

Advancing Global Health Research and Training at NIH

Biological Weapons Convention Review Conference
BWC Article X Implementation

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Fogarty International Center, National Institutes of Health (NIH)



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NIH: Steward of Medical and Behavioral Research



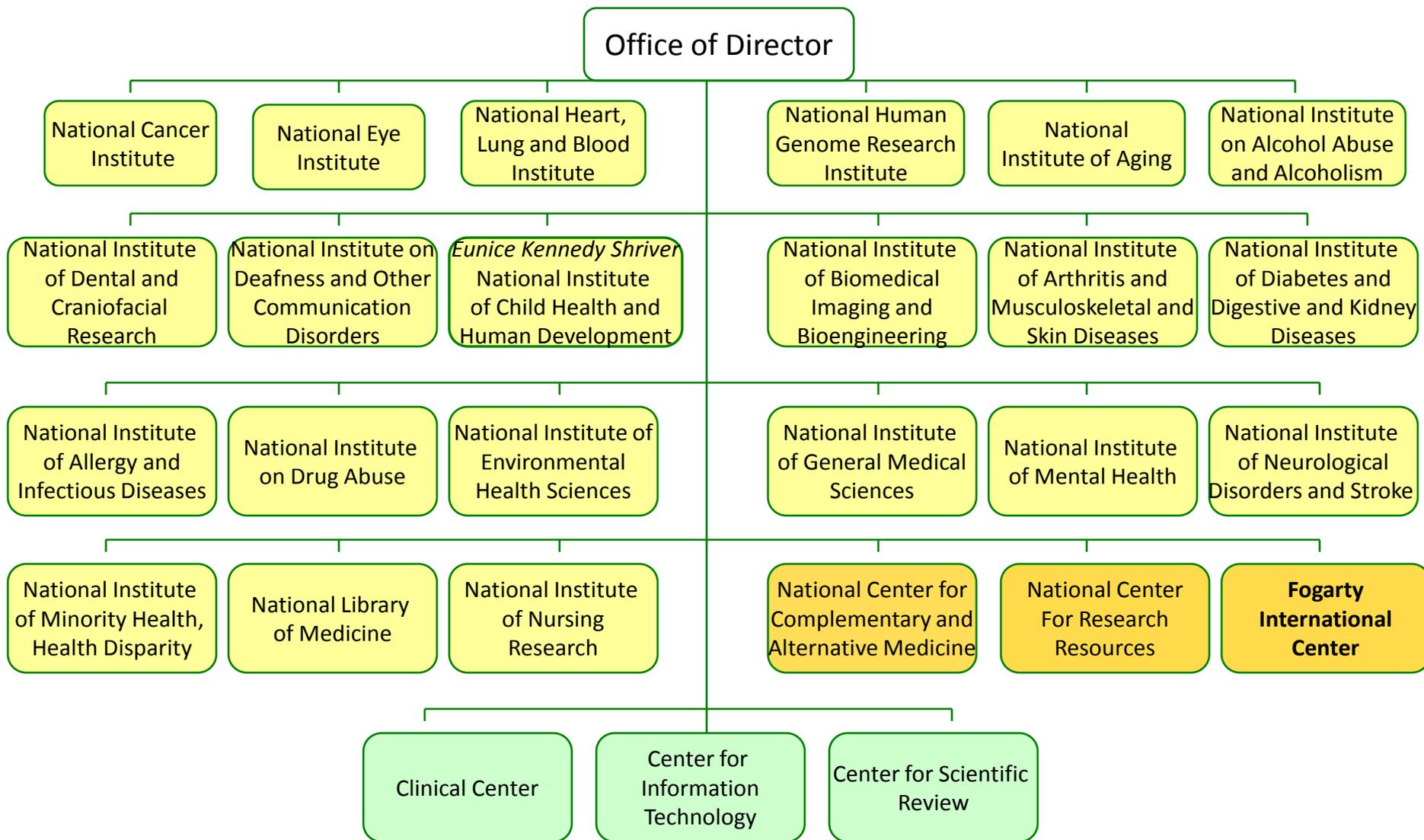
FOGARTY



“Science in pursuit of **fundamental knowledge** about the nature and behavior of living systems and the **application of that knowledge** to extend healthy life and reduce the burdens of illness and disability.”



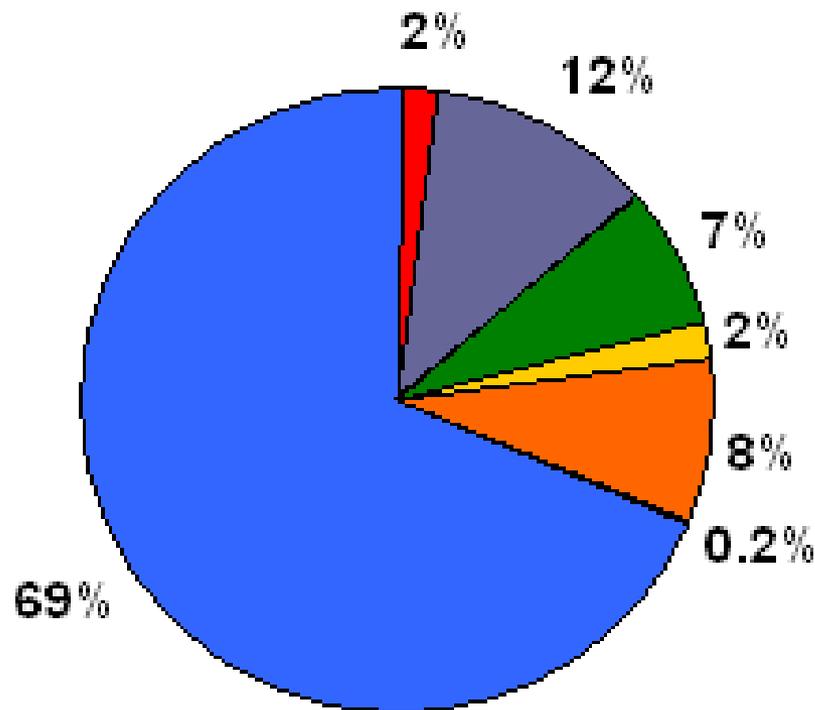
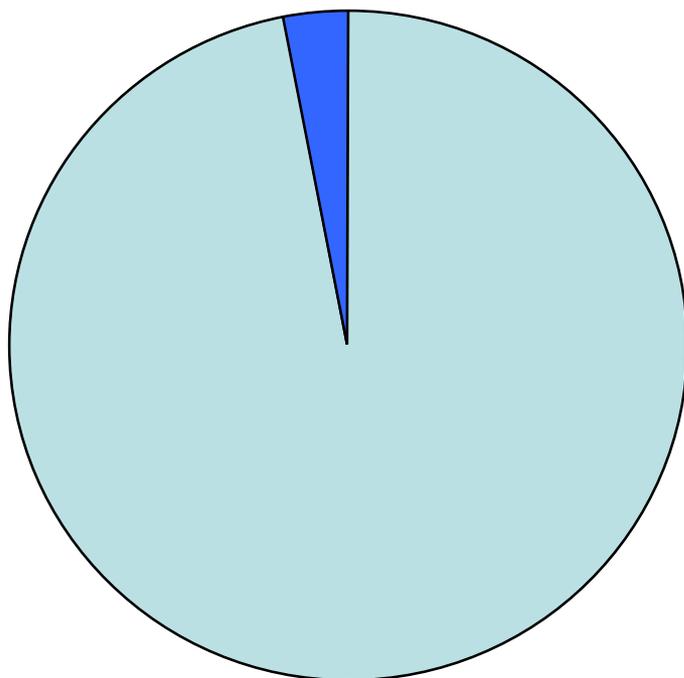
National Institutes of Health



NIH Global Investment and Regional Distribution



Foreign Awards
or Sub-Awards



Low and Middle income Countries

- East Asia & Pacific
- Europe & Central Asia
- Middle East & North Africa
- South Asia
- Latin America & Caribbean
- Sub-Saharan Africa

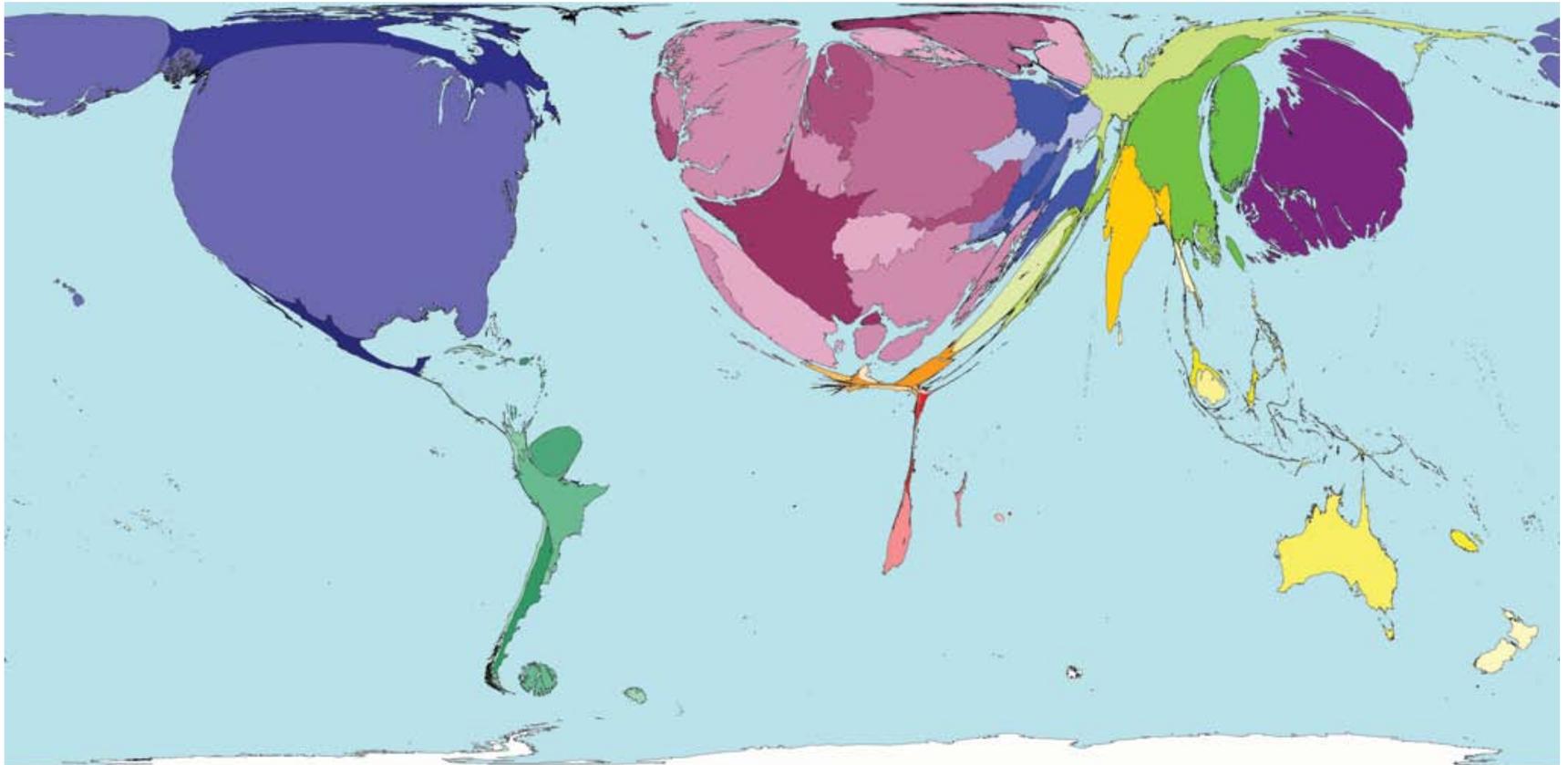
High income Countries

- OECD+High Income

Scientific Productivity



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NIH Fogarty International Center (FIC)

Advancing Science for Global Health

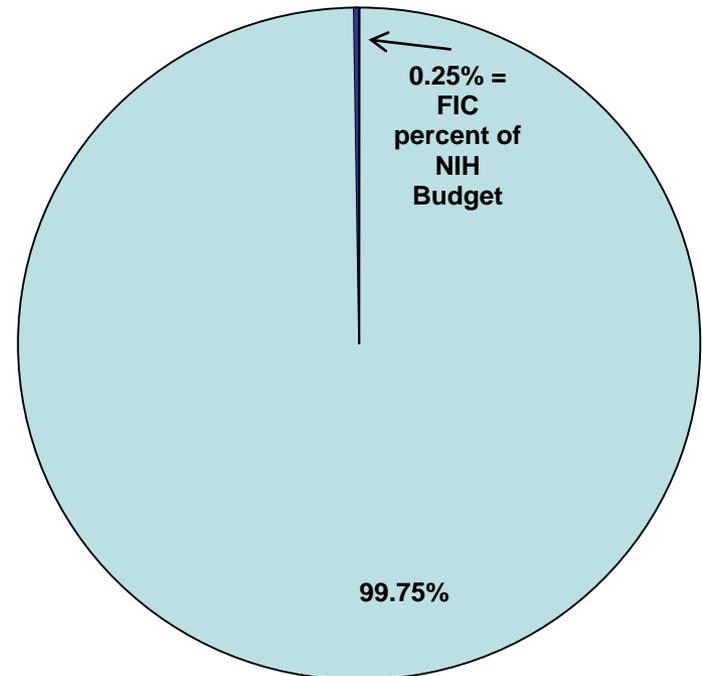


FIC Mission:

- To address global health challenges through innovative & collaborative programs for research & training
- To advance NIH mission through global partnerships



Rhode Island Congressman John E. Fogarty



Fogarty International Center

Major Research and Training Sites



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Fogarty International Center, Major Research and Training Sites

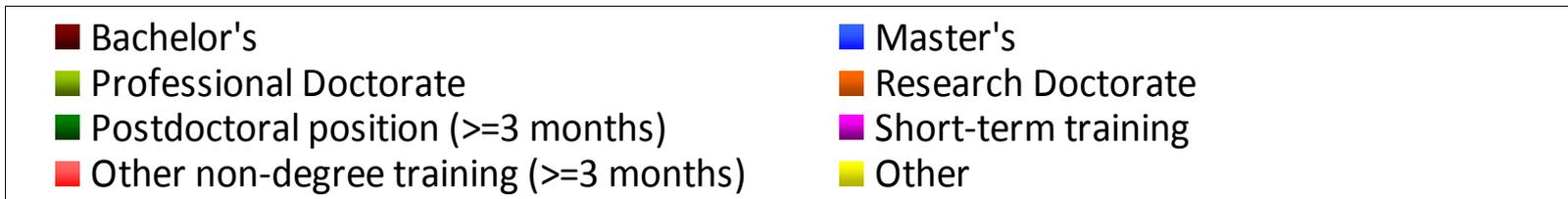
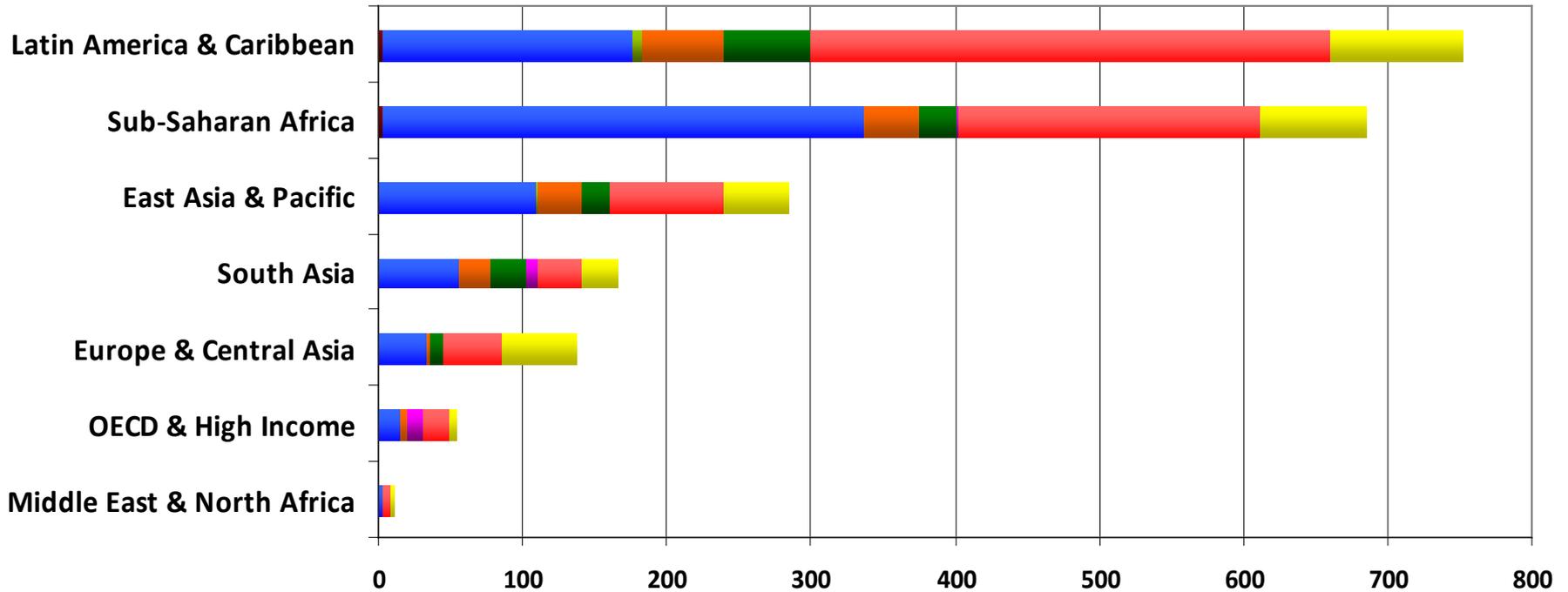


- 1/3 Research, 2/3 Training
- ~ \$55 million/yr
- ~400 active grants

Fogarty Trainees by Region



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HIV Research Training Program FY2013

25 year history of research & training



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Training HIV researchers in low and middle income countries

- Partners: Fogarty International Center (FIC), other NIH Institutes
- 2,548 trainees
- 47 countries
- Enabled significant advances by host-country researchers



Global Infectious Disease Research Training Program (GID)



- Linked to NIH & other funded research grants in neglected tropical diseases & other infectious agents
- 447 long term trainees
- 276 short term trainees
- 59 countries
- Enabled advances:
 - Leptospira genome
 - Rapid, low cost MODS assay for drug resistant TB diagnosis
 - Anti-malaria pregnancy vaccine discovery



- Network of sites that focuses on studying populations with a high prevalence of malnutrition & enteric infections

BILL & MELINDA
GATES foundation

Map of Sites & Institutions



Developing Health Workforce Capacity in Africa

Francis S. Collins,¹ Roger I. Glass,^{2*} Jack Whitescarver,³ Mary Wakefield,⁴ Eric P. Goosby⁵

As we mark World AIDS Day, it is important to assess the relationship between the challenges of AIDS prevention and control and the huge gaps in the health workforce needed to address these and other critical shortages. Although Africa bears 24% of the global disease burden, it has only 3% of the world's health workforce and less than 1% of the world's financial resources for health (1, 2). Sub-Saharan Africa as a whole has 18 physicians per 100,000 population, ranging from 60 in South Africa to 2

The MEPI awards were announced in October 2010 and will invest about \$130 million over 5 years to directly support African institutions in 12 countries, creating a network of 30 regional partners and more than 20 U.S. collaborating institutions (7) (see the table). For example, in South Africa, the two proposals are directed at two of the hardest hit areas: Stellenbosch University is working on the training of physicians to work in rural areas with the least resources by recruiting students from these underserved areas.

In Africa, programs to improve health will require major investments in institutions that can train and retain health professionals.

posals), 64% plan to have offerings in public health (to include biostatistics, epidemiology, and the like), 45% propose strategies to increase the number of women clinicians and researchers, and 36% of programmatic awards are intended to include maternal-child health training and research in the context of HIV/AIDS (including training of midwives).

This venture is aligned with the principles of President Obama's Global Health Initiative (8). MEPI is among several programs to support the congressional mandate that PEPFAR



Medical Education Partnership Initiative (MEPI)



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Direct awards to African Medical, Nursing & Public Health Schools to enhance quality & number of health research scientists



- Botswana
- Ethiopia
- Ghana
- Kenya
- Malawi
- Mozambique
- Nigeria
- South Africa
- Tanzania
- Uganda
- Zimbabwe
- Zambia



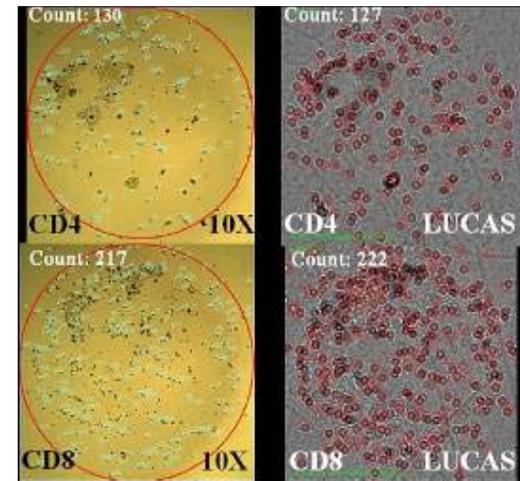
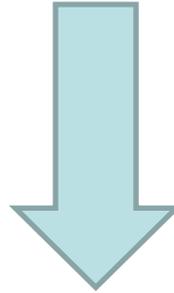
Framework Programs for Global Health Innovation



Some of the greatest innovations in global health have come from fields outside of medicine & public health!



Lens-free microscope (LUCAS)



LUCAS images of CD4+ & CD8+ T cells compared to a regular microscope image

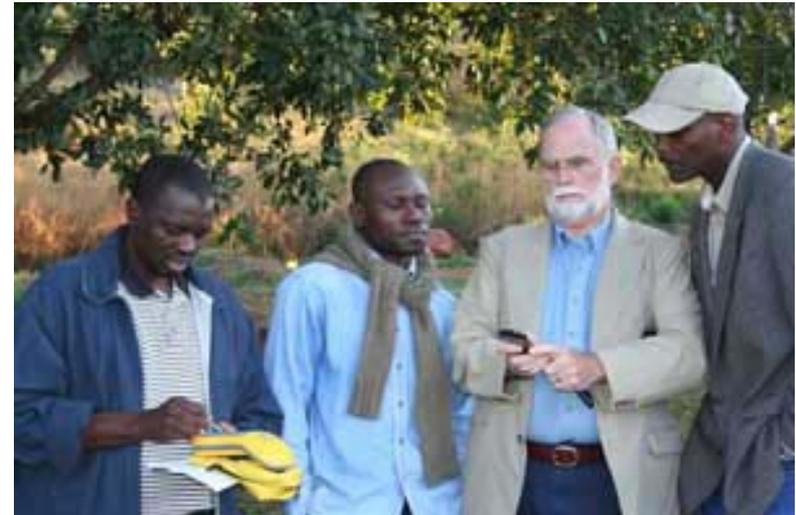
Broadly interdisciplinary **training programs** focused on generating “innovations” in global health: implementable solutions that are more effective, affordable, and/or scalable.

Frameworks for Global Health Innovations



Interdisciplinary team training in innovation science & development of products

- Prevention of tuberculosis transmission through uv-disinfection technology
- Point-of-Care diagnostics with a cell phone & \$2 “microscope”
- Providing evidence base for women’s health & empowerment
- Improving water management for health
- Improving detection, treatment, & prediction of drug resistant pathogens



University of Venda, SA & UvA water modeling project



Fogarty Programs



Fogarty International Center's programs provide funding to perform research and to train researcher in a variety of global health topics. Through these extensive programs, Fogarty and its partners throughout the National Institutes of Health (NIH) are working to build sustainable research capacity in low- and middle-income countries.

Please see the program description page for status, eligibility, funding announcements and deadlines.



Current Programs

Research and Research Training Programs

- AIDS (AITRP)
- Biodiversity (ICBG)
- Bioethics
- Brain Disorders
- Chronic, Non-communicable Diseases (NCD-Lifespan)
- Clinical, Operational & Health Services (ICHORTA)
- Clinical, Operational and Health Services AIDS/TB (ICOHRTA-AIDS/TB)
- Ecology and Evolution of Infectious Diseases (EEID)
- Environmental & Occupational Health (ITREOH)
- Framework
- Framework Innovations
- Framework Signature Innovations
- Global Health Fellows and Scholars Support Centers
- Global Infectious Diseases (GID)
- Informatics (ITGH)
- Medical Education Partnership Initiative (MEPI)
- New Foreign Investigators (GRIP)
- Research Collaboration (FIRCA)
- Tobacco
- Trauma & Injury
- Womens and Girls Health Administrative Grant Supplements

Career Development Opportunities for Individuals

- Fulbright-Fogarty Fellowships in Public Health
- Independent Scientist in Global Health (ISGHA)
- Japanese Researcher Fellowships (JSPS)
- Junior Research Scientists (IRSDA)
- Scholars & Fellows (FICRS-F)

<http://www.fic.nih.gov/Programs/Pages/default.aspx>

Other Programs

- American Reinvestment and Recovery Act (ARRA)
- Genetics
- Population
- Stigma



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www.fic.nih.gov



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