

Global Health Matters

News from the John E. Fogarty International Center

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FIC 35th Anniversary Symposium Focuses on Global Health: A Challenge to Scientists

Investing more to improve the health of everyone on the planet is a task that policymakers and biomedicine must tackle, both on humanitarian and self-interest grounds, said speakers at the FIC Symposium on Global Health at the NIH on May 20–21. The need to act has never been more urgent, with such devastating illnesses as malaria, tuberculosis, and AIDS on the rise and the potential for new diseases such as Severe Acute Respiratory Syndrome (SARS) to spread worldwide. As NIH Director Elias Zerhouni, M.D., said at the symposium, which honored FIC's 35th anniversary, the world has become "a village, and we need to energize and synergize our actions around the globe."

FIC Director Gerald Keusch, M.D., told the symposium attendees that the potential to advance world health has never been better. We are living in extraordinary times given our ability to diagnose, prevent, and treat disease, he said. Despite this, many parts of the

world are seeing a decline in life expectancy as people increasingly succumb to infectious and parasitic diseases and to noninfectious ailments such as cardiovascular diseases, injuries, and suicide. "This is just not good enough," said Dr. Keusch, and he added that health policymakers and researchers around the world should cooperate on new and expanded ways to improve health globally. "Each of us can do a great deal when we act alone, but by acting together, we can accomplish an enormous amount," he said.



FIC Director Dr. Gerald T. Keusch addresses symposium attendees.

Children in poorer nations suffer disproportionately from illnesses that are preventable, treatable, or even curable. Kul Gautam, Ph.D., Deputy Executive Director, UNICEF, noted that of every 100 children born, 8 would probably die before their fifth birthday. Daily,

2,000 children die from measles and 4,000 die from simple diarrhea. "These statistics are a cause for shame and outrage," he said. "What is really lacking is not resources, but vision, leadership, and the right priorities."

Public and private sectors spend more than \$70 billion annually on health research, yet only 10 percent of the money covers 90 percent of global health problems according to a 1996 World Health Organization report.

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Although research organizations such as FIC are working to change this picture by sponsoring projects in over 100 countries, health interests must focus substantially more attention and resources on the developing world, the speakers said.

Not only is the response to current health problems inadequate, new diseases continue to develop and spread around the globe with lightening speed. SARS broke out in rural China and infected people in 28 other countries within months. But SARS also shows what a concerted global response can affect. Addressing the symposium audience, World Health Organization Director-General Gro Harlem Brundtland, M.D., M.P.H., hailed the international community's success at quickly dampening the spread of SARS, saying, "This is global health at its best."

Dr. Brundtland added, "Now we should apply the same energy, same commitment, and necessary resources...to curb the threat of less newsworthy public health threats." She added, "We know we must invest more. Global health not only matters; it is the way forward."

Aside from the success at slowing the spread of SARS, health groups have made headway in the past few years in many other areas. For instance, the price of AIDS drugs fell, making them accessible to many more of the afflicted. Policymakers in developed countries, including the Group of Eight industrial democracies, are also giving global health issues more prominence. Also, new world health financing mechanisms are being developed, including the WHO's Global Fund to Fight AIDS, Tuberculosis, and Malaria. The Global Fund attracts and disburses additional resources for these key illnesses via partnerships between governments, the private sector, and affected communities. Since it opened in May 2000, the Fund has raised more than \$1.5 billion to cover 153 programs; however, contributions are lagging and approved funds are not being sent to the countries.

Several conference attendees stressed the need to improve world health as a means to economic development. Harold Varmus, M.D., former NIH Director and now President at the Memorial Sloan-Kettering Cancer Center, said that in the past couple of years "there has been an increased appreciation that better health can be a determinant of economic improvement." Especially in developing countries, making people healthier is an effective way of aiding the economy, for instance, by avoiding lost workdays and raising the energy levels of workers.

Dr. Varmus said advancing health in developing nations will require additional resources, including imaginative new programs supported by both governments and private groups, well-financed centers for conducting research, improved communication, free distribution of scientific literature, and a global science corps of senior researchers willing to spend a year or two in a developing country research institution to help improve the way science is conducted.

FIC supports research in priority global health areas and also develops human capital and research capacity in the poorest nations of the world. Many speakers called for the establishment of more centers in afflicted nations and further training of local people. Sir David Weatherall, M.D., F.R.C.P., Emeritus Regius Professor of Medicine at the University of Oxford and Fogarty Scholar in Residence, said this task of bringing health research to developing nations would not be easy. "It's very difficult for outsiders to go into any country with a recipe of what should be done. It has to be a very gradual process."

This sentiment was echoed by William Makgoba, Ph.D., Former President, South African Medical Research Council, and currently Vice Chancellor at the University of Natal, who stressed the need for western organizations to initiate partnerships with developing countries to ensure that western scientists understand the culture, language, and needs of the host nation.



Honorable Paul G. Rogers, an honorary co-chair of the symposium (left), speaks with NIH Director Dr. Elias Zerhouni (right) during the symposium.

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Message From the Director

Welcome to the first issue of the Fogarty International Center's newsletter, *Global Health Matters*. It gives me particular pleasure to launch this newsletter series in the year that we recognize and celebrate the Center's 35 years of history and progress in international cooperation in the life sciences. At this important time, we are planning a number of events to draw attention to the importance of global health and to the role of research in improving the lives of people around the world. A yearlong public lecture series is now underway to address various global health issues within a scientific and public health context. These issues range from the epidemic of mental health problems and suicide in developing countries to global health inequities and the role of public/private partnerships.

We hosted a scientific symposium to highlight the potential of research to reduce global health disparities and the benefits of investing in such research. This major event, held on May 20–21, addressed four major areas: Why global health matters, challenges and opportunities, building research partnerships across geographic boundaries, and the impact of building research capacity in developing countries at the local level.

Our goal was to shine a spotlight on global health and ensure that we are not looking at it simply from the perspective of foreign aid or commodities, which are important but are easier to see and recognize. The harder part is to see how investments in research and the building of research capacity make crucial contributions to the health of Americans and citizens around the world.

FIC was founded in 1968 as a memorial to Congressman John E. Fogarty of Rhode Island, a strong advocate of biomedical research and global health, who introduced a bill in 1958 to fund a center of international research. Today, FIC supports a range of research and training grants that reach more than 100 nations. The programs emphasize quality, peer-reviewed collaborative research and scientific capacity building in the world's poorest nations. We continue to look for new opportunities to advance global health and to work in new ways with partners across NIH, science funding agencies abroad, international organizations, foundations and the private sector to address the challenges that face us all today and in the future.

We invite you to join us as we advance the global health mission of the Center, and we welcome your ideas for moving this critical field forward.... Let us hear from you at edwardsi@mail.nih.gov.



Dr. Gerald T. Keusch, FIC Director



Dr. Alan Lopez, professor of medical statistics and population health and head of the School of Population Health at the University of Queensland, Australia, with FIC Deputy Director Dr. Sharon Hrynkow. Dr. Lopez gave a lecture entitled "Global Health Priorities: Diseases, Injuries, and Risk Factors" on April 8 at NIH. The lecture was the third in the yearlong series on global health issues sponsored by FIC to commemorate its 35th anniversary.

FIC 35th Anniversary Global Health Lecture Series

Next Lecture:

Arthur Kleinman, M.D., Esther and Sidney Rabb Professor of Anthropology, Harvard University Professor of Medical Anthropology and Professor of Psychiatry Harvard University Medical School

"The Global Epidemic of Mental Health Problems in Developing Countries: Depression, Suicide, and Violence"

Monday, September 22, 3:00 P.M.
Masur Auditorium, Building 10, NIH

A Virtual Global Network for Health Research

By Dr. Gerald T. Keusch
FIC Director

In 1993, the World Bank issued its annual World Development Report, subtitled “Investing in Health.” The thesis behind the report is that healthy populations in low- and middle-income countries contribute more to national economic productivity than they can when they are burdened by frequent illness and premature death. Thus, investments to improve the health of the general population return more to the economy than they cost, providing benefits in quality of life to these individuals at the same time. This simple proposition represented a true paradigm shift in international development. But the report went even further by recognizing that improvements in health were directly related to investments in new knowledge generation, which had to go hand in hand with the provision of health services and targeted interventions. The World Bank authors realized that current investments were inadequate to the need, an international effort was essential, and coordination and cooperation would be a stumbling block.

In 1997, the Institute of Medicine noted in its report, *America’s Vital Interest in Global Health*, that the United States needed to enhance investments in global health research to ensure that the nation could maximize the opportunities to understand, and thus to prevent or control, diseases that threaten the American people. A year later, in 1998, the Global Forum on Health Research was established to focus attention on the disequilibrium in health research funding, in which 90 percent of the research resources (from the wealthy nations) was funding research on diseases affecting just 10 percent of the

world’s population, the so-called “10/90 gap.” Then, in January 2000, Gro Harlem Brundtland, M.D., M.P.H., the new Director-General of the World Health Organization, established the Commission on Macroeconomics and Health to “assess the place of health in global economic development,” focusing on the poorest countries. The Commission issued its report just two years later in December 2001.

Declaring that “a sound global strategy for health will also invest in new knowledge,” the Commission called for the creation of a Global Health Research Fund to generate and disperse \$1.5 billion dollars per year and for the formation of a new international version of the U.S. National Institutes of Health or the Medical Research Councils of other countries to manage the resulting portfolio of peer-reviewed, merit-based scientific research. While the report established some critical principles—for example, defining health research and development as a global public good, emphasizing the collective benefit to all of such investments, and noting that enlightened self-interest was as compelling a motive to take action as was humanitarianism—it was vague on the models and the mechanisms to achieve the goals.

Last year, FIC, in collaboration with the Global Forum on Health Research and the Institute on Global Health at the University of California, San Francisco, initiated a study of the major research agencies in the North through interviews to determine the views of their leadership on initiating a global effort to enhance research on priority problems in developing countries. In the course of this assessment we have examined several models, ranging from pooling money in a new global research fund to actually creating a new institution for such research, constructing a building, and hiring a new staff. The model we settled on for deeper exploration was a virtual one in which

major research agencies of high- and middle-income countries could voluntarily come together—each working under its own set of rules to cooperate, coordinate, complement, and communicate science among the group—to maximize their research outputs. The group would have to ensure that competition, a necessary part of the best science, was both virtuous and vigorous, aiming for the development of useful inventions and not simply a means to advance the careers of the scientists or their institutions.

The time has come to explore the concept under which national institutions that have an “assured” annual budget, reasonable control over the allocations of the funds, a strict tradition of peer-reviewed science, a history of productivity and excellence, and a real documented interest in global health issues would come together in a virtual organization and, once having set priorities, would begin to invest in necessary research. The value of this approach is that a new infusion of funds would not be absolutely necessary if there were a shift in priorities for the existing funds toward these global goals—and the heads of the agencies could make this happen. The group effort is deemed necessary because no single agency could—or should—be expected to shoulder this responsibility alone, and yet together their investment could be significant.

There are limitations in the approach—the scope of the science would favor upstream and translational research and not interventional and operational research, there is no intrinsic requirement for capacity building in lower income countries, and there is an inherent danger of elitism in any proposal that involves a dozen or so partners when the problem is global. But these issues can be addressed as the structure and the priorities are developed. Importantly, to focus on the limitations is to ignore the urgency of

the global health crisis. I submit that we cannot afford to wait for the perfect solution, to be politically correct and all-inclusive, or for the creation of a new Global Fund for Research. Given the enormity of the needs, how long can we really afford to leave the leading research institutions on the sidelines or only partly involved? In my view the answer is not much longer, and it is for this reason that FIC is taking steps to engage the leadership of the best science agencies, North and South, with resources and capacity, in a dialog that will lead to action. We will report periodically in these pages on our progress.

An exposition of this proposal has recently been published in *Nature* (Keusch, GT and Medlin, CA. Tapping the power of small institutions. *Nature* 2003; 422:561–562).

FIC Hosts Disease Control Priorities Project for Developing Countries

FIC, together with the World Health Organization and the World Bank, is launching a new initiative to provide public health decision makers with tools to establish informed health priorities and cost-effective health interventions.

The Disease Control Priorities Project (DCPP) will produce science-based analyses and resource materials to inform health policymaking in developing countries. The three-year project is being funded by a \$3.5 million grant from the Bill & Melinda Gates Foundation. FIC is providing direction to project leadership and is coordinating all components of the initiative.

“This project will assist developing country leaders as they systematically examine their own country’s health

conditions, including endemic and epidemic diseases, and initiate well-reasoned, cost-effective actions to decrease the toll of those diseases,” says Fogarty Fellow Dean Jamison, Ph.D., DCPD Senior Editor.

The DCPD will gather demographic, epidemiologic, and economic information as well as materials on a range of diseases and health conditions. Scientists, economists, and public health professionals from developed and developing countries will have access to this information through a variety of channels. The DCPD will sponsor technical workshops on estimating disease burden and cost-effectiveness analysis, host online discussions of work in progress, post DCPD working papers and other publications on-line at www.nih.gov/fic/dcpp, and publish the second volume of *Disease Control Priorities in Developing Countries* by 2005. Data sets and documents will be widely distributed in multiple languages.

“The methodologies and results of this endeavor will allow decision makers internationally, and in developing countries in particular, to define their priorities systematically,” says Joel G. Breman, M.D., D.T.P.H., Senior Science Advisor at FIC and a member of the DCPD Board of Editors. “Scientific and evidence-based decision making is essential if we are to develop effective disease control and elimination strategies.”

Creating a second volume of the *Disease Control Priorities in Developing Countries* publication is an important component of the DCPD. The publication was first produced by the World Bank in 1993 and has since become a standard reference for policymakers, international development agencies, and academic institutions throughout the world. Dr. Jamison was an editor of the first volume and was one of several scientists and economists who brought the DCPD initiative to FIC’s Advisory Board for consideration.

The second volume of the publication will take into account today’s global health landscape, which has changed during the last decade with HIV/AIDS, the growing emergence of chronic diseases, and recent advances in science and technology. Each chapter will be written by a team of authors and will address scientific, demographic, epidemiologic, public health, and economic issues. Developing country experts will coauthor each chapter.

Work on all aspects of the DCPD initiative is underway. Consultations have been held with experts from around the world on cardiovascular disease, child health, and nutrition to help guide how DCPD will address these issues. Additional consultations will address economics, with specific focus on cost-effective analyses, malaria, cardiovascular diseases, sexually transmitted diseases and HIV, tropical diseases, and interventions proven to be effective. In addition, DCPD is forming an advisory committee to the editors that will include scientists, public health specialists, economists, and decision makers from developing and developed countries.

Other NIH Institutes and Centers will also be involved in the DCPD initiative. FIC is identifying NIH experts to serve as lead and coordinating authors and reviewers for chapters of the second volume of *Disease Control Priorities in Developing Countries* and to develop scientific and technical content.

Program organizers believe the tools developed by DCPD will last far beyond the three-year initiative.

“The use of the methods, products, results, and recommendations in developing countries and by decision makers internationally will be the key to sustainability of the project,” says Dr. Breman.

AIDS Program Enables Scientific Autonomy

After 14 years of working to reverse global inequity in AIDS-related research, the AIDS International Training and Research Program (AITRP) is inspiring next-generation programs that will transform developing and disadvantaged countries from field sites to full partners in research.

AITRP began in 1988 as one of a new generation of FIC training programs to help scientists from leading institutions in developing countries



AIDS education for community health volunteers, Calcutta, India.

build research and public health capacities in those countries. Long-term grants linked U.S. academic institutions with leading foreign institutions and offered foreign scientists and health professionals training support, mainly in the United States. Those eligible for training included scientists and laboratory staff, nurses, nurse midwives, counselors, physicians, traditional healers, and program administrators. When trainees returned home, they continued collaborative and mentoring relationships with their U.S. teachers.

At the same time, says Kenneth Bridbord, M.D., Director of the Division of International Training and Research (DITR), “NIH was investing in significant new research in foreign countries through U.S. universities. When [newly trained] foreign scientists returned home, they often had a chance at their institutions to participate in significant research efforts addressing high-priority problems.”

This confluence in foreign countries of scientist training and NIH investment “didn’t happen everywhere,” he says, “but where it did, it catalyzed the growth of major research and public health capacities in those countries.”

Over 14 years, the program’s focus has evolved. During the first five years, AITRP

invested heavily in epidemiology, which boosted a country’s capacity to understand the extent of its AIDS burden and populations at high risk. Awards went mainly to Africa and Latin America. In its second five years, the program expanded to Asia, Eastern Europe, and the former Soviet republics. The program used biomedical and behavioral research tools to build capacity for AIDS-related public health interventions in foreign countries. In the second five years, the program also gradually strengthened and advanced in-country research so that returning foreign scientists had a chance to use their new skills on research projects in their home countries.

Over the last four years, the program has enhanced its intervention and prevention research by using a new mix of biomedical and behavioral approaches and has strengthened its commitment to integrating prevention with therapy and care as part of a broader FIC/NIH research effort.

Today, training increasingly takes place not in the United States but in developing countries, which maintain collaborations with the United States or with other partners. The purpose for this shift is to further enhance the foreign site and build capacity for integrating clinical, operational, and health-services research in the AIDS field.

“Under a new program, the International Clinical, Operational, and Health Services Research Training Award (ICOHRTA), we make awards directly to foreign institutions that have received funding in the past,” says Program Officer Jeanne McDermott, Ph.D. “The foreign institution decides who to collaborate with, and each partner gets its own pot of money. Under AITRP, U.S. institutions control the funding and decide which foreign institutions to collaborate with.”

This shift toward scientific autonomy is an indication of AITRP success, Dr. Bridbord adds. “We can now fund [foreign] sites directly, and they are strong enough to put in good applications. The goal has always been to help them successfully compete for resources in the global scientific marketplace.”

Fogarty Facts

International Tobacco and Health Research and Capacity Building Program

Tobacco use will be the number one cause of death in the world by 2030, particularly in developing countries. To help diminish the growing incidence of tobacco-related illnesses in the developing world, FIC and eight partners awarded 14 new research and training grants under the International Tobacco and Health Research and Capacity Building Program. Research and capacity building will take place in Cambodia, China, India, Indonesia, Laos, Mongolia, Argentina, Brazil, Dominican Republic, Mexico, Syria, Egypt, Senegal, South Africa, and Tanzania.

Countries Where Tobacco Research Will Occur



Pan-African Conference of the Multilateral Initiative on Malaria

Every year, there are at least 300 million acute cases of malaria and 1.5–2.7 million people die of the disease. Ninety percent of these deaths occur in sub-Saharan Africa, primarily in children under age 5.

FIC, along with other sponsors, recently hosted the Third Pan-African Malaria Conference of the Multilateral Initiative on Malaria (MIM) in Arusha, Tanzania. The MIM is an international alliance of research and public health agencies and African scientists that coordinates scientific research efforts against malaria in endemic countries.

Health, Environment, and Economic Development

Many developing countries suffer from devastating air and water pollution and natural resource depletion, which have a direct impact on the spread of disease. FIC has announced a new

research program to support international collaborations to study the relationships between health, environment, and economic development. Proposals are now being accepted.

Brain Disorders in the Developing World

Mental illness and brain disorders pose an enormous disease burden globally and are expected to significantly increase in the developing world over the next two decades. FIC, along with nine NIH partners and research funding agencies in Canada and Mexico, announced a program to support international collaborations in the development of new interventions for low-income populations, particularly in developing countries. Approximately \$4 million will fund the program's first phase, which will support up to 20 two-year planning grants.

Did you know...

FIC funds 500 full-time and 1,000 part-time students and postdoctoral fellows from the developing world and former socialist economies.

From left to right: Dr. Richard Feachem, Global Fund for AIDS, TB, Malaria; Dr. Gerald T. Keusch, FIC Director; Dr. Harvey Fineberg, Institute of Medicine; Dr. Kul Gautam, UNICEF (partially hidden); Ms. Mary Woolley, Research!America; the Honorable Paul G. Rogers; and the Honorable Louis Sullivan.

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Some speakers called for more efficient delivery systems, for instance, ensuring that pharmaceutical drugs do not end up on the black market. Other speakers emphasized the need to reward intellectual property rights, encourage more private participation, and foster increased cross-discipline research.

The symposium attendees congratulated FIC on its achievements during the past 35 years and hailed Congressman John E. Fogarty of Rhode Island—after whom the center is named—for championing imaginative health legislation and promoting an international research

agenda. James Crowley, M.D., Professor of Medicine at Brown University, who knew Fogarty in his childhood, spoke of the lawmaker's vision. "In 1947, Fogarty became convinced that the promotion of world health by the U.S. should be the paramount goal of our foreign policy," a position that was not popular in those days, although it is more widely understood today.

Dr. Crowley added that the legislation Fogarty promoted before his death at age 53 "has had a profound effect on extending the lives and improving the health of people in this country and around the world. The world owes him a great debt of gratitude."

We are interested in hearing from you. Please feel free to contact Irene Edwards at edwardsi@mail.nih.gov.



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