

GLOBAL HEALTH MATTERS

Fogarty International Center
National Institutes of Health
U.S. Department of Health and Human Services

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Fogarty Director Joins Global Effort to Curb Deaths from Chronic, Non-communicable Diseases

Fogarty's Director Dr. Roger I. Glass and a group of eminent health scientists have published in *Nature* magazine a landmark global consensus paper detailing 20 measures that are urgently needed to curb humanity's most fatal conditions—chronic, non-communicable diseases.

These diseases account for over 60 percent of deaths worldwide, with four-fifths of those fatalities occurring among citizens of low- and middle-income countries, according to the authors. Such diseases, which in the past were largely confined to industrialized countries, include cardiovascular disease, type 2 diabetes, chronic respiratory diseases, certain cancers and major mental disorders. They result in twice as many deaths as the combined total of HIV/AIDS, tuberculosis, malaria, maternal and peri-natal conditions, and nutritional deficiencies.

"It is critical that we galvanize scientists and policy makers on this issue to stem the tide of these slow killer illnesses that are largely preventable," said Dr. Glass. "The grand challenge program aims to encourage research and a public health response that will lessen the impact of these new devastating threats to global health in the 21st century."

Other NIH supporters of the initiative include Dr. Betsy Nabel, Director of the National Heart Lung and Blood Institute, who was a co-author on the paper.

Twenty grand challenges were identified to restrain and reverse the toll of these illnesses. They are considered to be of equal importance and are grouped under six broad goals: to reorient health systems; mitigate health impacts of poverty and urbanization; engage businesses; modify risk factors; enhance economic, legal and environmental policies; and raise public and political awareness.

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WHO Director Warns Climate Change Will Dramatically Worsen Global Health, Particularly Among World's Poorest

The nature of climate change during this century is likely to go beyond human experience with developing countries being hit first and hardest, said Dr. Margaret Chan, Director-General of the World Health Organization, speaking recently at the 2007 David E. Barnes Global Health Lecture. The title of her talk, held at NIH, was *Climate Change and Health: Preparing for Unprecedented Challenges*.

"I believe that climate change will ride across this landscape as the fifth horseman. It will increase the power of the four horsemen that rule over war, famine, pestilence and death—those ancient adversaries that have affected health and human progress since the beginning of recorded history," Dr. Chan predicted.

The warming of the planet will be gradual, but the increasing frequency and severity of extreme weather events—intense storms, heat waves, droughts and floods—will be abrupt, Dr. Chan suggested. The consequences will adversely affect the most fundamental determinants of health: food, air and water.

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Director-General of the WHO, Dr. Margaret Chan, predicted climate change will bring dire consequences for global health, particularly among the world's most vulnerable populations.

Fogarty Scientists Urge Focus on Implementation Research to Save Lives in the Developing World



Implementation research could help bridge the gap between the development of new drugs and treatments and their adoption in the developing world.

Photo: WHO/P. Viro

Reducing the gap between the development of new drugs and treatments and their implementation in the developing world could save thousands of lives each day and make more effective use of the U.S. investment in global health, according to Fogarty scientists.

In a paper published in the Dec. 14 issue of *Science* magazine, Fogarty's Director Dr. Roger I. Glass addresses the causes of this implementation research gap and suggests ways it can be reduced.

"Many evidence-based innovations fail to produce results when transferred to communities in the global south, largely because their implementation is untested, unsuitable, or incomplete," he writes. "For example, rigorous studies have shown that appropriate use of insecticide-treated bednets can prevent malaria, yet on average fewer than 10 percent of children in 28 Sub-Saharan African countries regularly sleep with this protection."

Effective implementation in resource-poor countries is an intractable problem for a number of complex reasons, according to the paper. First, scientists have been slow to view implementation as a dynamic, adaptive, multi-scale phenomenon that can be addressed through a research agenda. Second, people living in poverty face social constraints and health threats that make prevention and treatment more difficult, and are less likely to have regular access to quality care.

Even a small investment in implementation research could dramatically improve the situation, the paper suggests, as well as significantly increase the effectiveness of major U.S. investments in global health.

"Instead, planners often assume that clinical research findings can be immediately translated into public health impact, simply by issuing 'one-size-fits-all' clinical guidelines or best practices without engaging in systematic study of how health outcomes vary across community settings," according to Glass.

He calls on the research community to adopt three goals to improve implementation in the developing world. First, scientists should work to advance theoretical models and new analytic methods that apply to resource-poor settings. Second, they should train a generation of researchers in interdisciplinary, systems-oriented approaches that will allow them to more effectively bridge the implementation gap. Finally, researchers should collaborate more closely with developing country governments, non-governmental organizations, and local communities.

Public Health: Implementation Science, Madon T, Hofman KJ, Kupfer L, Glass RI. *Science*, Dec. 2007, Vol. 318 no. 5857, pp. 1728-1729. <http://www.sciencemag.org/cgi/content/summary/318/5857/1728>

Fogarty Director Joins Global Effort to Curb Deaths from Chronic, Non-communicable Diseases

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Without concerted action, some 388 million people will die of one or more of these diseases in the next 10 years, according to co-author Nizal Sarrafzadegan, of Isfahan University of Medical Sciences in Iran. "With concerted action, the number of premature deaths prevented by 2015 would total at least 36 million—a number of people roughly equal to the population of Canada, Algeria or Kenya."

Noting the economic impact of chronic diseases, co-author and former WHO official, Robert Beaglehole, said unless serious action is taken now, over the next decade China will lose an estimated \$558 billion in national income, India will suffer a \$237 billion loss, and the U.K. will forfeit \$33 billion.

The Grand Challenges Global Partnership was established with a secretariat at the Oxford Health Alliance and was funded for the first five years by OxHA members. In addition to OxHA, the founding partners include: the National Institutes of Health; U.K. Medical Research Council; Canadian Institutes of Health Research; Indian Council of Medical Research; and Ovations Chronic Disease Initiative. The partnership is intended as a platform for collaboration of global research funding organizations.

Grand challenges in chronic non-communicable diseases. Daar AS, Singer PA, Persad DL, Pramming SK, Matthews DR, Beaglehole R, Bernstein A, Borysiewicz LK, Colagiuri S, Ganguly N, Glass RI, Finegood DT, Koplan J, Nabel EG, Sarna G, Sarrafzadegan N, Smith R, Yach D, Bell J. *Nature*, Nov. 2007, 450, pp. 494-496. To learn more visit: <http://www.nature.com/nature/journal/v450/n7169/full/450494a.html>

WHO Director Warns Climate Change Will Dramatically Worsen Global Health, Particularly Among World's Poorest

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"The power of scientific research has triumphed. The verdict is in. Climate change is real. Human activities are a prime cause," she said. "Humanity will suffer, for some decades to come, for past sins in the way we have inhabited this planet."

"I believe that climate change will ride across this landscape as the fifth horseman. It will increase the power of the four horsemen that rule over war, famine, pestilence and death—those ancient adversaries that have affected health and human progress since the beginning of recorded history."

**—Dr. Margaret Chan,
Director-General, WHO**

Although the catastrophic effects of climate change are not expected to be felt in much of the world until around the middle of this century, she said Africa is likely to be severely affected in as early 2020. By that date, increased stress on water supplies is expected to affect up to 250 million Africans, causing crop yields in some countries to drop by as much as 50 percent.

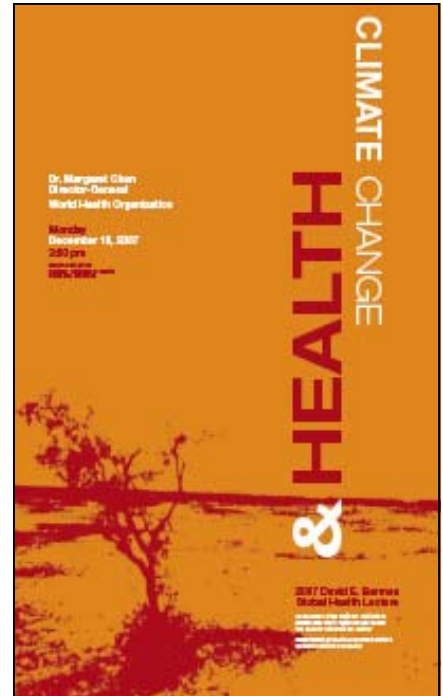
"The health sector must add its voice to this growing concern," urged Dr. Chan. "Just as we fought so long to secure a high profile for health on the development agenda, we must now fight to place health issues at the center of the climate agenda. We have compelling reasons for doing so."

Climate change could vastly increase the already huge imbalance in health outcomes that the Millennium Development Goals were designed to address. That would be unacceptable, according to Dr. Chan. "I believe that, in matters of health, our world is dangerously out of balance, possibly as never before."

She said the challenges ahead are enormous—but she did see some reason for optimism.

"Many of the things we are doing right now in public health are exactly what is needed to increase the resilience and adaptive capacity of developing countries," said Dr. Chan. She went on to make recommendations on how the scientific community can work together to mediate the impact of climate change (please see box, below).

The annual lecture series honors the late David E. Barmes, a long-standing WHO employee, special expert for international health in the National Institute of Dental and Craniofacial Research (NIDCR), and ardent spokesman for global health.



The lecture is jointly sponsored by the NIDCR and the Fogarty International Center.

The full text of Dr. Chan's lecture is available at: http://www.who.int/dg/speeches/2007/20071211_maryland/en/index.html

To watch the videocast, visit: <http://videocast.nih.gov/Summary.asp?File=14197>

Dr. Margaret Chan, Director-General of the WHO Recommendations to Mediate the Impact of Climate Change on Health

1. Unite behind an agreed policy to mitigate climate change on a sufficient scale and convince the world that humanity really is the most important species endangered by climate change.
2. Meet the Millennium Development Goals to ensure countries have basic infrastructure in place—including essential health and emergency services.
3. Implement the strengthened International Health Regulations to increase global health security and to equip the world to cope with the expected emergence of new diseases and changes in the distribution, or severity, of epidemic-prone diseases.
4. Alleviate poverty through a frontal attack on the neglected tropical diseases.
5. Include a health impact assessment as a mandatory component of all development projects.
6. Strengthen international capacity to respond to natural disasters in anticipation of more frequent and more severe extreme weather events.
7. Look after the welfare of women, especially in the developing world as evidence shows that women are the ones who take charge of relief efforts and reconstruction.
8. Remember the strategic and persuasive power of scientific evidence at the policy level.

NIH Awards Nearly \$17 Million for Projects Focused on Reducing Tobacco-Related Deaths in Developing Nations



Tobacco-related illnesses will claim ten million lives annually by 2025 if current trends persist—surpassing the combined toll from AIDS, tuberculosis, automobile accidents, maternal mortality, homicide and suicide—according to the World Health Organization.

To address this public health urgency, NIH recently awarded \$17 million to fund 11 research and capacity building projects that focus on tobacco-related issues. The projects are being funded through Fogarty's International Tobacco and Health Research and Capacity Building Program, with major support from the National Cancer Institute and the National Institute on Drug Abuse.

"These research projects are critical to our understanding of the growing tobacco burden in developing nations, so that we can identify effective interventions that will reduce the toll of this costly and deadly epidemic," according to Fogarty Director Dr. Roger I. Glass.

The awards support five years of funding for projects that involve both pursuing observational, intervention and policy research of local importance as well as building regional capacity in epidemiological and behavioral research, prevention, treatment, communications, health services and policy research.

2007 International Tobacco and Health Research and Capacity Building Awards

Centre for Global Health Research (Ontario, Canada)
Measuring tobacco mortality within the million death study in India

Duke University (Durham, N.C.)
The political economy of tobacco control in Southeast Asia

Health Related Information Dissemination Amongst Youth (New Delhi, India)
Advancing cessation of tobacco in vulnerable Indian tobacco-consuming youth

Internet Solutions for Kids, Inc. (Irvine, Calif.)
Harnessing the power of text messaging to promote smoking cessation in Turkey

Johns Hopkins University (Baltimore, Md.)
Epidemiology and intervention research for tobacco control in China

Public Health Institute (Oakland, Calif.)
Tobacco control policy analysis and intervention in China and Indonesia

University of Alabama at Birmingham (Birmingham, Ala.)
Network for tobacco control among women in Parana, Brazil

University of Arizona (Tucson, Ariz.)
Building capacity of tobacco cessation in India and Indonesia

University of California San Francisco (San Francisco, Calif.)
Tobacco control research and training in South America

University of Memphis (Memphis, Tenn.)
Responding to the changing tobacco epidemic in the Eastern Mediterranean region

Wake Forest University Health Sciences (Winston-Salem, N.C.)
Increasing capacity for tobacco research in Hungary

Survey of Chinese Physicians' Smoking Habits Has Led to Nationwide Non-smoking Campaign

As a result of a Fogarty-funded survey of Chinese physicians and their smoking knowledge, attitudes and practices, the China Centers for Disease Control has begun a nationwide nonsmoking campaign for physicians and medical students—and a smoke-free hospital campaign.

China consumes more cigarettes than any country in the world and is a key battleground in the fight against the global tobacco epidemic, according to the study published in the *American Journal of Preventive Medicine*. Smoking in China has tremendous health consequences—even for nonsmokers, the majority of whom are women who are exposed to secondhand smoke at home or at work. Physicians can play a key role in encouraging smokers to quit. However, little

had been known about Chinese physicians' attitudes and practices regarding smoking.

The study team, led by Dr. Yuan Jiang of the National Tobacco Control Office of the China Center for Disease Control and Prevention in Beijing, found that 23 percent of 3,552 hospital-based physicians surveyed from six Chinese cities. These numbers are substantially higher than in the U.S. (3.3 percent) and the U.K. (6.8 percent). The numbers of physicians who smoke in China reflect U.S. and U.K. numbers, prior to the publication of first Surgeon General's report detailing the health consequences of smoking in 1964.

Only 30 percent of the Chinese physicians reported good implementation of smoke-free workplace policies; 37 percent of current

Chinese physician who are smokers have smoked in front of their patients.

The research team said this effort may support China's ratification the *World Health Organization's Framework Convention on Tobacco Control*, which recommends cigarette tax increases enforcement of smoke-free environments, advertising restrictions and counter-marketing and provision of cessation aids.

Chinese Physicians and Their Smoking Knowledge, Attitudes, and Practices, Jiang Y, Ong, MK, Tong, EK, Yang Y, Nan, Y, Gan, Q, Hu, T. *American Journal of Preventive Medicine*, 2007.
The study can be found at: <http://www.ajpm-online.net>

Smoking Rates of Argentinean Women Rank Among the World's Highest

A Fogarty-supported study has found that the overall prevalence of smokers in Argentina remains among the highest in the Americas—and rates among women exceed those in most countries of the world.

With a view to inform tobacco control policy, the study was designed to assess the demographic and socioeconomic factors associated with smoking behavior in a representative nationwide household survey of Argentina. Adults aged 20 years and older were asked during face-to-face interviews about their smoking status, frequency and age of initiation. The interviews were conducted by trained fieldworkers using a structured questionnaire. Data were collected on a variety of household characteristics, as well as individual social, demographic and health factors. Multivariate logistic regression was used to compare social and demographic characteristics.

The present analysis included 23,423 women (53.4 percent) and 20,440 men (46.6 percent). Of the 43,863 participants, 38 percent of men and 24 percent of women were current smokers and 20 percent of current smokers smoked occasionally.

Smoking was less prevalent among older men and women, and their probability of quitting was higher. Men with more than high school education were less likely to be current smokers; rates for women did not differ by education. Smoking was not uniform among the different regions of the country. Among women, those living in the Metropolitan area, Central, Central West and Patagonia were significantly more likely to smoke than those living in the Northeast. Among men, those living in the Northwest and Patagonia were more likely to smoke.

The authors of the study report the data derived from their study seem to suggest a movement towards a decline in smoking among middle-aged and older men. They concluded that tobacco control interventions will need to be developed and adapted to reach smokers with limited formal education—particularly women.

Smoking Behavior and Demographic Risk Factors in Argentina: A Population-based Survey, Martínez E, Kaplan CP, Guil V, Gregorich SE, Mejia R, Perez-Stable, EJ, Prevention and Control 2006. The study is available at: <http://www.pubmedcentral.nih.gov/picrender.fcgi?tool=pmcentrez&artid=2084220&blobtype=pdf>

NIH Hosts Global Health Ministers for Security Discussions

The NIH campus was the site of the recent Global Health Security Initiative (GHSI) meeting, where ministers and senior staff engaged in a series of discussions on how to best address biological, chemical, radio-nuclear terrorism, pandemic influenza threats, and other public health emergencies, as well as food and product safety concerns.

The GHSI members are the Ministers of Health from Canada, France, Germany, Italy and the U.K.; the Secretaries of Health from Japan, México and the U.S.; the Health Commissioner of the European Union; and the Director-General of the World Health Organization. The GHSI originated following the attacks of Sept. 11, 2001, and the subsequent anthrax attacks, when the U.S. Government called for the establishment of a regular, formal opportunity for the health ministers of the major industrialized nations and its immediate neighbors to meet and exchange ideas.

On the final day of the meeting, Health and Human Services Secretary Mike Leavitt and Homeland Security Secretary Michael Chertoff hosted a breakfast for the ministers at Fogarty's Stone House. The gathering ended with a communique and news conference, during which Secretary Leavitt touted the GHSI gathering as an essential cooperative effort among allies: "It shows the importance of renewing our commitment...and of continuing to provide a very important forum for preparedness."

Receptions for the delegations were hosted by NIH Director, Dr. Elias A. Zerhouni, at the Stone House, and an event co-hosted by Fogarty Director, Dr. Roger I. Glass, and National Library of Medicine's (NLM) Deputy Director, Ms. Betsy L. Humphreys, held at the NLM.



HHS Secretary Leavitt (standing) moderates at the press conference concluding the Global Health Security Initiative meeting, held on the NIH campus.

This was the 8th ministerial meeting of the group and the first to be held in the U.S. and hosted by the HHS Secretary. Past meetings have been held in Tokyo, Rome, Paris, Berlin, Mexico City, London and Ottawa.

The video cast of the press conference is available at: <http://videocast.nih.gov/summary.asp?live=6109>

Fogarty's Dr. Kenneth Bridbord Receives NIH AIDS Award



Dr. Ken Bridbord receives 2007 NIH AIDS Day Award.

Dr. Kenneth Bridbord, Director of Fogarty's Division of International Training and Research, recently received a 2007 NIH World AIDS Day Award.

He was recognized for his efforts developing innovative programs that built a cadre of international research scientists and clinicians trained to join the global fight against the AIDS pandemic. The programs have played a significant role in building research infrastructure and capacity for the conduct of basic and clinical biomedical and behavioral AIDS research in more than 100 nations around the world.

"These awards demonstrate the NIH commitment to supporting a multifaceted research effort in HIV/AIDS, with the goal of fostering the best minds to work together as partners to develop new medical tools to stop the devastating effects of the disease around the world," said NIH Director Dr. Elias A. Zerhouni.

In 1988, Dr. Bridbord created Fogarty's AIDS International Training and Research Program (AITRP) to respond to the demand for in-country research and public health capacity to effectively deal with the expanding HIV/AIDS epidemic. The program—the first of its kind—has built much-needed scientific and public health capacity in more than 100 mostly low- and middle-income nations. Many of the 2,000 graduates of this program have become senior leaders at foreign universities, have applied successfully for grants from NIH and other science funding agencies, and have formed the framework for effective public policymaking in their home countries. Graduates of the program are now associated with the President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Combat AIDS, Tuberculosis (TB) and Malaria. Many leaders in the HIV community in the developing world today are alumni or have been trained by alumni of these programs, including the current or former ministers of health in Senegal, Rwanda, Uganda and Malawi.

In 2002, Dr. Bridbord played an important role in the establishment of a second HIV-related program: the International Clinical, Operational and Health Services Research Training Award for AIDS and TB (ICOHRTA AIDS/TB). This initiative supports research training to strengthen the capacity of institutions to conduct clinical, operational and health services research in low- and middle-income countries where AIDS, TB, or both are significant problems. The proposed research training addresses the skills needed at institutions to design and conduct HIV/AIDS and TB research for the scale-up of promising interventions to the population and health care system level.

"Ken Bridbord has been a true leader in responding to the global HIV epidemic," says Fogarty Director Dr. Roger I. Glass "Ken's insight early on in the epidemic was to appreciate the impact that HIV could have in the developing world. Crucially, he quickly understood that training for research requires not only formal coursework but also participation in mentored research projects. His vision and leadership of Fogarty's successful AIDS training programs helped re-direct the Center's efforts to emphasize capacity building in resource-limited countries, which has become the structural model for our subsequent training programs."

In addition, a joint award was made to Dr. Daniel Douek and Dr. Richard Koup of the Dale and Betty Bumpers Vaccine Research Center of the National Institute of Allergy and Infectious Diseases (NIAID). They are being honored for their original scientific research that significantly contributed to determining the mechanisms that control HIV pathogenesis and immune reconstitution. Their landmark findings have led the field in understanding the role of HIV-specific T cells in the control of HIV infection and helped to establish the immunological basis for the future development of an AIDS vaccine.

The annual award program, in its second year, was created by the Office of AIDS Research and NIAID to acknowledge the important contributions that NIH scientists have made to AIDS research.

More than 25 million men, women and children have already died of HIV/AIDS, and an estimated 33.2 million people around the world are currently living with the infection, according to NIAID. Last year alone, an estimated 2.5 million new HIV infections occurred worldwide, and 2.1 million people died from AIDS.

"These awards demonstrate the NIH commitment to supporting a multifaceted research effort in HIV/AIDS, with the goal of fostering the best minds to work together as partners to develop new medical tools to stop the devastating effects of the disease around the world."

—NIH Director Dr. Elias A. Zerhouni

Health Economist Calls for Standardization of Global Disease Burden Estimates

“Standardization to broaden the field of research and analysis is imperative to the health and well-being of the world’s population,” said Dr. Christopher J. Murray in his lecture, Global Burden of Disease and Disability Adjusted Life Year (DALY) Estimates, held recently at NIH.

Dr. Murray is the director of the Institute for Health Metrics and Evaluation at the University of Washington (UW), where he is spearheading the new Global Burden of Disease (GBD) project. There is great demand for global burden estimates, as research and advocacy groups have brought new conditions—such as chronic diseases and accidents—to the awareness of the public health community, he said. The GBD will study these conditions and make comparisons to other causes of health burden.

Researchers have significantly improved methods for burden assessment since the original GBD in 1990. The team will revise the 1990 figures, generate new estimates for 2005, and project estimates for 2010.

“To make a long-term difference in the health of countries, there must be valid measurements of global health programs,” said Dr. Murray. “The GBD will produce the new estimates of the global burden of diseases, injuries and risk factors that are necessary to make effective health interventions possible.”

The GBD project is composed of senior researchers from UW, Harvard University, the University of Queensland, Johns Hopkins University and the World Health Organization. The core team unites the authors of the original study and engages new leaders in the global health field to design and coordinate research.

Dr. Murray is principal investigator of a Fogarty International Research Collaboration Award and was recently elected as a member of the Institute of Medicine.

To learn more about the Global Burden of Disease Project, visit: <http://www.globalburden.org/design.html>



Health economist Dr. Christopher J. Murray is spearheading the new Global Burden of Disease project, which he discussed recently with NIH scientists.

Fogarty-Supported Study Finds War-Related Trauma Has Increased Mental Disorders in Lebanon



Severe mental disorders are not uncommon in Lebanon and war-related trauma has increased the rate of these disorders, according to the results of the Lebanese Evaluation of the Burden of Ailments and Needs of the Nation (L.E.B.A.N.O.N) survey published recently in the *Lancet*.

The L.E.B.A.N.O.N.—part of the World Health Organization’s (WHO) World Mental Health (WMH) Survey Initiative—was conducted to produce nationally representative data on the prevalence, correlation and treatment of mental disorders in order to raise mental health awareness and influence healthcare and policy planning. Lebanon was the only Arab country to participate in the initiative.

Supported in part by a Fogarty International Research Collaboration Award, the 12-month prevalence and treatment of mental disorders epidemiologic survey was conducted by Dr. Elie G. Karam of the St. George Hospital University Medical Center in Beirut, Lebanon.

Households were selected for the survey from the five different areas representing the various demographic and socioeconomic levels in the country. Nearly 3,000 face-to-face interviews were conducted by a team of 350 fieldworkers.

The survey findings are the first independent presentation of L.E.B.A.N.O.N results. Although baseline data in the representative

sample showed relatively good psychiatric epidemiology on mental disorders in Lebanon, the study team found:

- Seventeen percent of the population met the criteria of mental disorder—4.6 percent severe mental disorder; 6.1 percent moderate mental disorder and 6.3 percent mild mental disorder.
- Of the 17 percent who met criteria for a mental disorder, only 10.9 percent received any treatment.
- Anxiety disorders are much more common in Lebanese women than in Lebanese men.
- Nearly half of the representative population had been previously exposed (before 2003) to war-related traumatic events.
- Odds for all mental disorders (except substance abuse) are substantially increased among those exposed to two or more war-related traumatic events.

12-Month Prevalence and Treatment of Mental Disorders in Lebanon, A National Epidemiologic Survey. Karama EG, Mneimneh ZN, Karam AN, Fayyad JA, Nasser SC, Chatterjee S, and Kessler RC. *Lancet* 2006; PMC 2007 October 16. For more information visit: <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2030488&blobtype=pdf>

Research Needed to Address Negative Impact of Health Disparities on Native Populations

To commemorate American Indian and Alaska Native Heritage Month, Fogarty helped organize an NIH symposium titled *Health Research in Native Communities*. The event drew notable American Indian researchers, who presented their scientific work involving native populations. This seventh annual NIH research symposium was co-sponsored by Fogarty, the National Institute on Alcohol Abuse and Alcoholism, the National Institute of General Medical Sciences and the Indian Health Service.

Significant and negative health disparities exist between American Indians and Alaska Natives and other races in the U.S., according to the research presented. The five major



The importance of research and education, conducted within the cultural contexts of native populations, was emphasized by Fogarty's Dr. James Herrington, a Chickasaw.

causes of disability and disease among Native Americans, in rank and order are: alcohol use, motor vehicle accidents, heart disease, unipolar major depression and cirrhosis of the liver. Also contributing significantly to the global burden of disease suffered by Native Americans is diabetes, self-inflicted injury, stroke, homicide and violence, and congenital abnormalities.

There are an estimated 4.5 million American Indians and Alaska Natives in the U.S., represented by 562 federally recognized tribes. About 40 percent live on reservations. The median income reported by indigenous Americans was about \$33,627, in 2005, with about 25 percent living below the poverty level and 30 percent having no health insurance.

"Talking Leaves: A Journey Through Native Addictions, Treatment and Prevention," the keynote lecture, was provided by Dr. Dale Walker, a Cherokee and the director of the One Sky Center, a national resource center for American Indians and Alaska Natives dedicated to improving prevention and treatment of substance abuse and mental health.

Native populations have difficulty receiving treatment for such conditions due to difficulties with funding, agency turf issues, diverse treatment philosophies, lack of resources, poor cross training, and consumer/family barriers, according to Dr. Walker.

He said research and advocacy go hand-in-hand. "Our experience has taught us that, in order to be successful, evidence-based research in addiction prevention and treatment requires the input and active involvement of the American Indian communities," Dr. Walker added.

Fogarty's Director of International Relations, Dr. James Herrington, a Chickasaw, discussed the importance of pursuing research, training, continuing education, technical assistance and information dissemination within a framework that recognizes the unique cultural contexts of this special population.



Dr. Dale Walker, a Cherokee and the director of One Sky Center, delivered the keynote address, Talking Leaves: A Research Journey through Native Addictions, Treatment and Prevention.

Fogarty's African Journal Partnership Provides Model for Increasing Access to Scientific Information



Dr. Thomas J. Goehl is author of paper, "Access Denied."

ated with improving the developing world's access to information, according to the edito-

Free access to the world's literature on health care continues to be a problem for scientists and researchers in low- to middle-income countries, according to a recent editorial published in *Environmental Health Perspectives*.

However, major steps have been taken by Fogarty and others to overcome some of the problems associ-

rial's author, publishing consultant Dr. Thomas Goehl.

Dr. Goehl argues there is a moral imperative to share this information so that leaders in the developing world can improve clinical practices and formulate laws based on scientific facts. In addition, he says sharing information is good foreign policy. In addition to free access to the world's literature on health care, he suggests developing countries should be provided assistance in developing their research capabilities, publication processes and distribution methods.

He cites as a successful model for journal capacity building the African Journal Partnership (AJP), a project that was initiated in 2004 by Fogarty, the National Library of

Medicine and the National Institute of Environmental Health Sciences—managed by the Council of Science Editors.

The AJP model has been adopted in Latin America, where the Committee on Data for Science and Technology, a part of the International Council for Science, recently convened a workshop, *Strategies for Permanent Access to Scientific Information in Latin America*.

Access Denied, Goehl TJ, *Environ Health Perspect*. 2007 October; 115(10): A482–A483. doi: 10.1289/ehp.10729.

For more information visit:

<http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pmcentrez&artid=2022641>

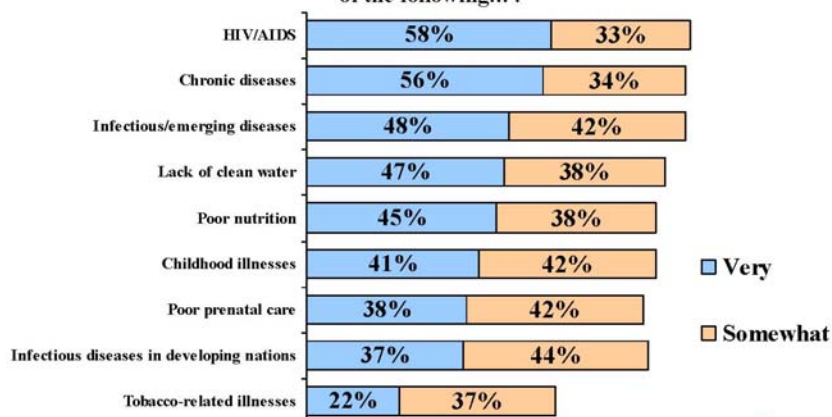
FOGARTY UPCOMING PROGRAM ANNOUNCEMENTS

Program	Contact	Receipt Date	Eligibility
Planning Grants for International Malaria Clinical, Operational and Health Services Research Training Programs (ICOHRTA-MALARIA)	Barbara Sina, PhD sinab@mail.nih.gov	January 13, 2008	Research Institutions in the President's Malaria Initiative (PMI) countries or U.S. institutions with PMI country research institution.
Fogarty International Research Collaboration Award—Basic Biomedical (FIRCA-BB)	Kathleen Michels, PhD firca@nih.gov	January 21, 2008	Principal Investigator of U.S. based NIH-sponsored research project grant that will be active for at least one year beyond submission date of application, in collaboration with partner institutions in low- to middle-income countries.
International Research Scientist Development Award (IRSDA)	Barbara Sina, PhD sinab@mail.nih.gov	February 16, 2008	Only U.S. citizens or permanent residents, applicants must have doctoral or medical degree, or equivalent, in social science, behavioral science or health science field earned within the past seven years; applicant must have U.S. sponsor or mentor affiliated with internationally recognized low- to middle-income research facility.
Global Infectious Disease Research Training Program (GID)	Barbara Sina, PhD sinab@mail.nih.gov	September 13, 2008	U.S. and low- to middle-income institutions with demonstrated history of research collaboration.
Global Research Initiative Program for New Foreign Investigators Basic Biomedical, and Global Research Initiative Program for New Foreign Investigators Behavioral and Social Science (GRIP)	Aron Primack, MD primacka@mail.nih.gov	September 21, 2008	Low- to middle-income scientists currently or recently supported through Fogarty D43 int'l training programs, through NIH Visiting Program for Foreign Scientists, or as NIDA INVEST or Humphrey Fellowships.


Fogarty's program research grants or research training grants are listed at: www.fic.nih.gov/funding

Priorities in Global Health

Considering the different types of health problems facing the world today, how high a priority do you think it is that the United States invest in research to address each of the following... ?



Attitudes: Global Health Research
Charlton Research for Research!America, 2006



PEOPLE



Fogarty Names AIDS Expert, Dr. Michael P. Johnson, as Deputy Director

Fogarty has named HIV/AIDS expert, Dr. Michael P. Johnson, its new Deputy Director. He came to Fogarty from the Office of Global Health Affairs at HHS, where he was liaison to the President's Emergency Plan for AIDS Relief (PEPFAR). In that position his responsibilities included policy, technical and budgetary aspects of HHS involvement in PEPFAR, which currently exceeds one billion dollars.

Prior to joining PEPFAR, Dr. Johnson was the Chief of Party for the Center for Disease Control's (CDC) Caribbean Regional Office, co-located with the Caribbean Epidemiology Centre in Port of Spain, Trinidad. During his two-year assignment there, he played a leading role in the establishment of CDC Offices for PEPFAR in Haiti and Guyana, and established partnerships with a number of Caribbean regional organizations.

Dr. Johnson has worked on domestic HIV/AIDS as the Chief Medical Officer and the Director of the Division of Training and Technical Assistance for the Ryan White CARE Act in the HIV/AIDS Bureau of the Health Resources and Services Administration (HRSA). This work included oversight of the national AIDS Education and Training Centers, initiation of the first clinical quality improvement initiative in a national, publicly-funded clinical care program and the development of a variety of technical assistance interventions. He also provided agency representation and leadership in a White House initiative: the Congressional Black Caucus Initiative on AIDS.

Fogarty has named Dr. Michael P. Johnson its new Deputy Director.

As a faculty member in the Department of International Health of the Johns Hopkins School of Hygiene and Public Health, his work was focused in Haiti as in-country director for studies on short-course tuberculosis treatment and chemoprophylaxis among HIV-infected persons. While at Hopkins, he received a Fogarty training grant. He applied many aspects of his work in Haiti to domestic programs in the resource-limited, minority neighborhoods of Baltimore, Maryland.

Dr. Johnson is a graduate of Clark University (A.B. 1979), Tufts University School of Medicine (M.D. 1983) and Johns Hopkins School of Hygiene and Public Health (M.P.H. 1991). He is also Board Certified in Internal Medicine and Infectious Disease.

Fogarty Grantee Wins Prize for Research on Drug-Resistant TB

A large percentage of people living with tuberculosis (TB) in Papua New Guinea (PNG) have developed resistance to available treatments, according to a Fogarty-funded study that was released at the 2007 Medical Symposium in Port Moresby.

Fogarty's Global Infectious Disease Research Training Program grantee Ms. Lisol Luke, a medical scientist working at the Papua New Guinea Institute of Medical Research, received the President's prize for her work on TB—an award for the best research paper presented at the medical symposium. Ms. Luke and her colleagues found that about 52 percent of people between the ages of 15 and 55 at Modilon Hospital in Madang, PNG reported having TB, and that almost 17 percent have a form of drug-resistant TB.

PNG Medical Society President Mathias Sapuri said the country's health department should consider further studies to determine the scope of drug resistance. The health department also should consider using new TB drugs, he added, since HIV/AIDS is fueling the spread of TB. "It's double dose, when we have TB resistance, we have a major trouble," Sapuri said. "We in the health sector need to see the traditional treatment and may have to bring in a new drug combination."



Fogarty Board Member Editor of New Journal Devoted to Neglected Tropical Diseases

Fogarty Advisory Board member, Dr. Peter J. Hotez, is the editor of a new online medical journal, the PLoS Neglected Tropical Diseases.

"The journal features the most common diseases of the 2.7 billion people in the world who live on less than two dollars a day. One-half of these people have one, or more, of these diseases," said Dr. Hotez, worm-disease specialist at George Washington University Medical Center and President of the Sabin Vaccine Institute. These diseases are

associated with poverty and frequently overlap geographically. They cluster in places where there is insect infestation, substandard housing, unsafe drinking water, poor sanitation and limited access to health care.

Two examples of neglected tropical diseases include worm infestation and leishmaniasis. Worm infestation can leave children anemic, urinating blood and too weak to walk to school; it can blind adults or grotesquely swell legs. Leishmaniasis creates weeping sores and is transmitted by the bite of sand fly; the visceral form of the disease appears on internal organs.

The new journal is online at <http://www.plosntd.org>

Fogarty board member Dr. Peter J. Hotez, is the editor of journal on neglected tropical diseases.

PEOPLE



Fogarty Grantee Dr. Christopher Plowe Appointed HHMI Investigator

Fogarty grantee Dr. Christopher Plowe, of the University of Maryland Medical School, is among 15 of the nation's top physician-scientists to be appointed as a Howard Hughes Medical Institute (HHMI) Investigator.

The new HHMI investigators were selected from a nationwide competition from researchers who lead patient-oriented research programs, and whose scientific work was guided by their interaction with patients.

Dr. Plowe is principal investigator on a Fogarty Global Infectious Disease Research Training Program (GID) grant for

Fogarty grantee, Dr. Christopher Plowe, has been named a HHMI investigator

Photo: Kaye Evans-Lutterodt/HHMI

malarial research in Mali. He is building the molecular tools needed to track the spread—or falloff—of drug-resistant malaria parasites in Africa and using the knowledge to tailor combinations of drug therapies to people in the affected regions



Former Fogarty Acting Director Joins NIEHS as an Associate Director

Former Fogarty Acting Director, Dr. Sharon Hrynkow has joined the National Institute of Environmental Health Services (NIEHS) as an associate director.

She will work with senior leadership on a range of program and management activities including trans-NIH initiatives, partnership-building with federal agencies and others and extramural community outreach.

Dr. Sharon Hrynkow is an NIEHS Associate Director.

Dr. Hrynkow has held leadership positions at NIH for 10 years. During much of that time she worked at the Fogarty, first as deputy director and, from 2004 to 2006, as acting director. During the past year, she took a sabbatical from her position in the NIH Office of the Director to serve as senior advisor for the United Nations Foundation.

Fogarty Investigator Dr. Nirbhay Kumar Elected AAAS Fellow

Fogarty investigator, Professor Nirbhay Kumar of Johns Hopkins University, has been elected fellow of the American Association for the Advancement of Science (AAAS) by his peers. Since 2004, he has served as principal investigator of a Fogarty-funded malaria research and training program grant.

Among 471 new fellows from around the world who were honored for their scientific or social efforts to advance science or its applications, Dr. Kumar was elected for his distinguished contributions to the field of parasitology—particularly for studies of malaria parasite development and identification of proteins for a transmission-blocking vaccine.

Dr. Kumar focuses on the parasitic disease that annually affects hundreds of millions of lives in the world and kills a child every 30 seconds. He and colleagues are working to develop a human malaria transmission-blocking vaccine that would interfere with the development of sexual stages in mosquitoes and could significantly reduce malaria transmission. Several antigens have been identified as targets for the development of such a vaccine. Dr. Kumar also has employed targeted gene disruption to investigate molecular mechanisms involved in the differentiation and development of sexual stages of the parasite, which are crucial for malaria transmission.

Dr. Kumar has published more than 120 scientific papers and is a member of several national and international review committees of the American Society for Microbiology, the American Society of Parasitologists, and the American Society of Tropical Medicine and Hygiene. He serves on the editorial boards of several scientific journals.



Fogarty grantee, Dr. Nirbhay Kumar, has been elected as AAAS Fellow.

Photo: Courtesy of Professor Kumar

Fogarty Grantees Describe Research Training Projects During Capitol Hill Briefing



Dr. Terrie Taylor (center) described her malaria research in Malawi for an audience of Congressional staffers.

Photo: John Williams

Fogarty-funded scientists participated in a recent Capitol Hill briefing to inform Congressional staffers about the benefits of research training collaborations.

The standing-room-only event was hosted by Families USA, in cooperation with Congressman David Obey, Congresswoman Barbara Lee, and Congresswoman Betty McCollum. The event was part of Families USA's Global Health Initiative, which focuses on how U.S. policy supports critical global health challenges.

Moderated by Fogarty Director Dr. Roger I. Glass, the briefing's aim was to illustrate how these collaborations benefit both the U.S. and its developing country partners, and why international partnerships—and in-country scientific expertise—are essential for sustainable progress in global health. The panel included Fogarty grantees Dr. Robert Gilman and Dr. Terrie Taylor, together with their in-country trainees.

Dr. Gilman, of Johns Hopkins Bloomberg School of Public Health and Luz Caviedes, of the Universidad Peruana Cayetano Heredia, discussed how their research and training teamwork in Lima, Peru has resulted in a faster, simpler, low-cost diagnostic test for tuberculosis.

Meanwhile, Dr. Taylor, of Michigan State University, and her Malawi partner, Dr. Linda Kalilani, presented details of their collaboration, which has focused on improving the treatment of cerebral malaria among children. The team has now undertaken a research and training program to monitor and evaluate the requirements of the President's Malaria Initiative.



Global Health Matters

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Fogarty Posts Draft Strategic Plan on Web Site for Comment

Fogarty has posted its draft Strategic Plan covering the years 2008-2012 on its Web site. Fogarty Director Dr. Roger I. Glass is encouraging the community to review the plan, and submit comments and suggestions by Jan. 31.

The Strategic Plan is available at: <http://www.fic.nih.gov/about/plan/>

Fogarty Accepts Donations to Further Global Health Research

The U.S. Congress authorizes Fogarty to accept donations and bequests to support its mission. Donations to Fogarty are deposited in a Gift Fund account which is separate from the funding the Fogarty receives from Congress. Projects supported through the Gift Fund may vary from year to year depending on the needs of the Center. The following examples are the types of activities that may be supported through the Gift Fund:

- Research studies;
- Printing of pamphlets and brochures about global health for the general public; and
- Support of research conferences, symposia and workshops of special importance to global health research.

To learn more visit: <http://www.fic.nih.gov/about/donations.htm>