. Moreover, Fogarty-supported investigators and trainees have participated in research teams that have made seminal discoveries with significant policy implications.

For example:

- Supported by both the National Institute of Allergy and Infectious Diseases and Fogarty, researchers conducted a clinical trial in Uganda demonstrating that **surgical circumcision reduces a man's chances of acquiring HIV through sexual contact by more than 50 percent**. The WHO and UNAIDS now endorse the procedure as part of a comprehensive prevention package for HIV-negative men.

The Inter-American Development Bank

- A Fogarty-funded investigator working in Lima, Peru developed **a new assay for TB**. This simple and relatively inexpensive diagnostic test offers faster, more sensitive detection of TB and drug-resistant TB than the existing gold standard and cuts diagnostic time from an average of 28 days to 7 days. This inexpensive method is appropriate for countries with limited resources, and several countries are in the process of incorporating it into TB control protocols.
- Funded by Fogarty and the Eunice Kennedy Shriver National Institute of Child Health and Human Development, researchers found that a woman's response to HIV **treatment with drug combinations that contain nevirapine** is improved by waiting six months after having received the drug as a single dose during labor to prevent passing HIV on to her child.

PROGRAM AREAS

Fogarty funds groundbreaking fields in global health, stimulating research and research training programs in novel areas of science as well as filling gaps in the global health research workforce and enterprise. Several initiatives are interdisciplinary and conducted with partners in other agencies as well as NIH Institutes and Centers.

Fogarty's research portfolio includes programs related to:

- Brain disorders
- Ecology of infectious diseases
- Biodiversity and natural products discovery
- Tobacco and health
- Stigma and global health

Fogarty's research training portfolio includes programs related to:

- HIV/AIDS
- Infectious diseases
- Population health
- Informatics
- Genetics
- Clinical, operational and health services
- Global health research training for U.S. graduate students