

International Collaboration Through Research and Training

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Presentation at “Research Through Global Collaboration” workshop
University of Central Florida
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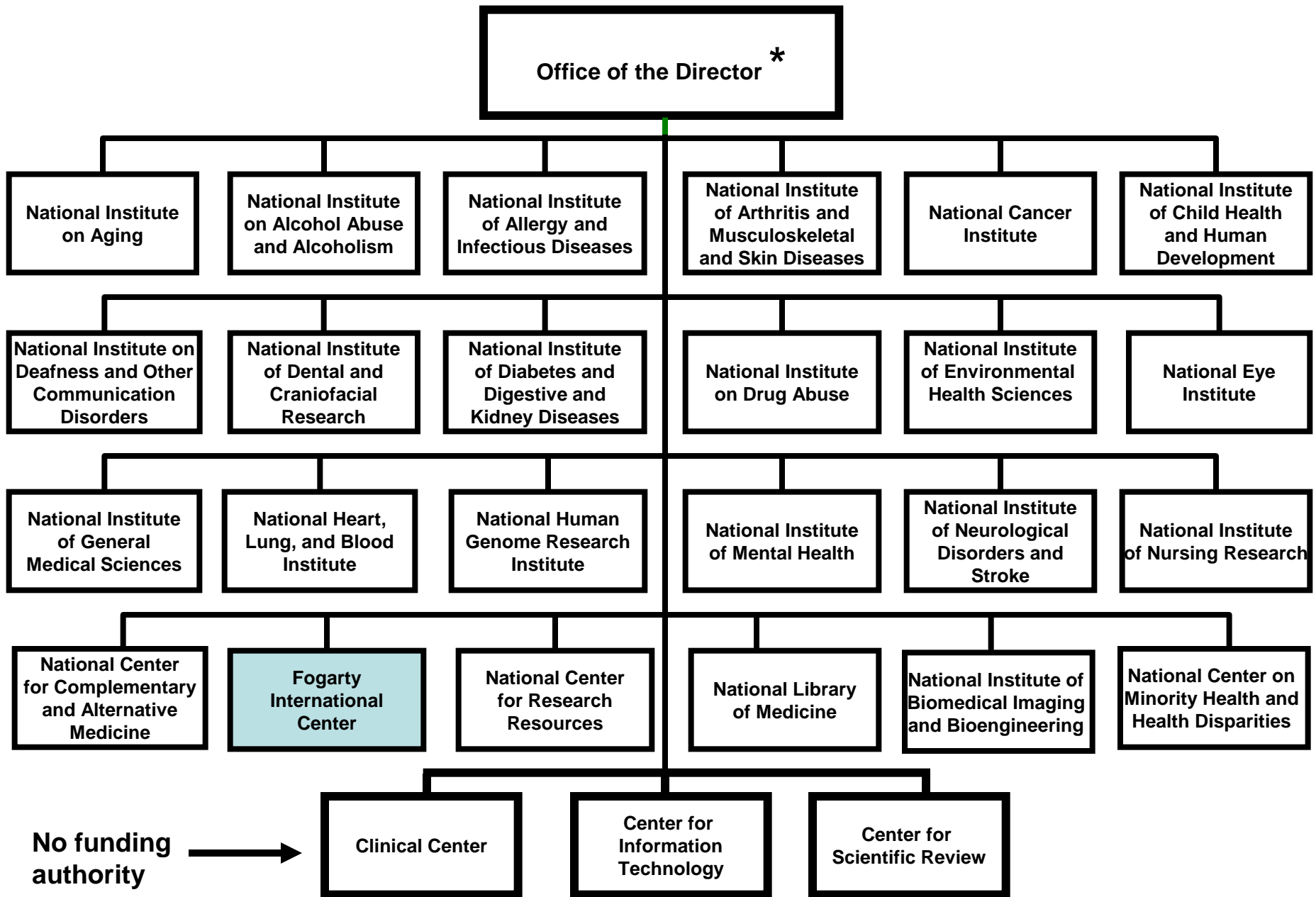
FOGARTY
INTERNATIONAL CENTER

National Institutes of Health



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- Begun as a one-room Laboratory of Hygiene in 1887, the NIH has grown to 27 Institutes and Centers (ICs)



DEFINITION: IC = Institute - Center

The National Institutes of Health



NIH's mission is to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability. The goals of the agency are:

- to foster fundamental creative discoveries and their applications as a basis for ultimately protecting and improving health;
- to develop, maintain, and renew scientific human and physical resources to ensure our capability to prevent disease;
- to expand the knowledge base in medical sciences to enhance the nation's economic well-being and ensure a continued high return on the public investment in research; and
- to exemplify and promote the highest level of scientific integrity, public accountability, and social responsibility in the conduct of science.

NIH director's vision for the agency



At his inaugural address as NIH director, Dr. Collins shared “five areas of special opportunity in the coming years”:

- High throughput technologies
- Translation of NIH science into practice
- Putting science to work for the benefit of healthcare reform
- Greater focus on global health
- Need to reinvigorate and empower the biomedical research community through stable and predictable funding increases, through high quality training programs



NIH in numbers

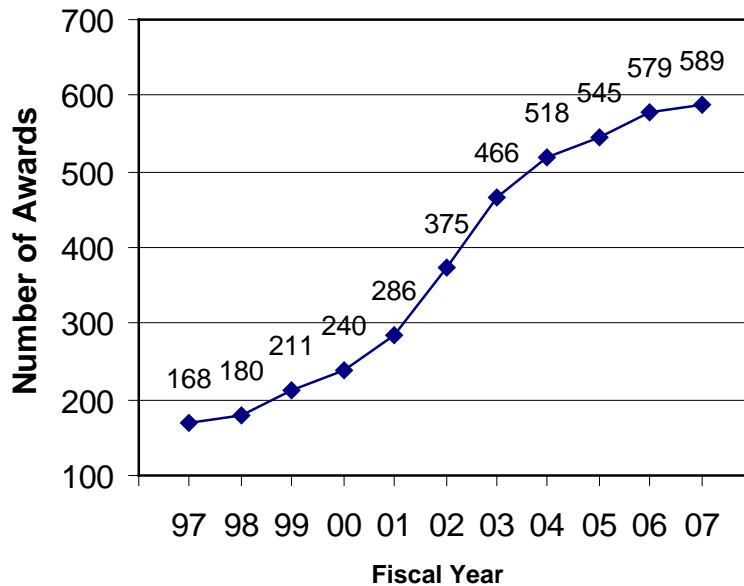
- ~\$30 billion dollars/year
- More than 4/5 of NIH budget is devoted to funding competitive grants:
- Support more than 325,000 research personnel
- Funding to over 3,000 institutions
- Activities in all 50 states and US territories and more than 90 countries around the world

Substantial Growth in NIH Foreign Awards

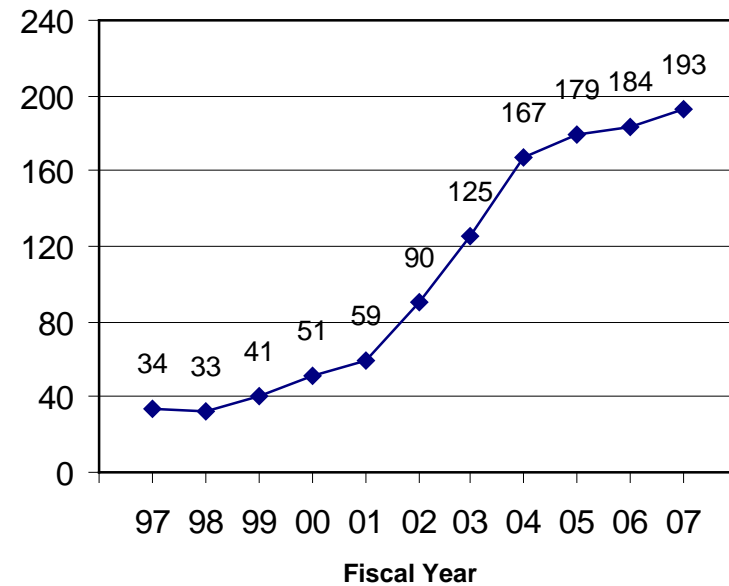


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Number of Research Awards to Foreign Institutions



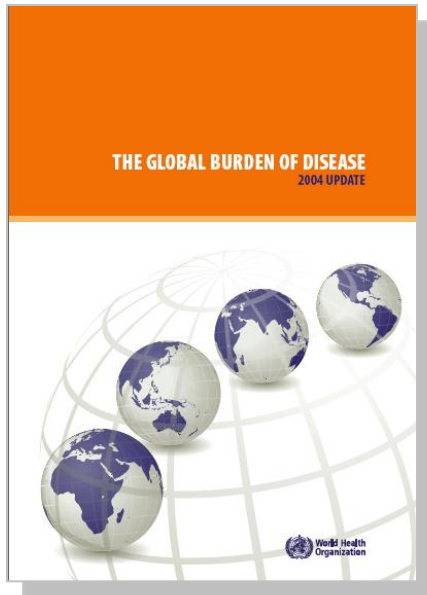
Amount Awarded (\$ in Millions) to Foreign Institutions



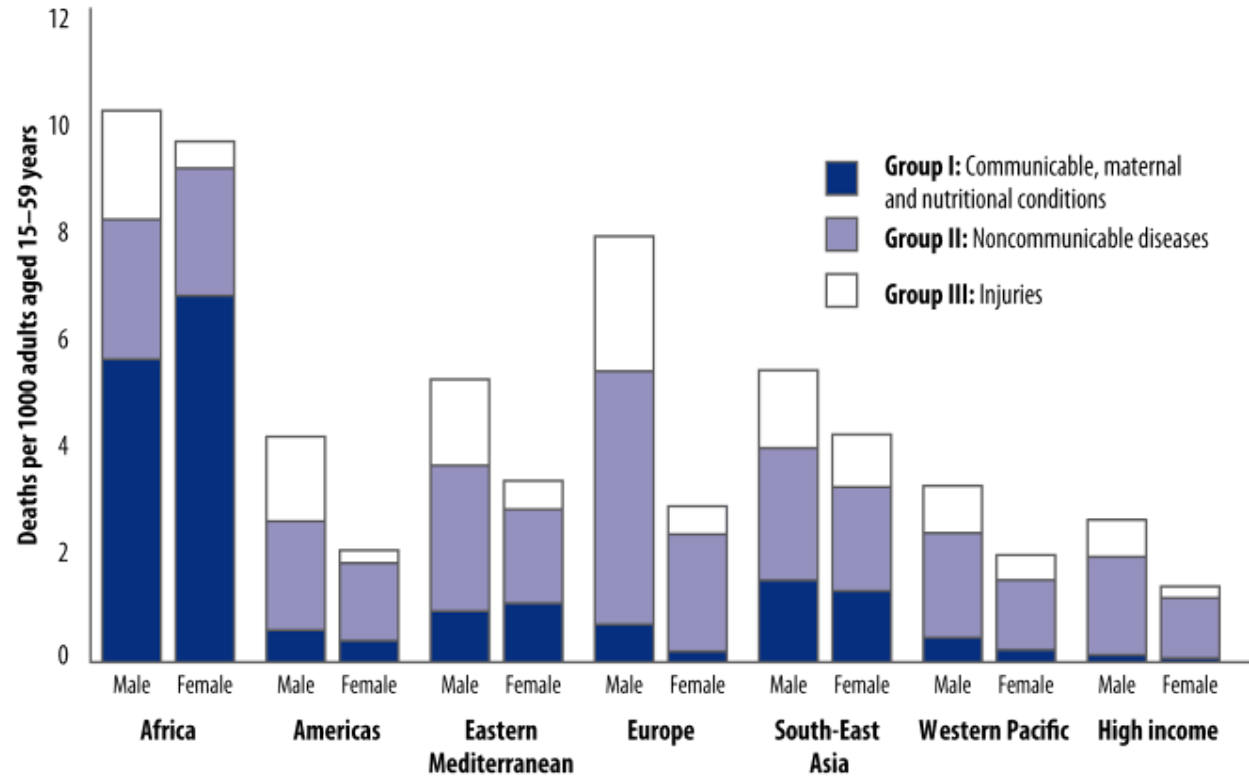
Source: NIH OER

http://report.nih.gov/award/trends/Inst_Char_Research_Grant_2007.xls

Non-communicable diseases and conditions



Launched October 2008



Adult mortality rates, 2004

Non-communicable diseases (2005-2016)



Geographical regions (WHO classification)	2005		2006-2015 (cumulative)		
	Total deaths (millions)	NCD deaths (millions)	NCD deaths (millions)	Trend: Death from infectious disease	Trend: Death from NCD
Africa	10.8	2.5	28	+6%	+27%
Americas	6.2	4.8	53	-8%	+17%
Eastern Mediterranean	4.3	2.2	25	-10%	+25%
Europe	9.8	8.5	88	+7%	+4%
South-East Asia	14.7	8.0	89	-16%	+21%
Western Pacific	12.4	9.7	105	+1	+20%
	58.2	35.7	388	-3%	+17%



The Cancer Genome Atlas

- Coordinated by a project team comprised of individuals from both the National Cancer Institute (NCI) and the National Human Genome Research Institute (NHGRI)
- over the next few years, TCGA's research team will build comprehensive catalogs of the key genomic changes in 20 major types and subtypes of cancer. These data are being shared rapidly with the worldwide scientific community, and will provide powerful new guides for all those striving to develop better ways to diagnose, treat, and prevent cancer
- <http://cancergenome.nih.gov/>



Diabetes Prevention Program

- NIH funded trial that showed that one of the most effective ways to lower the risk of type 2 diabetes is through regular exercise and modest weight loss. A recent follow-up study showed that the protective effects of weight loss and exercise persist for at least a decade.
- Research into implementing DPP findings in the real world -> United Health Group, YMCA, and Walgreen's pharmacies will implement on a national scale what was learned in DPP
- <http://diabetes.niddk.nih.gov/dm/pubs/preventionprogram/>

National Collaborative on Childhood Obesity Research (NCCOR)



- Pulled experts from four NIH institutes (NCI, NHLBI, NICHD, NIDDK), the CDC, the USDA, and the Robert Wood Johnson Foundation.
- Trial of Activity for Adolescent Girls: a national study to develop and test school- and community-based interventions to get girls more involved in gym class, organized sports, or recreational activities.
- *We Can!*: provides families with practical tools for weight loss at more than 1,000 community sites nationwide
- <http://www.nccor.org/index.html>

Alzheimer's Disease Neuroimaging Initiative



- Public-private partnership: National Institute of Aging (NIA), National Institute of Bioimaging and Bioengineering (NIBIB), Pharma, and several foundations
- Showing some success in finding methods for early diagnosis and assessing whether drugs and other interventions can prevent or delay the onset of AD
- <http://www.adni-info.org/Home.aspx>



NHLBI Centers of Excellence

NHLBI and UnitedHealth Group network

- Network of research and training centers to build institutional and community capacity to prevent and control chronic diseases
- NHLBI awarding 5-year contracts totaling almost \$26m to LMIC sites and a 6-year contract to Westat for \$8.8m



NINDS International Neuroscience Fellowship



8 ICs (NINDS, NIA, NIAAA, NICHD, NIDA, NIDCD, NIEHS, NIMH) participate

For foreign junior and mid-career scientists to receive 1-2 years (clinical research up to 3 years) of research training in the U.S.

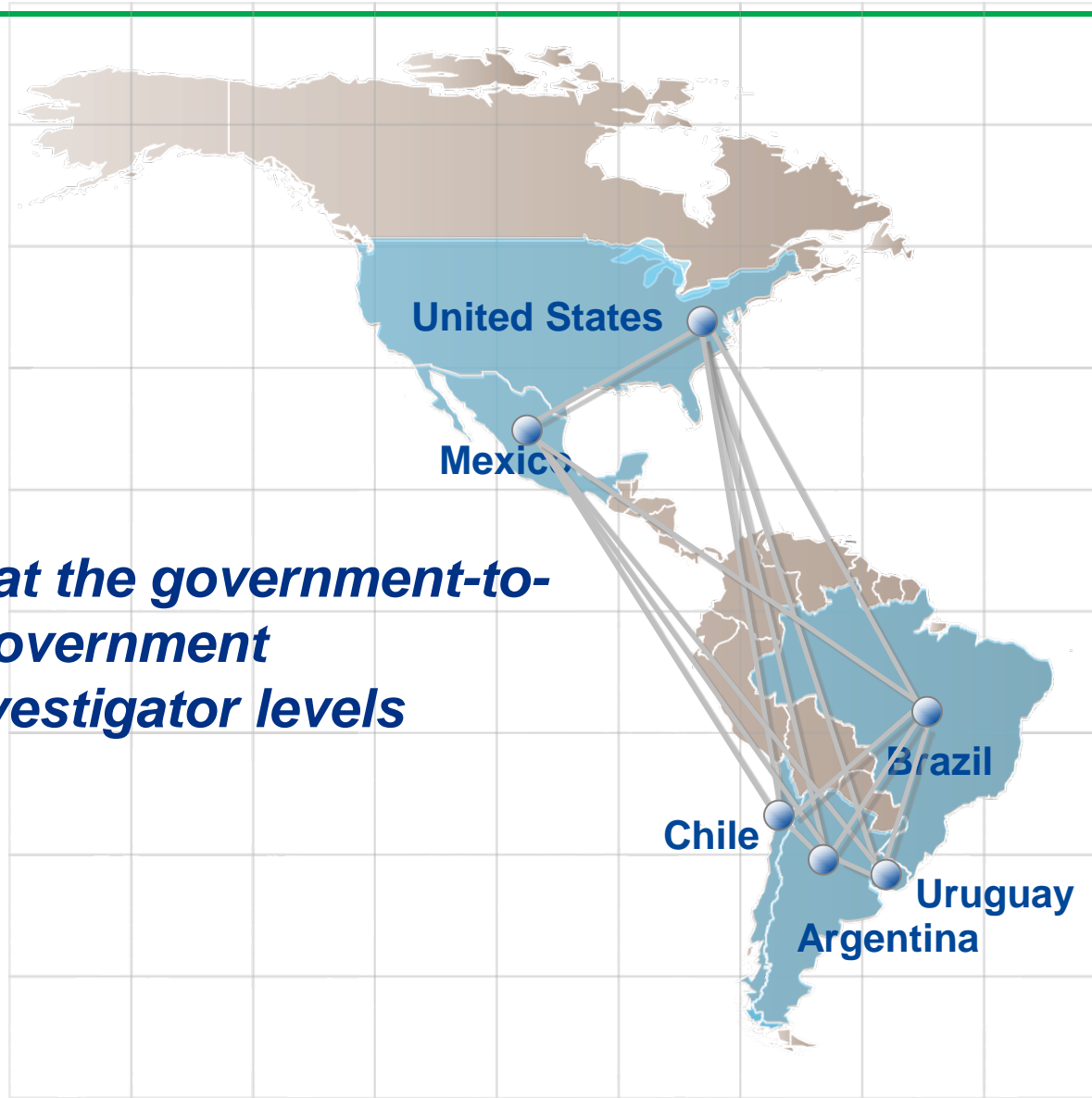
Candidate must have a position upon returning to the home country

Preference will be given to developing country scientists

United States-Latin America Cancer Research Network (US-LA CRN): *A New Model for International Cancer Research*



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Connecting at the government-to-government and investigator levels



US-LA CRN At a Glance

- Launched in March 2009
- Unprecedented bilateral partnership connecting governments, institutions & researchers, and non-governmental organizations
- First project: Addressing the high breast cancer incidence in Latin America
- Providing data to advance cancer management for United States Hispanic population
- Focusing on 21st century biomedical concepts
 - Molecular Profiling of Breast Cancer
 - Understanding/Improving Early Detection
 - Clinical Trials
- Improving biobanking process in Latin America



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Fogarty International Center

www.fic.nih.gov

John E. Fogarty International Center for Advanced Study in the Health Sciences



- Established in 1968
- Mission: supporting and facilitating global health research conducted by U.S. and international investigators, building partnerships between institutions, and training the next generation of scientists
- Budget has grown from \$0.5m to ~\$70m



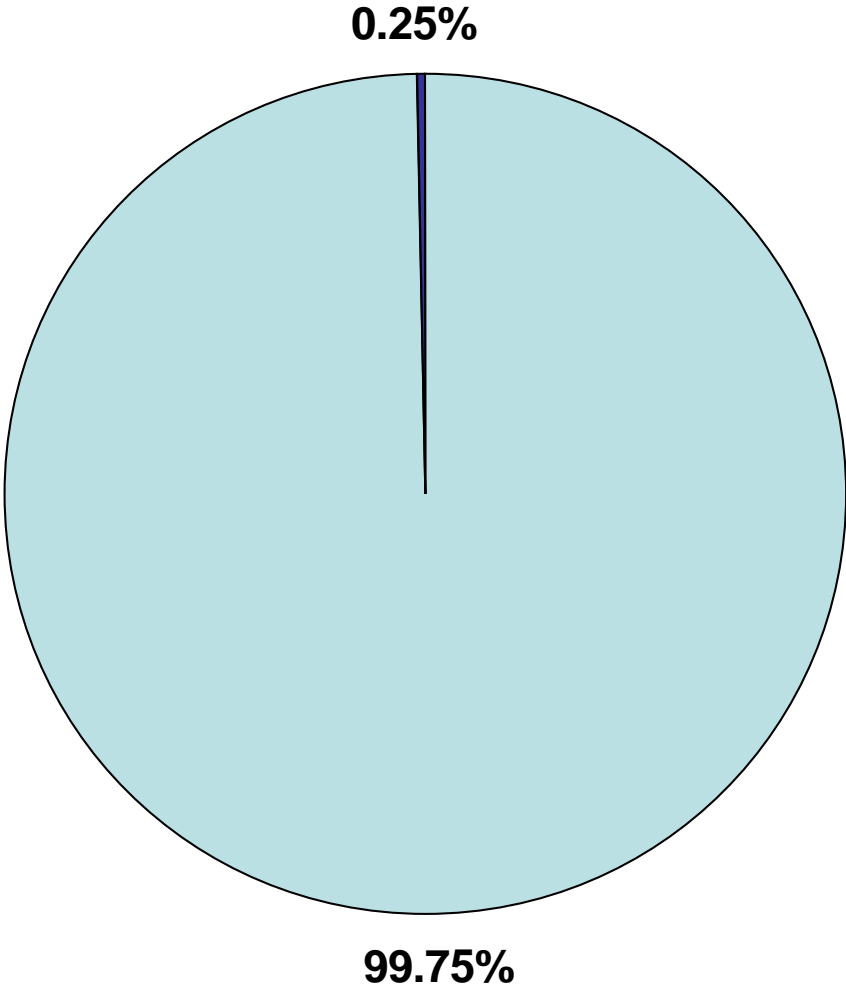
FIC strategic plan

- Address the growing epidemic of chronic, non-communicable diseases
- Bridge the implementation research training gap
- Develop human capital in the developing world
- Foster a sustainable research environment in low- and middle-income countries
- Build strategic alliances and funding partnerships

Fogarty Intl Center Percent of NIH Budget



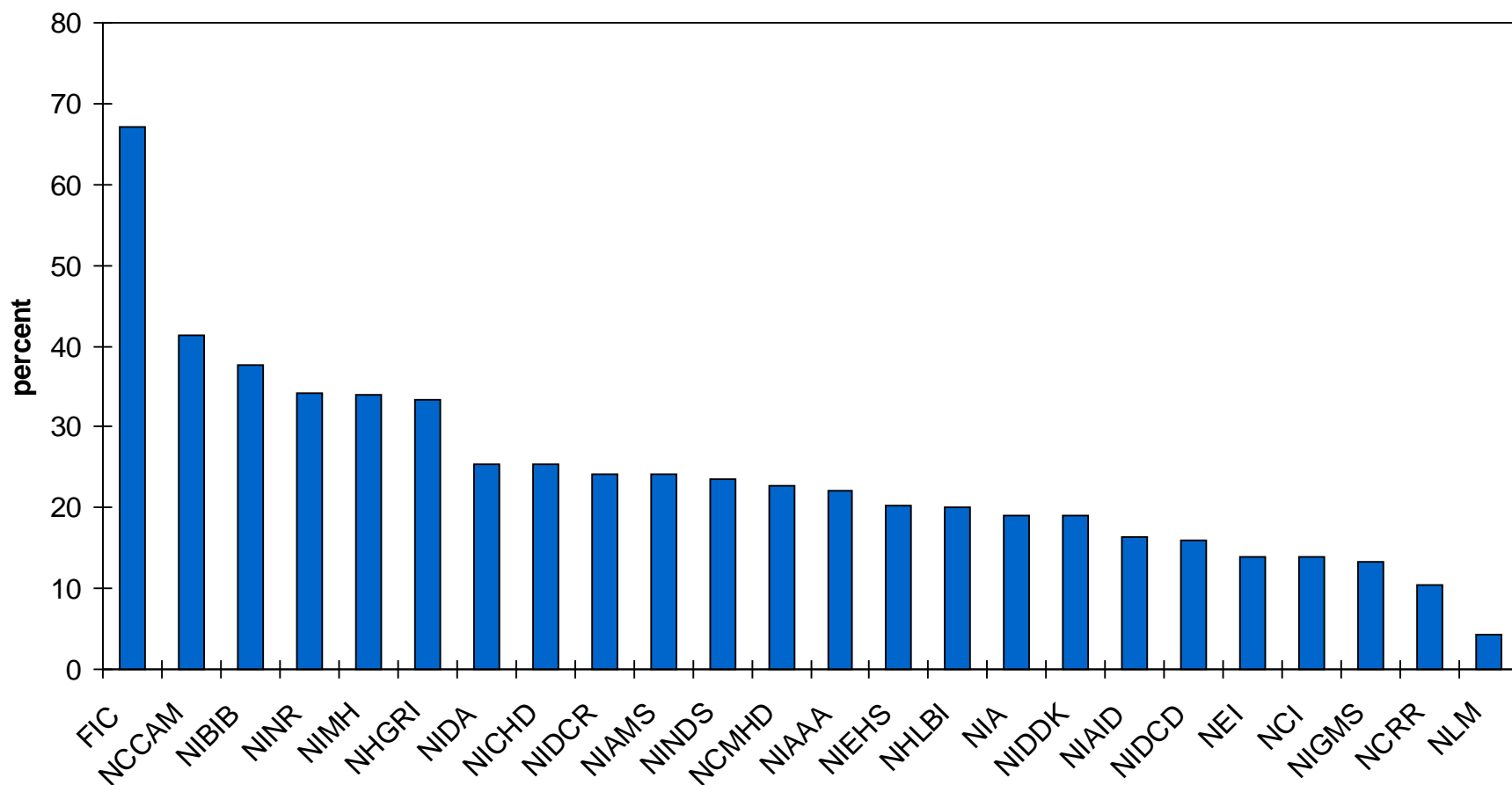
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NIH Collaborative Activities Report FY 2009

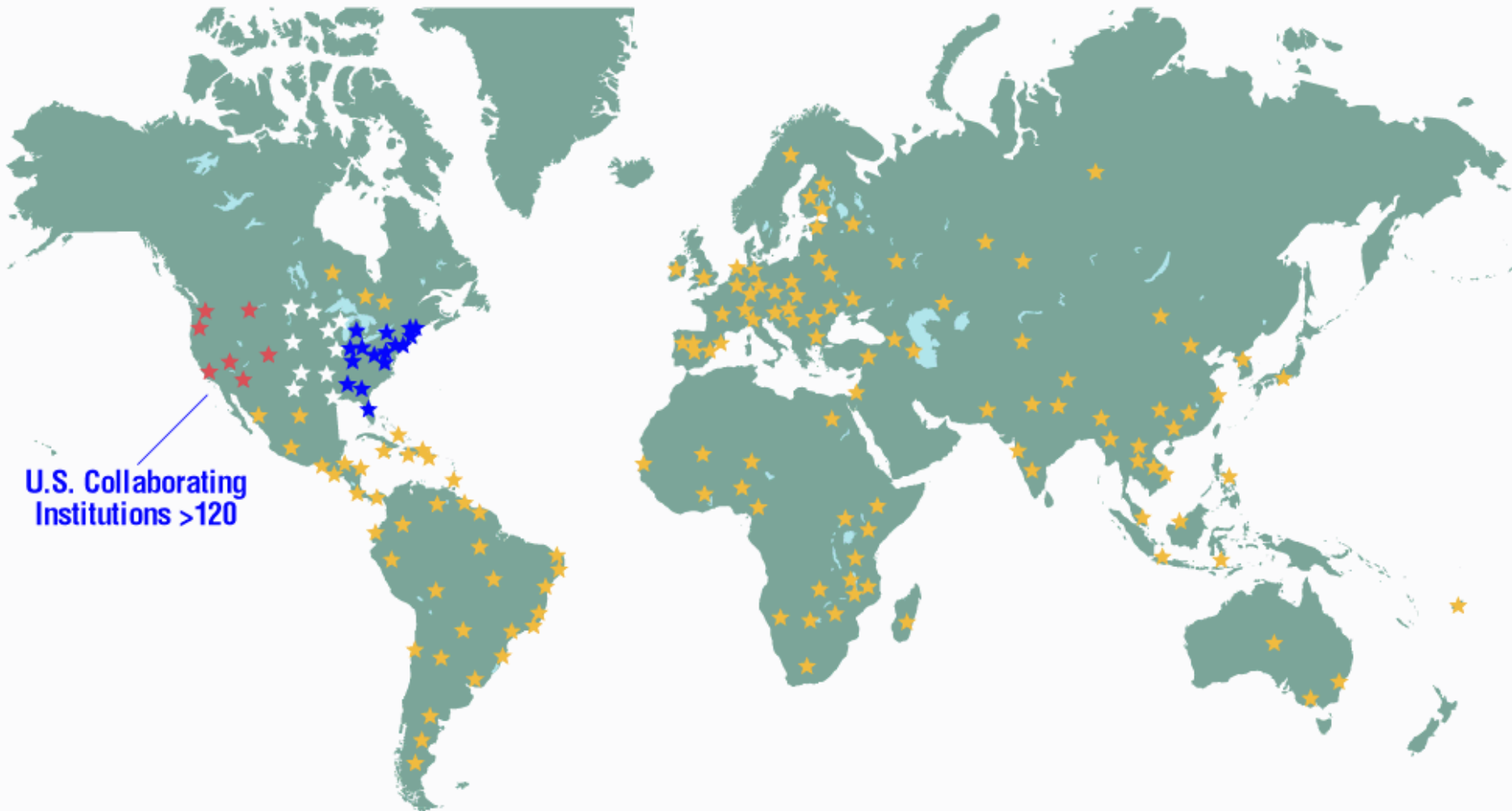


■ % Collaborative Activities



Fogarty International Center

Major Research and Training Sites





Fogarty programs

- Research training grants
- Research grants
- Fellowships
- Career development awards
- Multidisciplinary global health educational development initiatives



Research Training Programs

- provide funding to train foreign researchers and build sustainable research capacity in LMICs in areas such as HIV, global infectious diseases, chronic disease, trauma, occupational and environmental health, and informatics.
- Utilize D43 mechanism



NCD-Lifespan

- Goal is to support collaborative research training between institutions in the US and LMICs to increase in-country experts to conduct research on non-communicable diseases
- Both US and LMIC institutions can apply for full grants
- Up to \$250,000 per year (total direct costs) for up to five years
- Planning grant: up to \$27,000 per year for up to two years
- Receipt date: Sept 2011, 2012

AIDS International Research & Training Program

- Begun in 1988
- Goal is to build multi-disciplinary biomedical, behavioral, and social science research capacity for the prevention, care and treatment of HIV/AIDS and related conditions
- Both US and LMIC institutions eligible to apply
- \$278,000 per year (total direct costs) for up to five years for new applicants; \$695,000 per year for up to 5 years for renewal applicants entering their 16th or greater year of funding
- Receipt date: August 2012



Research grants

- Provide funding to perform research in a variety of global health topics, such as brain disorders, tobacco cessation, ecology of infectious diseases, biodiscovery from biodiversity, a small grants program in all NIH fields, and a program for new foreign investigators.
- Utilize R01, R03, R21 mechanisms



GRIP awards

Global Research Initiative Program for New Foreign Investigators

R01 research grant mechanism

- New, young investigators
 - Trained under a Fogarty D43 program (research training program)
 - Trained at an NIH campus for 2 years
 - Training completed within 4 years of application
- Coming from and returning to a LMIC after U.S. training
- Work on scientific needs of the country/region
- Only foreign institutions can apply

- Up to \$50,000 per year for up to 5 years, Plus facilities and administrative (F&A) costs up to 8% for a foreign institution
- Approximately 6-8 awards per year
- Two funding opportunity announcements
 - Behavioral/Social Sciences
 - Basic/Biomedical Sciences
 - Receipt dates: January 2011, 2012, 2013

Fogarty International Research Collaboration Award R03 mechanism – small research grant

- Goal is to support collaboration between a U.S. investigator with NIH research funds and a foreign collaborator from a LMIC to help build research capacity
- Applicants must either be an **NIH-funded investigator** holding an R01, P01, U01, R21, or R03; or a **previous LMIC collaborator** on an awarded FIRCA
- All areas of health-related research are eligible
- Very competitive, but a good way to get started



FIRCA

- \$50,000 in direct costs for up to 3 years
- All areas except for HIV/AIDS-related illnesses are eligible
- FIRCA-BSS (behavioral & social science)
- FIRCA-BB (basic biomedical)



Fellowships

Provide funding to U.S. postdoctoral fellows, medical students, clinical fellows, and junior faculty who have an interest in research in LMICs.

Fogarty Fellows Program (FICRS-F)

- Clinical research training program for medical residents and fellows, and PhDs in health-related post-doc programs
- Both US and non-US candidates can apply
- 39 vetted sites in Africa, Asia, South & Central America
- Support for one year of mentored clinical research only in a developing country setting
- \$45,000 stipend, \$8,000 infrastructure support, up to \$15,000 discretionary and research project related funds

http://www.fic.nih.gov/programs/training_grants/nih_fogarty.htm



Career Development Awards: K01

International Research Scientist Development Award (IRSDA)

- US institutions only
- Eligible PIs:
 - Non-tenure track faculty
- Support for 3-5 years
 - Up to \$75,000 in salary + fringe benefits
 - Up to \$30,000 in research development support

http://www.fic.nih.gov/programs/training_grants/irsda.htm

Career Development Awards: K02

Independent Scientist in Global Health Award (ISGHA)

- US institutions only
- Eligible PIs:
 - Tenure track \pm independent NIH research support
 - Non-tenure track + independent NIH research support
- Support for 3-5 years
 - 50% of salary up to \$85,000 + fringe benefits
 - Up to \$25,000 in research support

http://www.fic.nih.gov/programs/training_grants/isgha.htm

Global Health Educational Development Initiatives



- Multidisciplinary
- Examples include Framework Programs for Global Health, International Research Ethics Education, and the Medical Education Partnership Initiative.

Medical Education Partnership Initiative



MEPI is a collaborative effort by the **U.S. Office of the Global AIDS Coordinator**, the **National Institutes of Health**, and the **Health Resources and Services Administration**.

Goal: Provide direct support to African institutions to transform medical education in Sub-Saharan Africa, strengthening and building clinical and research capacity and thereby strengthening human resources for health

Where: 13 Awardee Institutions in 12 African Countries

Funding: \$130 million over 5 years

Expected Outcome: 40,000 healthcare workers targeted for training. Retention of faculty, clinicians, and researchers in their home countries



MEPI Sites



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■ Botswana

[University of Botswana](#)

■ Ethiopia

[Addis Ababa University](#)

■ Ghana

[Kwame Nkrumah](#)

[University of Science and Technology](#)

■ Kenya

[University of Nairobi](#)

■ Malawi

[University of Malawi
College of Medicine](#)

■ Mozambique

[Universidade de Eduardo
Mondlane](#)

■ Nigeria

[University of Ibadan](#)

■ South Africa

[University of KwaZulu-Natal](#)

[Stellenbosch University](#)

■ Tanzania

[Kilimanjaro Christian
Medical Centre](#)

■ Uganda

[Makerere University](#)

■ Zambia

[University of Zambia,](#)

■ Zimbabwe

[University of Zimbabwe](#)



Coordinating Center: [George Washington University](#)



Thank you