

Trans-NIH effort launched on global health

Photo by Michael Spencer, NIH



NIH director Dr. Francis Collins urged members of the new trans-NIH working group on global health research to find better ways to leverage resources and coordinate international activities to improve human health.

NIH should capitalize on the current supportive environment for global health science, its director Dr. Francis Collins recently urged members of the newly created Trans-NIH Global Health Research Working Group.

“Our country is poised to move from the hard power stance to soft power or, as Hillary Clinton said, smart power. Shouldn’t we at NIH be leading that charge?,” he asked.

The high-level working group is the result of a two-year effort by institute and center directors to analyze global health research activities at NIH and explore better ways to coordinate efforts, both across NIH and throughout the government. The Obama administration has pledged \$63 billion to its Global Health Initiative and is seeking input on its approach.

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Consortium of Universities for Global Health:

Meeting attendees hear ‘stars are aligned’

To U.S. global health advocates, these may be the best of times – a confluence of public support, funding for new policy initiatives and an alliance of universities to strengthen a field that students are demanding in unprecedented numbers.

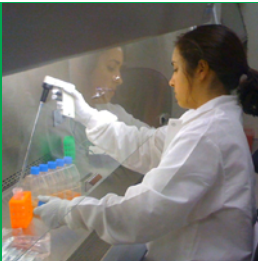
“The stars are aligned in a way we never would have anticipated, especially in a period of economic downturn,” says Fogarty Director Dr. Roger I. Glass. “It’s a difficult period but we are bucking the trend.”

Fogarty was co-host for the first meeting of the Consortium of Universities for Global Health at the NIH campus in September, and Glass, who also is associate director of the NIH for international research and a member of the administration’s Global Health Initiative steering committee, cited the following recent events:

- The president’s \$63 billion commitment to global health over the next six years
- New NIH Director Dr. Francis Collins’ designation of global health as one of his top priorities
- Creation of the Consortium of Universities for Global Health
- Creation of a trans-NIH working group on global health, co-chaired by Glass, and the move by many Institutes and Centers to include the field in their strategic plans
- Explosive demand among college students for global health curricula

A highlight of the conference was a discussion among presidents of five leading U.S. universities with global health programs and their commitment to break down academic walls to involve experts from nonmedical

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Child health authority Alexander joins Fogarty



Dr. Duane Alexander, the long-time director of the Eunice Kennedy Shriver National Institute of Child Health and Human Development, has

joined the Fogarty Center as senior scientific adviser for global maternal and child health research.

"Duane Alexander has devoted decades to providing leadership to the pediatric community to improve the health of women and children through research," said Fogarty Director Dr. Roger I. Glass. "Given the administration's keen interest in this topic, Duane will be instrumental in our efforts to engage with the State Department and other agencies to further the administration's \$63 billion Global Health Initiative."

Among Alexander's achievements are: the study of the safety of amniocentesis; the reduction of mental retardation from Hib meningitis; the reduction in preterm birth among women who had previously delivered a preterm infant; the dramatic reduction in sudden infant death syndrome; and the reduction of mother-to-child HIV transmission.

Dr. Susan Shurin, deputy director of the National Heart Lung and Blood Institute, will serve as acting director of NICHD until the position is filled permanently.

President Obama visits NIH

President Obama visited NIH to announce that \$5 billion in economic recovery funds had been granted before the end of the fiscal year. Here he looks through a microscope during a tour of an oncology laboratory at the National Cancer Institute. With him are Dr. Marston Linehan, left, NIH Director Dr. Francis Collins and Health and Human Services Secretary Kathleen Sebelius.



White House photo by Lawrence Jackson

Polio Vaccine Figure Ruth Kirschstein dies



Dr. Ruth Kirschstein, a leading figure in making polio vaccine safer and decades later mobilizing an NIH response to

the emerging AIDS epidemic, died Oct. 6 at the age of 82 after a long illness. From 2000-2002, she was acting director of the NIH.

"Ruth Kirschstein's brilliant and passionate dedication to public health led to the saving of millions of lives around the world and made her a true global health hero," said Fogarty director Dr. Roger I. Glass. "When I arrived at Fogarty, she sat me down

and gave me wonderful advice that has helped me throughout my tenure."

In the 1950s, Kirschstein led the search for a safer alternative to the Salk polio vaccine, resulting in widespread use at home and abroad of the Sabin oral vaccine. When AIDS first appeared in the United States in the 1980s, Kirschstein and her staff were met with strong conservative political opposition to solving the crisis. Despite this, she mobilized a research group to track down funding, investigate the virus and develop drugs to alleviate or prevent its attack.

Her HIV/AIDS work has global implications and may prove vital in areas worst hit by the epidemic, especially Africa, Glass said.

She later became director of the National Institute of General Medical Sciences, the first woman to head an institute, and between the departure of Dr. Harold Varmus and the appointment of Dr. Elias Zerhouni, Kirschstein ran the NIH on an acting basis.

New synthetic protein could speed flu vaccine

NIH scientists have developed a way to drastically cut the time needed to mass produce flu vaccines by cloning the protective antigen protein and growing it in bacteria instead of eggs.

The team of investigators from the National Institute of Child Health and Human Development and the National Institute of Allergy and Infectious Diseases—together with Fogarty's director of international epidemiology, Dr. Mark Miller—used the new technique on several strains of avian flu as well as the pandemic A/H1N1 strain.

Typically, development can take up to six months, but using recombinant hemagglutinin (rHA) antigens to create a flu vaccine could take only three or four weeks, Miller said.

"Influenza vaccine production has been using technology that's over 50 years old," he said, noting that recombinant protein synthesis is similar to the one that led to widespread use of hepatitis B vaccine now available worldwide for less than 50 cents a dose. That would make the technique attractive to large countries facing a shortage of vaccines now under production by the big drug companies.

"This is a vaccine construct that is not commercially available now," Miller said. The new method, tested in mice and ferrets is awaiting human clinical studies as required by the Food and Drug Administration prior to licensure. If successful, vaccine production could scale up quickly, Miller added. A number of international vaccine manufacturers have expressed interest to work further with this product.

"The ... methodology for producing a rHA vaccine is cheaper, safer and



HEMAGGLUTININ
Ribbon diagram of hemagglutinin molecule.

more productive than the available technology to meet urgent needs in a world health emergency," the researchers concluded in an article published in the journal *Vaccine*.

Specifically, they said, "Our protocol eliminates the handling of live virus and expensive egg propagation systems or insect cell cultures and facilitates the rapid production (weeks) of high yields of immunogen... compared to current methods requiring one to two eggs per vaccine dose and a minimum of six months after the circulating strain is isolated."

Experiments supported by NIH in extramural labs are pursuing similar means for expedited vaccine production, he said.

Other Fogarty scientists are also at the forefront of research into A/H1N1.

Dr. Martha Nelson and Dr. Eddie Holmes collaborated with researchers in Wisconsin, New York and at the J. Craig Venter Institute on a large-scale analysis of the evolutionary relationships of influenza viruses from the current A/H1N1 pandemic. Their work revealed that the virus has already diversified into multiple lineages that exhibit complex spatial patterns and rapid growth dynamics.

In addition, Dr. Gerardo Chowell has been analyzing historical pandemics and the current A/H1N1 outbreak in the U.S. Dr. Viggo Andreasen and Dr. Kimberly Bloom-Feshbach have been working on historical data from Scandinavian pandemics dating from 1890 and Dr. Colin Russell has been mapping how the flu virus fools the immune system.

Finally, Drs. Cecile Viboud, Lone Simonsen, Russell and Miller have published lessons from past influenza pandemics in the new *PLoS Current*, a moderated, but not peer-reviewed, online journal.

Biesova Z, Miller MA, Schneerson R, Shiloach J, Green KY, Robbins JB, Keith JM. "Preparation, characterization, and immunogenicity in mice of a recombinant influenza H5 hemagglutinin vaccine against the avian H5N1 A/Vietnam/1203/2004 influenza virus." *Vaccine*. 2009 Aug 15

Miller, Mark; Viboud, Cécile; Simonsen, Lone; Olson, Donald R.; Russell, Colin. "Mortality and morbidity burden associated with A/H1N1pdm influenza virus: Who is likely to be infected, experience clinical symptoms, or die from the H1N1pdm 2009 pandemic virus?" *PLoS Currents Influenza*. 2009 Aug 26 [revised 2009 Sep 2]

Collaborations funded to develop informatics expertise

Seeking to increase informatics expertise in low- and middle-income countries, Fogarty has awarded more than \$9.23 million to eight global health informatics programs over the next five years.

Fogarty's Informatics Training for Global Health program supports the training of scientists in the design of information systems and use of computer-supported management and analysis in biomedical research. The grants are being awarded to both new and ongoing informatics programs at various international sites.

Informatics, the science of handling large volumes of information, can help link physicians and researchers around the world so that they can share knowledge ranging from the best care of patients to issues in collaborative research.

"The application of informatics allows our clinicians in low-resource settings to leverage new technologies in order to speed discoveries," said Fogarty Director Dr. Roger I. Glass. "These new awards will enable researchers to better analyze data, compare results among populations and quickly share findings with colleagues around the world."

Two of the awards will fund new informatics programs in South America.

The first is a collaborative effort between the University of Pittsburgh and Javeriana University in Bogota, Colombia to build the capacity of individuals in the field of health informatics with an emphasis on clinical research.

The second grant will allow Oregon Health and Science University to combine the existing strengths of its informatics and epidemiology program with that of the Italian Hospital of Buenos Aires in Argentina to develop a focus in clinical and translational research informatics.

Another grant will support the creation of the Andean Global Health Informatics Research and Training Center, a regional center of excellence in global health informatics. The center will be administered by the Cayetano Heredia University, with participation from the U.S. Naval Medical Research Center Detachment in Lima, Peru, the University of Cauca in Colombia, the Andina University of Simon Bolivar in Ecuador and the University of Washington in Seattle.

A collaboration among researchers from the University of Georgia, the Oswaldo Cruz Foundation Rene Rachou Research Institute and the Federal University of Minas Gerais in Belo Horizonte, Brazil, and the Oswaldo Cruz



Photo by Dr. Bill Tenney

A Kenyan woman and her child hold a new ID card, part of a patient identification system created through a Fogarty-supported informatics program.

Institute in Rio de Janeiro, will use its grant to bolster an existing training project by expanding into new areas of bioinformatics, epidemiology and molecular evolution, with a focus on tropical parasites and their vectors and hosts.

A grant awarded to the University of California, San Diego, was initially developed to build capacity in Brazil. The funding will allow for expansion into a South-South network by extending informatics curricula and training in Portuguese to researchers in Maputo, Mozambique.

Vanderbilt University's award will support a new partnership with two leading research institutions in India, the National AIDS Research Institute in Pune and the National Institute of Epidemiology in Chennai. The program will have an emphasis on HIV/AIDS and other infectious diseases.

A longtime informatics grantee, the University of KwaZulu-Natal in South Africa, will develop research and training capacity through a Pan-African collaborative initiative involving institutions in Uganda, South Africa and Zimbabwe. The funds will allow the University of KwaZulu-Natal to continue to offer postgraduate while assisting other universities in Africa to establish their own medical informatics training programs.

Another grant will support development of an East African Center of Excellence in Health Informatics. The center will be a major resource for improving local human capacity for health informatics and clinical research in sub-Saharan Africa, building upon an almost two-decade collaboration between Indiana University and Moi University in Eldoret, Kenya.

Participating with Fogarty as NIH funding partners in the Informatics Training for Global Health program are the National Library of Medicine and the National Human Genome Research Institute.

Recovery Act supports five Challenge Grants

Fogarty has awarded five NIH Challenge Grants in Health and Science Research with Recovery Act funds for diverse studies in chronic diseases, climate change, emerging technologies and the effect of cultural beliefs on health.

The projects will receive about \$4.7 million over the next two years. The Challenge Grant program is intended to jumpstart studies addressing specific scientific and health research challenge areas in biomedical and behavioral research.

"We're extremely grateful for this stimulus funding and the boost it's providing to biomedical research, a critical component of the U.S. economy," said Fogarty Director Dr. Roger I. Glass. "These grants will help support cutting-edge research in priority areas and will enable scientists to explore new ways to leverage emerging technologies to improve human health."

The effect of climate change on cholera outbreaks is the subject of a study by Dr. Shafiqul Islam of Tufts University. Droughts, floods and cyclones have been associated with major cholera epidemics, and extreme climatic events are likely to bring about changes in the ecosystem that may impact cholera bacteria.

The project, in collaboration with the University of Maryland and the Institute of Water Modeling in Bangladesh, will examine how sea level increases and variations in precipitation might affect transmission of the disease, which has re-emerged as a significant cause of death.

Dr. Robert Boyd, at the University of California, Los Angeles, will lead a team conducting research on cultural variation at sites on Yasawa Island, Fiji, and in Huatasani, Peru. The funding will allow the team to develop a better understanding of people's cultural beliefs, which have an important impact on diet, exercise, lifestyle and other aspects of public health.

Long-distance communication and distance learning applications will be the focus for University of Alabama at Birmingham researcher Dr. Lynda Wilson.

The project will develop four courses, which will be offered over a two-year period to 150 study coordinators at various international sites.

The goal is to address the lack of adequate training for research coordinators across the globe by employing a mix of approaches, including Internet-based classes, courses on CD-ROM, podcasts and text messaging.



Photo Credit: World Bank/Scott Wallace

Recovery Act funds will support five Fogarty Challenge Grants, including one that will examine the effects of climate change on cholera in Bangladesh and other locations where it has re-emerged as a significant cause of death.

A study that analyzes how electronic protocols might improve adherence by health care providers and patients will be carried out by Dr. Marc Mitchell of Harvard University. Mitchell and his team have designed software that guides providers through protocols related to childhood illnesses.

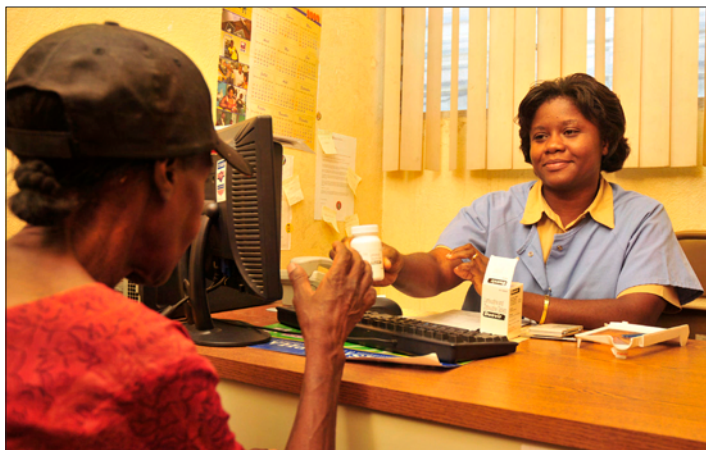
The software can be operated on a PDA or cell phone and helps providers avoid skipping steps or arriving at an inaccurate diagnosis. The study will be carried out in Tanzania at Evangelical Lutheran Church clinics, all of which currently use paper based protocols for the treatment of children.

A University of Pennsylvania research team of Dr. John Danesh, Dr. Daniel Rader and Dr. Danish Saleheen will conduct a study on the poorly understood link between diabetes and cardiovascular disease in South Asia, where the number of people with type 2 diabetes is expected to approach 100 million by 2030.

The team will generate new data on this link by working with an already existing heart disease study in Pakistan.

Overall, the NIH will award a total of at least \$200 million in Challenge Grants.

For more information, visit www.fic.nih.gov/recovery/main.htm.



Haitian researchers have proven anti-retroviral therapy programs are sustainable, even in resource-poor countries. GHEKSIO clinics like this one report excellent retention and adherence and a survival rate of 75% at 5 years.

ART successful in Haiti

GHEKSIO, the long-time Fogarty AIDS training and research grantee in Haiti, recently published data indicating the success of sustainable antiretroviral therapy (ART).

Researchers including Dr. Jean "Bill" Pape, the founding and current director of GHEKSIO (the French acronym for the Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections), enrolled 910 HIV-infected patients in a clinical trial of different regimens and found that survival was tied strongly to adherence after the regimen was introduced.

Before the advent of ART in Haiti in 2003, 90 percent of AIDS patients died within a year and 100 percent within two years. After ART, such patients had a 90 percent survival rate after one year and 79 percent after five years.

The death rate was seven times higher in the first six months of treatment than after six months. Deaths after six months were associated with adherence of less than 90 percent, being over 50 years old and a tuberculosis diagnosis in the first six months of ART.

The study was sponsored in part by Fogarty.

Leger P, Charles M, Severe P, Riviere C, Pape JW, Fitzgerald DW. "5-year survival of patients with AIDS receiving antiretroviral therapy in Haiti." N Engl J Med. 2009 Aug 20;361(8):828-9

Europe prepared for research "Renaissance"

A recent report to the European Commission lays out six goals intended to encourage a "Renaissance" in European research by 2030. Based on current key research challenges, the report invokes the memory of the revolution in thought, society and science during the Renaissance to frame the changes needed now.

The European Research Area Board's first annual report calls for action to:

- create a united European research area
- find solutions for the world's Grand Challenges (climate change, energy supply, aging societies, etc.)
- encourage interaction between science and society
- foster collaboration between public and private sectors
- encourage scientific excellence
- promote cohesion

The report stresses the need to restore trust between science and society, with a new social contract based on the '3 Rs': "rigor in decision making, political or scientific; respect for our fellow man, scientist and environment and responsibility for our own actions as scientist and citizens."

For additional information visit: <http://ec.europa.eu/research/erab/>

Castilla gives Chiles Lecture



South American researcher gives Chiles Lecture Dr. Eduardo E. Castilla, a prominent South American researcher into birth defects, gave the annual Lawton Chiles International Lecture on Maternal and Child Health in the Americas. The Latin American Collaborative Study of Congenital Malformation that Dr. Castilla heads, has built a network of 84 hospitals in 60 cities across nine countries that reports 200,000 births a year to help with the Study's goal of "prevention through research."

Trans-NIH effort launched on global health

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“If we don’t step forward and point out the value of research, the focus is likely to be increasingly on delivery, which of course is critical,” Collins noted. “But we need the research aspect of this to be vigorously supported.”

The genesis of the working group was the previous director’s leadership forum in 2007, during which a white paper was commissioned to detail the agency’s role in global health. Its recommendations guided a day-long discussion by NIH global health leaders last May.

Fogarty director Dr. Roger I. Glass, who also serves as the NIH associate director for international research, reported to IC directors in June and received their support to form the standing working group on global health research.

Participants agreed to focus on three overarching issues:

- improving data collection on NIH international activities
- ensuring clinical trials supported by NIH meet the highest possible standards no matter where they take place and
- developing strategies to position the NIH to play a strategic role in the U.S. government’s global health activities.

High-level representatives of 18 ICs and the Office of the Director participated in the group’s inaugural session.

Participants agreed to focus on three overarching issues—improving data collection on NIH international activities, ensuring clinical trials supported by NIH meet the highest possible standards no matter where they take place and developing strategies to position the NIH to play a strategic role in the U.S. government’s global health activities.

“When I came here to Fogarty, we had no data on NIH’s commitments and investments in global health nor on the different areas of the world where people are invested and what they are doing,” Glass recounted.

There is still no comprehensive system to track the foreign investments made by NIH, acknowledged Dr. Sally Rockey,

acting director of the Office of Extramural Research. Foreign sites that receive direct awards from the NIH are captured in the system but foreign components of domestic awards are not, she said. “We want to strengthen our database so we can understand the funding gaps.”

Rockey suggested a possible solution may involve creating a new field that grantees would be required to use to report on foreign segments of domestic grants.

She agreed to co-chair a subcommittee on data collection issues with Dr. Jim Herrington, Fogarty’s international relations director.

A trans-NIH framework to assist the planning and implementation of international research projects was suggested by Dr. Susan Shurin, acting director of the National Institute of Child Health and Human Development.

It could collect best clinical research practices and other guidance by country or region, including advice on developing partnerships with NGOs and other governments. Other issues such as regulatory requirements, tissue specimen movement and human subjects’ protection could also be provided, she said.

Such shared information could reduce the time for contract negotiations on foreign projects, encourage IRB reciprocity and help recruit clinical trial participants, noted NCRR director Dr. Barbara M. Alving. A virtual “concierge of experts” could also be assembled to provide useful on-the-ground experience to other investigators.

A second subcommittee, led by Shurin and Dr. Hugh Auchincloss, deputy director of the National Institute of Allergy and Infectious Diseases, will develop the clinical trials resource.

It was also decided the group will convene country-specific meetings to facilitate inter-IC collaboration and share best practices for engaging a specific country.

Collins told the group their work could prove to be significant and that he’d be cheering them on. “This is a moment, I think it’s a great scientific opportunity and it fits so well with what NIH is all about — which is science to serve the public, in this case the whole public.” The full working group is scheduled to meet again in December.

FOCUS

Campuses embracing global health

When today's university administrators were going to school, student demands were about politics or campus living conditions. Today, the demands of students are purely academic—more courses in global health, the hottest field in academia.

The numbers are staggering. Enrollment in global health programs in universities across the United States and Canada doubled in just three years due to a surging interest in careers that address health disparities and prevent the spread of disease in developing countries.

Photo by Will Kirk, Johns Hopkins University



Fogarty Director Dr. Roger I. Glass introduces NIH Director Dr. Francis Collins to longtime Fogarty grantee Dr. Patricia Garcia, of Peru's Cayetano Heredia University.

A survey of 37 institutions conducted by the Consortium of Universities for Global Health found:

- The number of undergraduate students enrolled in global health grew from 1,286 to 2,687 between 2006 and 2009.
- The number of graduate students enrolled has more than doubled from 949 in 2006 to 2,010 this year.
- Student organizations focused on global health now number 105, an average of almost three on each campus.
- The 37 universities offer a combined 302 programs that have been in place for at least one year in 97 countries.

Academic leaders at the Consortium's recent annual meeting at the NIH were concerned about the budgetary and structural challenges facing university global health programs, but they marveled at today's students.

"I think our current young generation has an unconsummated desire for sacrifice and service," says Dr. Michael Merson, director of the Duke University Global Health Institute.

University of Washington President Mark A. Emmert explains the demand from the point of view of a self-described Baby Boomer:

"Our generation of college students was a generation that said, 'We don't want to live in a nation where people have different rights and opportunities.' Our students seem to be saying, 'I don't want to live on a planet that doesn't provide those same kinds of opportunities.'"

At Emory University, global health has become the largest undergraduate minor on campus less than two years after it was established, with students representing 15 different majors. At its Rollins School of Public Health, more applications are received for global health graduate programs than for any other.



Nearly 300 members of the Consortium of Universities for Global Health from 60 institutions gathered at NIH for the group's first official meeting.



Boston University associate provost and former Fogarty director, Dr. Gerald Keusch (center), catches up with Fogarty staffers Dr. Ken Bridbord (left) and Dr. Flora Katz (right) during the Consortium meeting at NIH.

"Programs in global health are attracting students from across the University with a wide range of interests, including health sciences, business, law, theology, and liberal arts disciplines," says Emory's Dr. Jeffrey Koplan.

The University of Maryland's School of Public Health—while comprising more than just global health—has seen undergraduate majors increase from 757 to about 1,600 in just five years, says Dean Robert Gold, noting that his university president has challenged all students to engage in some kind of international experience.

One thread running through the two-day CUGH meeting was trying to define what a seamless global health education program ought to be—to the satisfaction of faculty in narrow disciplines, students seeking a broader education and funding agencies that will support both.

"I think our current young generation has an unconsummated desire for sacrifice and service."

— DR. MICHAEL MERSON, Duke University Global Health Institute

The question was defined by Dr. Timothy F. Brewer of McGill University as, "What basic minimum information—whether you're going to be a plastic surgeon, or you're going to be a family practice doc or you're going to be a biochemist—should you have heard of in global health? ... What is the equivalent every medical doctor should know about the burden of diseases?"

Specific criteria have yet to be developed, and some conference participants expressed the notion that standardizing a list of competencies may be antithetical to another popular notion that experts in a field ought to do what they do best.

Happily, global health is a field where student demand is actually matched with increasing job opportunities, says Dr. Gerald Keusch, a former Fogarty director and now associate provost for global health at Boston University.

"The job market is, in fact, growing as more and more money is coming into bilateral, multilateral and major global health programs," he says. "There is a need for experience in the developing world, in government and in the private sector."

For more information about the survey, visit <http://tinyurl.com/mzeexr>

Collaborations spur biomedical innovations



When an intravenous drip is not available in resource-poor areas, the only way to deliver fluids is through the bone, especially in children.

A device to do just that costs about \$10,000 in the United States, but a collaboration between Stanford University and research teams in India has produced an intraosseous fluid delivery system that can be produced locally for under \$2.

The intraosseous device and an artificial knee costing only \$20 are among the success stories of the eight-year-old Stanford-India Biodesign, a program that unites researchers, engineers, designers and business students to develop technology to improve health and catalyze growth of biomedical industry in the world's second largest nation.

The program was featured at the recent meeting at the NIH of the new Consortium of Universities for Global Health.

"We feel innovation is something that can be taught," Srivastava said. "It is a discipline. It requires diligence."

Advanced students are selected from around the world to participate in the highly structured program, which begins with "clinical immersion" for those who are not trained in medicine. Teams of four are taught to observe unmet clinical needs, catalogue them and come up with one or two for which innovative solutions can be developed, modeled and brought to market.

The Stanford researchers collaborate with counterparts from the All India Institute of Medicine and the Indian Institute of Technology to address needs in that country.

"It's an opportunity to really alleviate human suffering on a large scale and to help catalyze an industry that fosters a sustainable model," Srivastava explained. The hope is "to create a global paradigm that is replicable to other parts of the world."

Meeting attendees hear 'stars are aligned'

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White House adviser Dr. Ezekiel Emanuel told the Consortium of Universities for Global Health meeting attendees that "Getting a bigger bang for the buck is not just an economic outcome, it is an ethical imperative."

... I will be cheering and trying to help in every way I can."

White House health adviser Dr. Ezekiel Emanuel, a bioethicist with the NIH Clinical Center, and U.S. Global AIDS Coordinator Ambassador Eric Goosby emphasized the administration expects concrete "deliverables," not just measures of procedural progress in the efforts against infectious and chronic diseases and maternal and child mortality.

"Getting a bigger bang for the buck is not just an economic outcome," Emanuel said. "It is an ethical imperative" because wasting money means "someone else will not get a resource that could have been more valuably used."

Goosby said the administration's Global Health Initiative will be a seed for a broader discussion that will move from bilateral to multilateral efforts and use the success of the President's Emergency Program for AIDS to expand delivery of other health services in host countries.

He said it is incumbent on those countries to develop their own cadre of credentialed health care workers by working with national medical and nursing schools. One of the more difficult problems, he said, is getting governments to improve civil service pay in order to retain their best researchers and clinicians, who frequently move to better positions in the private or nonprofit sectors.

Both officials strongly supported integrating overseas health services programs to avoid duplication among U.S., private and nonprofit organizations and making emergency programs flower into long-term infrastructure improvements in developing countries.

fields. A CUGH survey of 37 institutions found that both undergraduate and graduate enrollment in global health programs had more than doubled since 2006.

In opening the two-day CUGH meeting, Collins told the nearly 300 leaders from 60 universities that "global health is great science, but it's also a great responsibility and a great opportunity to reach out and try to do things across the world instead of focusing so much on ourselves, so go to it

At a meeting of Fogarty's advisory board, Jennifer Klein, a senior adviser in the State Department's Office of Global Women's Issues, confirmed administration support for the role of universities in fashioning details of the Global Health Initiative. "We very much have in mind to seek input and an ongoing partnership with the academic community," she said.

Support also came from Capitol Hill, where Rep. Betty McCollum, D-Minn., co-chair of the Congressional Global Health Caucus, hosted a CUGH briefing, where Dr. Judith Wasserheit, vice chair of global health at the University of Washington, proclaimed Fogarty "a secret weapon and a real hidden jewel" that trains "the vast majority" of health policy leaders in the developing world at a cost of less than ¼ of 1 percent of the total NIH budget.



Ambassador Eric Goosby, U.S. Global AIDS Coordinator, said he hopes to build on PEPFAR's success to expand delivery of other health services in host countries.

Former House Health Appropriations subcommittee chair John Porter, R-Ill., now chair of the advocacy group Research!America, cautioned that "politics is unpredictable and good leaders in office today could be gone tomorrow." He said increased funding for global health "will take time, but in my judgment it can be done."

According to Research!America President Mary Woolley, there is widespread public support, with 81 percent of respondents in a survey it commissioned believing either strongly or somewhat that it is important for the United States to work for global health through research.

In addition to Fogarty, sponsors of the meeting were: Bill & Melinda Gates Foundation, Rockefeller Foundation, National Institute of Allergy and Infectious Diseases and the Foundation for the National Institutes of Health.

What is CUGH?

The Consortium of Universities for Global Health sprang from an idea conceived by former Fogarty Director Dr. Gerald Keusch. Last year, it held its first organizing meeting among 20 members at the University of California, San Francisco.

There are 58 members now, and the four criteria for membership are:

- A well-established global health program
- An interdisciplinary program nearly always involving more than one school
- Activities encompassing education and training, research and service
- A well-established and functioning international partnership

Dr. Haile T. Debas of the University of California, San Francisco, chairman of the founding board of directors, outlines some of the Consortium's first priorities:

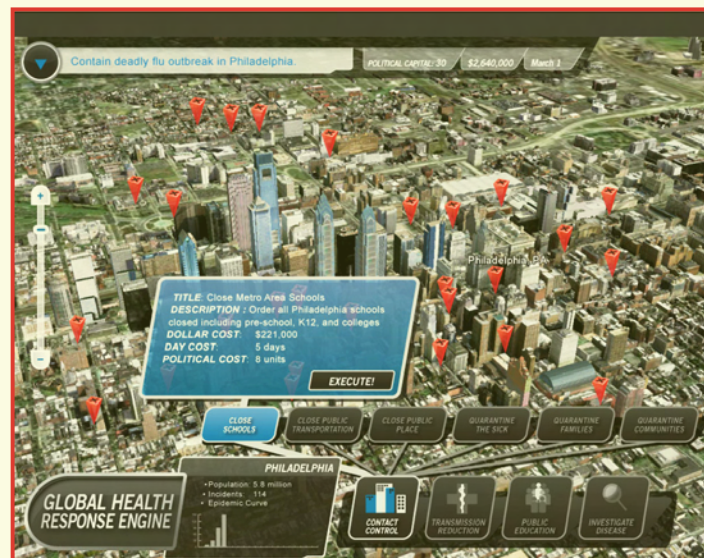
- Defining what is meant by global health education in terms of curricula and competencies
- Collaborating among members in research, training and service
- Developing a common "platform" for members to facilitate their work overseas
- Developing policy and advocacy in support of global health
- Creating international partnerships for human and institutional capacity building

"I am hopeful that the Consortium will ensure that we catch the crest of the wave of excitement and idealism in our students and faculty to make universities a transforming force in global health," Debas says.



Rep. Betty McCollum, D-Minn., greets Duke University's Dr. Michael Merson at a Capitol Hill briefing she hosted as co-chair of the Congressional Global Health Caucus. Also pictured are Boston University's Dr. Gerald Keusch and Dr. Donald Thea.

USC tries video games as teaching tool



The University of Southern California is taking advantage of its digitally savvy students on a campus where creativity is a natural part of the curriculum and electronic games have become learning devices.

"We are using gaming to develop virtual simulations that are engaging and rooted in science and can be used as a teaching tool for global health students, says Dr. Heather Wipfli.

Games like "Immune Attack" or "Darfur is Dying" use real data and can be tailored to specific health problems for use by students in coming up with new solutions.

Wipfli says the USC "Global Response Health Engine" program provides an example of what five university presidents advised during the CUGH meeting—using an institution's unique strengths to build global health curricula.

At USC, where gaming is already part of other courses, the medical school where Wipfli teaches collaborates with schools of cinema, engineering, communications, business, fine arts, music, arts and sciences and with the Los Angeles gaming industry itself.

"It's less about facts and figures and more about teaching students how to access information and how to judge whether it is credible information or not," she says. "We want to make it very clear, gaming is serious business.

We are not just playing around here."

Causes of suicide differ

A large international mental health survey has found that suicide rates do not differ much based on a country's level of development, but the causes do.

Writing in the journal *PLoS Medicine* in August, a global team of researchers including Fogarty grantee Dr. Ronald Kessler of Harvard University, analyzed results from structured interviews conducted for the World Health Organization with nearly 110,000 people from 21 countries.

"Overall, mental disorders were equally predictive (of suicide) in developed and developing countries, with a key difference being that the strongest predictors of suicide attempts in developed countries were mood disorders, whereas in developing countries impulse-control, substance use and post-traumatic stress disorders were most predictive," the research concluded.

The paper also found that although depression is a strong predictor of suicide, it is because it leads to thinking of killing one's self, whether or not the act is carried out.

The findings also show that only half the people who



Photo by WHO/P. Viot

Impulse-control, substance use and post-traumatic stress disorders are the strongest predictors of suicide attempts in developing countries.

have seriously considered suicide actually have a mental disorder.

Nock MK, Hwang I, Sampson N, Kessler RC, Angermeyer M, et al. (2009) Cross-National Analysis of the Associations among Mental Disorders and Suicidal Behavior: Findings from the WHO World Mental Health Surveys. *PLoS Med* 6(8): e1000123.

US-Latin America commit to fighting cancer

Argentine Ambassador Héctor Timerman (left), National Cancer Institute Director Dr. John E. Niederhuber and Urugayan Minister of Public Health Dr. Mária Julia Muñoz, sign letters of intent to collaborate in cancer research. Along with Chile, which signed such a letter with the U.S. in June, these countries comprise the United States-Latin America Cancer Research Network, which is committed to developing a comprehensive understanding of the cancer burden among Hispanic populations in Latin America and the United States and to enhance the cancer research and care infrastructures in both regions of the hemisphere.



Drop in abortion linked to contraception

A report by the Guttmacher Institute links the increased use of contraception worldwide to the reduction of unintended pregnancies, which declined from 69 per 1,000 women age 15 to 44 in 1995 to 55 per 1,000 in 2008. At the same time, abortions declined from an estimated 45.5 million in 1995 to 41.6 million in 2003. The report said abortion occurs at roughly equal rates in countries where it is broadly legal and where it is not. The difference is that illegal, clandestine abortions cause significant harm to women, more so in developing countries. <http://tinyurl.com/yhrt7ad>

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Deadly malaria parasite came from chimps

Photo courtesy of Global Viral Forecasting Initiative



A team of international genetic detectives led by renowned Fogarty grantee Dr. Nathan Wolfe has determined that the malaria parasite that kills more than 1 million people a year originated from a chimpanzee parasite and did not, as was previously believed, co-evolve as the human and chimpanzee lineages split from a common ancestor.

The groundbreaking analysis was made possible by the team's identification of eight new isolates of the parasite, *Plasmodium reichenowi*, which infects chimpanzees.

The new genetic materials came from 84 wild or wild-born captive chimps in Cameroon and Côte d'Ivoire.

The researchers, writing in *Proceedings of the National Academy of Sciences*, were able to conclude that the deadly human parasite, *Plasmodium falciparum*, is a fairly recent descendent of the more genetically diverse and thus, older chimpanzee parasite.

Previous studies, which strongly suggested the two parasites had developed independently, one in humans and one in chimps from a common ancestor millions of years ago, had been based on only a single isolate of the chimpanzee parasite.

Instead, "phylogenetic analysis indicates that all extant *P. falciparum* populations originated from *P. reichenowi*, likely by a single host transfer, which may have occurred as early as 2-3 million years ago, or as recently as 10,000 years ago," the authors wrote.

Part of Wolfe's work in collecting the specimens was supported by a Fogarty International Research Scientist Development Award.

Stephen M. Rich, Fabian H. Leendertz, Guang Xu, Matthew LeBreton, Cyrille F. Djoko, Makoah N. Aminake, Eric E. Takang, Joseph L. D. Diffo, Brian L. Pike, Benjamin M. Rosenthal, Pierre Formenty, Christophe Boesch, Francisco J. Ayala and Nathan D. Wolfe. "The origin of malignant malaria." *PNAS* 2009 106:14902-14907; published online before print August 3, 2009.

SAVE THE DATE

SPEAKER: Dr. Julio Frenk
Dean, Harvard School of Public Health



Tuesday, December 15, 2009

11:30 a.m. - 12:30 p.m.

MASUR AUDITORIUM

Clinical Center (Building 10), NIH

2009 David E. Barmes Global Health Lecture

Sponsored by the National Institute of Dental and Craniofacial Research and the Fogarty International Center

Reception to follow hosted by the Friends of the NIDCR

"Globalization and Health: The Role of Knowledge in an Interdependent World"

Making a difference in global health

The past decade has seen an enormous increase in the number of North American universities offering new programs addressing global health challenges. This remarkable response to the international global health crisis reflects the desire of our faculties and students to bring the unique resources of the university to bear on problems that require sustained, integrated, interdisciplinary, and collaborative approaches.

We must train the next generation of health professionals to help ensure a healthier future for people everywhere. While our schools of medicine, public health, and nursing are central to these efforts, the university has much more to offer. We recognize that to truly address the myriad of global health problems affecting the poor and disenfranchised requires more than good medicines and dedicated health care professionals. Our broader global health initiatives are building on our historical strengths.

For example, our schools of engineering, architecture and urban planning are able to address infrastructure needs for clean water and safe sewage systems and injury prevention. Our environmental sciences faculty and students are in the vanguard in addressing the impact of climate change on the health of human populations around the globe. Our schools of public affairs and public policy and law develop policy and governance structures that promote health, and together with faculty in bioethics and philosophy address the human rights dimensions of global health and the challenges of achieving global justice more broadly.

Our students and faculty have enthusiastically embraced our growing investment in global health programs. Their desire to act is driven in part by the global communications revolution that brings the reality of human suffering and health inequities to everyone. We are excited by the evidence of interest and concern for global health that we see every day in our institutions, from our faculty, our students, and our staff. This is one of the best indications that our institutions will continue to foster global citizenship into this century and beyond, and we commit ourselves to involving our institutions in achieving a healthier, better educated, more equitable, and peaceful world.

We urge policymakers and health-related foreign assistance programs to use the resources and global health expertise



Photo by Will Kirk, Johns Hopkins University

Five university presidents addressed the Consortium of Universities for Global Health Meeting and released a joint statement on the importance of global health on their campuses. From left, Dr. Mark Emmert, Dr. James Wagner, Dr. Ronald Daniels, Dr. Michael Merson (moderator), Dr. Richard Brodhead and Dr. Robert Brown.

of our universities to deliver high quality, evidence-based, cost-effective, and sustainable assistance to partner nations. We stand ready to do so.

However, there is a need for resources that will enable us to prevent disease and reduce mortality around the world by supporting the global health research, technology and engineering efforts of our faculty and more importantly, enable us to provide opportunities for the thousands of students, trainees and graduates of our universities and at our partner universities, which are clamoring to become involved and make a difference in global health.

President Robert A. Brown, *Boston University*

President Richard H. Brodhead, *Duke University*

President James W. Wagner, *Emory University*

President Ronald J. Daniels, *Johns Hopkins University*

Principal Heather Monroe-Blum, *McGill University*

President John L. Hennessy, *Stanford University*

President Mark G. Yudof, *University of California*

President Mark A. Emmert, *University of Washington*

This statement, edited for space, was issued during the Consortium of Universities for Global Health meeting held at NIH.

PEOPLE

Four new staff join Fogarty

Three program officers and a program analyst have joined Fogarty in recent weeks.



Dr. Rob Lyerla, formerly a CDC epidemiologist with a background in HIV/AIDS surveillance, is now the program officer for Europe. He has

field experience in Denmark, France, Moldova, Portugal, Romania, Russia, Spain, Ukraine and Uzbekistan.



Dr. Myat Htoo Razak will work on project development and the Fogarty International Clinical Scholars/Fellows program. He

received his medical degree in Burma and a master's in public health and a doctorate in epidemiology from UCLA.



Dr. Yvonne Njage, an American Association for the Advancement of Science fellow, will manage the new Millennium Promise

Awards program for research training in chronic diseases. She has an M.D. from Harvard and has worked in Kenya, Botswana, Zambia and India.



Farah Bader is providing analytic support for Fogarty grants awarded under the American Recovery and Reinvestment Act. She

holds a master's in public health from Johns Hopkins University and has worked on problems of Iraqi refugees in Jordan.

Center-backed investigator wins Heinz Award



Dr. Kirk Smith, a co-investigator on the Fogarty-sponsored international environmental and occupation health research training program, is one of 10

winners of the \$100,000 Heinz Award for his work on pollution in the developing world. The award, named after the late Sen. John Heinz, cited the University of California, Berkeley, professor for his work on the danger of the global practice of cooking indoors with wood, coal or other biomass. (See. *Global Health Matters*, Vol. 8, Issue 2, p. 10).

Grantee elected to Institute of Medicine



A long-time Fogarty grantee, **Dr. Wafaa El-Sadr**, founder of Columbia University's Center for Infectious Disease Epidemiologic Research,

has been elected to the Institute of Medicine, one of the highest honors in medicine. She serves on the scientific advisory committee of the Center's AIDS International Training and Research Program and was an investigator in the Fogarty-funded Centre for the AIDS Programme of Research in South Africa.

Global HEALTH Briefs

About 10 percent of births are premature

About one in 10 births worldwide is premature, resulting in 1 million neonatal deaths a year, according to World Health Organization data analyzed by the March of Dimes. The estimate of 12.9 million premature births annually is conservative, analysts believe because few countries keep good statistics. <http://tinyurl.com/y9k3pr>

Alzheimer's cases increasing rapidly

The number of cases is growing so rapidly, the World Health Organization ought to make Alzheimer's disease a global health priority, says the nonprofit Alzheimer's Disease International organization. It estimates 35 million people around the world have Alzheimer's and other forms of dementia, a 10 percent increase over 2005. <http://tinyurl.com/mdhmba>

Paper explores disparity in disease funding

A recent article in the *Bulletin of the World Health Organization* argues that certain diseases are favored by funders because advocates have made them seem more important than others, regardless of the disease burden. Author Dr. Jeremy Shiffman of Syracuse University says advocates are effective when they emphasize the threat to human well-being, national security and economic development. <http://tinyurl.com/yckytb6>

Lancet issue devoted to South Africa

A collaboration among *The Lancet* and academic institutions in the country has produced a special edition of the journal devoted to chronic diseases and health delivery in South Africa. The series of papers culminates in a call for action for the South African government, universities, training institutions, health councils, researchers and civil society to strengthen the country's health care system. <http://tinyurl.com/yboxq99>

Funding Opportunities

Programs	Details	Deadline
Ecology of Infectious Diseases Initiative	http://www.fic.nih.gov/eid/	Dec. 9, 2009
Global Research Initiative Program, Basic/Biomedical Research Award	http://www.fic.nih.gov/grip/	Dec. 18, 2009
Fogarty International Research Collaboration, Basic/Biomedical Research Award	http://www.fic.nih.gov/firca/	Jan. 28, 2010
All Fogarty Funding Opportunities	http://www.fic.nih.gov/funding/	

For more information, **visit www.fic.nih.gov/funding**

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*Photo at bottom of page 1
courtesy of Yale University.*

Grant application forms revised, shortened

Shorter new paper and electronic forms will be required for fiscal 2011 grant applications due on or after Jan. 25, 2010.

The forms, including those for training and career development grants, also will be restructured to streamline the information as part of an overall NIH effort begun last year to revamp the peer-review system. Changes will be made to the research plan, resources and biographical sketch sections of the application.

Between now and December, NIH will publish new Funding Opportunity Announcements without accompanying electronic application packages.

All new or resubmission applications must use the revised application forms and instructions even if the initial submission followed the current application forms and instructions.

For details, visit <http://tinyurl.com/nursul>