National Institutes of Health

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GlobalHealthMatters

News from the John E.

Fogarty International Center

www.fic.nih.gov



- FIC welcomes new Acting Director, Sharon Hrynkow
- World AIDS Foundation (WAF) closes its doors
- New Visiting Fellows group formed
- FIC helps Israeli and Palestinian scientists collaborate
- Career Paths for Women in the Health Sciences
- Progress partnerships for students, young scientists

Senator Jack Reed Hosts FIC Roundtable

Senator Jack Reed (D-Rhode Island) hosts FIC at Brown University. Sharon Hrynkow, Gerald Keusch, and Pierce Gardner recently took part in a roundtable discussion hosted by Senator Jack Reed on The Role of the Fogarty International Center in Globalization of Health

the Gaia Vaccine Foundation; Kenneth Mayer, M.D., Director of the Brown-Tufts Fogarty International AIDS International Research and Training Program; and Chris Butler, Executive Director of the AIDS Project, Rhode Island. Terrie Wetle, Ph.D., Associate Dean of Medicine for Public Health and Public Policy at Brown and former Deputy Director of the National Institute on Aging, moderated the discussion. Senator Reed noted that the roundtable marked "an important milestone for the Fogarty



Left to right: Dr. Pierce Gardner, Dr. Terrie Wetle, Dr. Annie deGroot, Dr. Richard Besdine, Mr. Thomas McAndrew, Dr. Charles Carpenter, Senator Jack Reed, Dr. Gerald Keusch, Lt. Governor Charles Fogarty, Dr. Sharon Hrynkow, and Dr. Kenneth Mayer.

Care. The event, held December 18 at Brown University, was the first of what FIC hopes will be many more such occasions. The roundtable at Brown celebrated FIC's 35th anniversary and honored Charles C.J. Carpenter, M.D., 2003 recipient of the John E. Fogarty Recognition Award for International Health. With members of the late John Fogarty's family in attendance, Hrynkow, Keusch, and Gardner discussed the Center's mission, history, and specific ongoing projects and its role in promoting science for global health. The Rhode Island perspective on critical global health issues was presented by Anne DeGroot, M.D., Director and Founder of

International Center, which," he said, "has demonstrated a singular commitment to advancing health through international cooperation." He praised FIC for training the next generation of health care professionals to work together to confront new international health challenges that are the inevitable consequence of increasing globalization.

FIC is planning a series of similar town meetings to explain its mission at selected venues across the country and raise awareness of global health research as a benefit to U.S. communities. ❖



Sharon Hrynkow, Ph.D. Acting Director, FIC

Message From the Director

I am pleased to welcome you to the second issue of *Global Health Matters* and to write in my capacity as Acting Director of the Fogarty International Center. I am honored that Dr. Zerhouni has appointed me to lead the Center during the period of transition to the naming of a permanent director. Having served as Deputy Director for almost 4 years and for 5 years at FIC in other capacities, I know firsthand how critical FIC's efforts are in advancing global health, and the extraordinary talent and commitment of the FIC team.

I am happy, too, to announce that Richard Millstein, J.D., has joined the Center on an interim basis as Acting Deputy Director. Dick Millstein has served as Deputy Director of NIDA since 1988 and was NIDA's Acting Director for 2 years. He brings to the FIC team a wealth of knowledge and expertise and is already playing a key role in keeping the Center moving ahead with full steam!

As we look ahead, several programs and initiatives that have been on the drawing board will be finalized and rolled out. For example, in April we expect to launch a new research and training program to address the growing burden of trauma and injury in developing countries. As we have learned, trauma and injury, including challenges related to interpersonal violence, road traffic injuries, and civil/societal disturbances, kill more people than HIV/AIDS and malaria combined and exact an enormous toll in morbidity and long-term suffering.

We will also continue our commitment to fostering and enhancing a global culture of science, working to ensure that research data are accessible around the world, building knowledge and capacity in research bioethics, and working to ensure that the best and brightest are recruited and retained in biomedicine. Among our activities will be continued support and exploration of issues confronting women in the life sciences, particularly those in low- and middle-income nations, and efforts to work with science funding agencies around the world on crosscutting issues of gender and sex as related to global health challenges.

We will develop new partnerships and expand on FIC's interest in the neurosciences. We have begun with a research program "Brain Disorders in the Developing World: Research Across the Lifespan," and will continue to look at ways in which we can help address the enormous global burden of disease posed by mental illness and a variety of conditions affecting brain function.

This is a pivotal time for global health research and training. The needs are great; so, too, are the opportunities and the commitment to meet them. I welcome your ideas and comments as we continue to look for opportunities to support Science for Global Health and to advance the FIC agenda. Let me hear from you at: ficinfo@fic.nih.gov.

Sharon Hrynkow, Ph.D.

Acting Director, Fogarty International Center

Marin Aghr

Keusch Leaves FIC for Boston University

A page of FIC history has turned with Gerald Keusch's resignation as Director of the Fogarty International Center and the appointment of Sharon Hrynkow as FIC Acting Director. Dr. Keusch has accepted two newly created positions at Boston University to build a university-wide program in global health. Since January 1, 2004, he has been Assistant Provost for Global Health at Boston University Medical Center and Associate Dean for Global Health at the Boston University School of Public Health. He is also Professor of Medicine at Boston University School of Medicine and Professor of International Health in the School of Public Health.

Dr. Keusch, who also served as NIH Associate Director for International Research, came to FIC in 1998 and led the Center during a period of remarkable productivity in the global health arena. During his tenure, FIC adopted the motto Science for Global Health and rose to the forefront of those who spotlight the often-neglected fact that biomedical and health research fill a critical gap in addressing global health disparities. He championed investment across the spectrum of basic, clinical, and translational research and operational and health services research to improve the health of people everywhere, particularly in nations constrained by limited resources and enormous disease burden.

As Dr. Keusch reflected on his transition to Massachusetts from Maryland in a recent phone conversation, he said that one of the notinsignificant advantages brought by his new positions at Boston University is rejoining his family, who remained in Boston during his 5 years in Bethesda. "The commute," he said with a chuckle, "is certainly shorter."

From Our Grantees— Science and Friendship

By Cathy Kristiansen

Two scientists from regions of the world where people are deeply hostile toward each other found

a way to collaborate on research designed to unlock the mysteries of inherited deafness. Children in certain Palestinian and Israeli Arab families are unusually prone to inherited hearing loss, and identifying the responsible genes helps prospective parents know the risks and speeds potential discovery of a cure.

In 1996, Israeli geneticist Karen Avraham, Ph.D., of Tel Aviv University in Israel, and Palestinian geneticist Moien Kanaan, Ph.D., of Bethlehem University, found they were interested in the same themes of genetic research and decided to combine their expertise. Their funding breakthrough came from the Fogarty International Center (FIC) through grants that would help pay for their initial research and pave the way for them to write proposals for further awards. Dr. Avraham received her 3-year Fogarty International Research Collaboration Award (FIRCA) grant from FIC in 1999; Dr. Kanaan received his FIRCA in 2000. Geneticist Mary-Claire King, Ph.D., of the University of Washington in Seattle, was the U.S. collaborator for both. All FIRCA grants are given jointly to an NIH-funded U.S. investigator and a foreign collaborator, with all support going to the foreign collaborator.

Together, the three scientists launched a genemapping and cloning project, collecting clinical data and volunteered DNA samples from 59 Israeli and 74 Palestinian families. Their studies have thus far discovered four genes associated with inherited deafness and led to an understanding of how mutations in these genes lead to inherited hearing loss. (List of published findings below.)

Childhood deafness was more prevalent around the world before widespread distribution of the German measles vaccination greatly curbed incidence of viral damage to hearing *in utero*. Deafness rates are relatively high in the populations the scientists studied, however, because endogamy—related persons marrying—is traditional among some families and has led to the appearance of recessive genetic traits. Some families in the region have higher occurrences of inherited blindness and beta thalassemia. The large size of many families is helpful in gene mapping projects.

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Drs. Karen Avraham and Moien Kanaan

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Through their published work, seminars, and teaching, Drs. Kanaan, Avraham, and King have educated the public of the region about hearing loss. This has been useful for the families, and they have worked with an international charitable organization that distributes hearing aids to the needy. "Our work has enabled families to know, in many cases, the genetic basis, or cause, of the deafness in their family," Dr. Avraham said. "The right to know is powerful and provides families with a sense of control."



Palestinian child with hearing aid

Photo Credit:

Karen Kasmauski National Geographic Image Collection

Publications:

Walsh T, Walsh V, Vreugde S, Hertzano R, Shahin H, Haika S, Lee MK, Kanaan M, King MC, Avraham KB. From flies' eyes to our ears: mutations in a human class III myosin cause progressive nonsyndromic hearing loss DFNB30. *Proc Natl Acad Sci U S A*. 2002 May 28;99(11):7518-23.

Shahin H, Walsh T, Sobe T, Lynch E, King MC, Avraham KB, Kanaan M. Genetics of congenital deafness in the Palestinian population: multiple connexin 26 alleles with shared origins in the Middle East. *Hum Genet*. 2002 Mar; 110(3):284-9.

Weiss S, Gottfried I, Mayrose I, Khare SL, Xiang M, Dawson SJ, Avraham KB. The DFNA15 deafness mutation affects POU4F3 protein stability, localization, and transcriptional activity. *Mol Cell Biol.* 2003 Nov;23(22):7957-64.

Many challenges face scientists in such areas torn by strife. For example, exchanging students to train and work in each other's labs requires permits that are difficult to obtain and need frequent renewal. And, because Israeli firms will not make deliveries to Bethlehem, Dr. Kanaan spends valuable time collecting lab supplies. Dr. King said the

research collaboration's success thus far has involved "an enormous amount of goodwill" from both the Israeli government's defense forces and the Palestinian authorities.

Today, 31 joint projects between Israeli and Palestinian scientists are active, according to Ziad Abdeen, M.P.H., M.Sc., Ph.D., Dean of Research and Graduate Studies at Al-Quds University in East Jerusalem. Dr. Kanaan feels a strong personal drive to continue his work. "I need to keep the lab going," he said. "It's my way of saying we are still free to think and do, away from prejudices enforced on us by the nature of any occupation."

Fogarty's FIRCA grants that launched Drs. Avraham and Kanaan's project are designed to facilitate joint research between NIH-supported U.S. biomedical scientists and investigators in developing countries. FIRCA awards, which amount to \$32,000 per year for up to 3 years, seek to extend and enhance the research interests of U.S. and collaborating scientists and help increase the research capacity of foreign scientists and institutions. FIC launched FIRCA awards in 1992 and makes about 50 awards per year.

"That is exactly what happened with this collaboration," said Dr. King, who is a former FIC Advisory Council member. "The FIRCA grants succeeded scientifically, in public health, and in technology transfer in both countries," said Dr. King. "Bethlehem University now has the capacity for molecular genetics and genomic analysis, and we have been able to bring Palestinian students into Israeli labs to work on the project. It's a real tribute to the NIH, and Fogarty in particular, that our work is respected by people on both sides of the Middle Eastern conflict."

At the end of their FIRCA support last year, the three geneticists won a prestigious R01 grant from the NIH's National Institute on Deafness and other Communication Disorders to continue their work. "I think the investments in Fogarty are the best investments the NIH makes, dollar for dollar," Dr. King said. "People who use these funds are the cream of the cream of the crop."

FIC Program Director Kathleen Michaels also hailed the success of the FIRCA awards to Drs. Avraham and Kanaan. "Both awardees and Dr. King moved this area of research on deafness along," she said. "FIRCA served the purpose of jumpstarting the three-way collaboration and allowing them to write an outstanding competitive application to continue the collaboration through an NIH R01."

The three collaborators are linked by friendship and the continuing hunt for hearing-loss genes, which, Dr. King said, "is going fabulously." The researchers are also pursuing separate research projects.

Dr. Avraham is deciphering the molecular basis of sensory diseases and disorders, using genetic, developmental, biochemical, and cell biological tools. Her research, much of which involves mouse models, focuses on understanding how hearing is maintained through the delicate balance of protein expression in sensory hair cells. Dr. Kanaan is investigating epidermolysis bullosa, a skin abnormality caused by defects in extracellular matrix proteins in the skin's dermis and epidermis layers. Dr. King, who is American Cancer Society Research Professor of Genetics and Medicine at the University of Washington School of Medicine, discovered *BRCA1* and has investigated inherited breast and ovarian cancer for 28 years. ��

New Visiting Fellows Group To Spur More Contact and Help at NIH and Back Home

Visiting fellows (VFs) who travel far from their home nations to work at the NIH will have more networking avenues and help from NIH and NIH alumni colleagues on campus and when they return home, thanks to the formation of a new grassroots group, the NIH Visiting Fellows Committee (NIHVFC), which became official on July 1, 2003.

The genesis of NIHVFC came in 2001, when the FIC's then-Deputy Director, Dr. Sharon Hrynkow, initiated discussions with junior scientists at NIH from countries in the developing world and countries in economic transition to discuss how FIC could help recruit postdoctoral trainees from these countries and help them return home afterward. These initial discussions came in response to an informal FIC study which showed that of the 2,500 foreign trainees in the NIH Visiting Program, only 20 were from sub-Saharan Africa, and that other parts of the world in which the burden of disease is exceptionally high also were poorly represented.

The immediate result of FIC's discussions with VFs was the launch of the Global Health Research Initiative Program for New Foreign Investigators (GRIP), which supports the return home of young NIH-trained foreign investigators from the developing world by providing \$50,000 per year, for 3 to 5 years, in the form of an R01 grant. Since its launch in 2002, GRIP has supported 25 young researchers' return home, providing partial salaries and support to develop first-rate scientific research projects. Furthermore, since 2001, VFs and FIC have been working together on grant-writing and mock peer review sessions to help VFs gain as much practical experience as possible in grant writing while at NIH.

The NIHVFC is a natural extension of early discussions and the development of GRIP. More than 30 fellows from several countries attended the first official NIHVFC meeting, held recently at NIH's Lawton Chiles International House. Invited participants included senior NIH leaders

who were asked to serve as advisors to the group: Dr. Sharon Hrynkow; Donna Vogel, M.D., Ph.D., Director of the NCI Fellowship Office; Philip Chen, Ph.D., Senior Advisor to the NIH Deputy Director for Intramural Research; Norka Ruiz-Bravo, Ph.D., then Director of Extramural Programs at NIGMS and now NIH Deputy

Director for Extramural Research; and Candelario Zapata, Chief of the NIH International Services Branch. Also participating at the launch was William Steiger, Ph.D., Special Assistant for International Affairs to the Secretary of Health and Human Services.

The NIHVFC will be led in its first phase by Valeria de Mello Coelho, Ph.D., a VF from Brazil, and Devyani Haldar, Ph.D., and Kamala Tirumalai, Ph.D., VFs

from India. Initially, NIHVFC will represent fellows from developing countries only, in particular from Africa, Asia, Eastern Europe, and Latin America, with a view to later expanding membership to all fellows. "Developing countries" is an operational term based on gross national product per capita and does not necessarily reflect a country's development status. "The Committee's main goal is to increase networking ability among visiting fellows while they are on campus and to help maintain their connection to the NIH and to each other after they return home," Dr. Tirumalai said. "People returning to their home countries often have spent many years away, and it can be a struggle to navigate the bureaucracy to establish yourself professionally." But if fellows maintain links with the NIH, "both parties can benefit," she said.

The NIHVFC intends to develop strategies to improve the training experience of VFs while they are at NIH and encourage the establishment and maintenance of strong institutional links with NIH after they complete their training and go back to their home countries. The group also wants to strengthen mechanisms for helping VFs cope with the many questions that arise during their NIH stay about administrative and career issues. The NIHVFC will work closely with the NIH fellows committee and other existing groups as it moves forward.



NIH Visiting Fellows; advisors Dr. Donna Vogel, NCI, Dr. Norka Ruiz-Bravo and Mr. Candelario Zapata, OD, and Dr. Sharon Hrynkow, FIC; and FIC staff, Dr. Allen Holt and Ms. Judy Levin.

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National Institutes of Health

Visiting Fellows Committee

As an important step toward building a viable networking structure for former, current, and future VFs, NIHVFC proposes to establish an alumni database and a Web site for members. The database, supported by FIC and the National Institute of Environmental Health Sciences, will be a major tool for NIH-trained scientists and will allow them to access colleagues—past, present, and future—as they continue their research careers. The Web site could offer a chat room and information about job and grant opportunities and FIC/U.S. resources available to scientists on their return home. It could also help identify and provide information for potential NIH visiting program fellows. NIHVFC proposes that a pilot alumni association focus on four countries: Brazil, India, Mexico, and South Africa. "These countries have a critical mass of former visiting fellows and local sponsors willing to provide infrastructure support and to facilitate access to information," Dr. Coelho said.

Web site: http://felcom.nih. gov/NIHVFC FIC Acting Director Dr. Sharon Hrynkow acknowledged the group's great progress in a short time and offered to work across NIH to identify funds needed to support key efforts.

"Fogarty has been supporting us all this while," Dr. Tirumalai said, proffering special thanks to FIC's Hrynkow for her "unflagging" support. To move forward for the benefit of junior scientists from loward middle-income nations, she urged all VFs to become involved in the group and help it thrive.

World AIDS Foundation's Work Draws to a Close

It was a bittersweet moment when the World AIDS Foundation (WAF) celebrated its accomplishments at a scientific symposium convened last July at the Institut Pasteur in Paris. The Foundation was created in 1988 to help combat and prevent HIV/AIDS in developing countries through research and education. Its funds were derived solely from royalties on the sale of blood tests devised to detect antibodies to HIV, the virus that causes AIDS. The patent on these tests expires in April 2004, ending royalty payments and, as a consequence, the granting of new WAF awards.

"WAF has had an enormous impact," said Kenneth Bridbord, M.D., Director of FIC's Division of International Training and Research, who has been involved with WAF since its inception. "It carved out a unique area in HIV/AIDS funding by focusing on training and by building public health capacity in developing countries. It is a tribute to all involved that they recognized quite early in the epidemic that HIV/AIDS had the potential to affect developing nations in a devastating way," explained Dr. Bridbord.

WAF was established following an agreement between Presidents Jacques Chirac of France and Ronald Reagan of the United States. The declared codiscoverers of the cause of AIDS, Robert Gallo, M.D., and Luc Montagnier, M.D., readily agreed that 25% of royalties from the diagnostic test designed to detect its presence should be used to help combat the growing pandemic. Dr. Gallo, who directs the Institute of Human Virology at the University of Maryland, said, "The World AIDS Foundation was the first of its kind. We are all proud to be a part of an organization whose sole goal was unselfishly [helping] developing nations. It is a model not only for AIDS but for how things can be done in many walks of life and all aspects of medicine, and that is its legacy."

In its 15 years of operation, WAF granted \$25 million in awards to further the understanding of AIDS and stem its spread. It funded more than 300 projects that have helped 80 developing countries in Africa, Latin America and the Caribbean, the Far East and the Pacific, and Eastern Europe, Russia, and the Newly Independent States of the former Soviet Union. Most awards were for 2 years, and the maximum for any single award was \$150,000. Nearly half the grants involved some form of collaboration with U.S. scientists to support work in developing countries. Increasingly, WAF was making awards directly to developing countries.

The largest number of grants awarded went to scientists from China, India, Vietnam, Brazil, Nigeria, Peru, Ukraine, Cameroon, Thailand, and Uganda, in that order. Although total funding was not nearly as substantial as amounts currently offered by the Gates Foundation or the Global Fund to fight AIDS, TB, and malaria, WAF supported efforts at a relatively early stage in the

HIV/AIDS epidemic and focused on areas not covered by these and other groups.

Examples of funded projects included the following: WAF facilitated a confidential HIV/AIDS counseling and testing center in Tbilisi, Georgia, and a program to prevent sexually transmitted diseases (STDs) and AIDS in mining areas of Ghana. It funded programs for safe blood transfer in Peru and AIDS prevention through literacy and education in Malawi. In addition, it provided training for trainers and peer educators for HIV/AIDS prevention in Turkey as well as funds for researching a reagent in India for detecting anti-HIV antibodies in a drop of whole blood.

Dr. Bridbord lauds the WAF grantees, calling them "the real heroes" out front in the fight against AIDS. One hero he cites is Jean Pape, M.D., a professor at Cornell University and the State University in Haiti. Dr. Pape and colleagues, with the help of a WAF award at a very early phase in Haiti's response to HIV/AIDS, enhanced the activities of the Haitian Study Group on Kaposi's Sarcoma and Opportunistic Infections (GHESKIO), a research center founded in 1982 by Haitian health professionals. Much of what is known about the clinical presentation, epidemiology, and transmission of AIDS in Haiti comes from studies carried out by GHESKIO, which today receives walk-in and referral patients from throughout Haiti and screens them for HIV, STDs, and tuberculosis. This and other WAF awards helped Haitian health authorities establish their response to the growing AIDS threat in their country.

Apart from providing financial support, WAF awards played a crucial role in helping educate developing-world scientists and governments on how to compete successfully in international grant systems. WAF awards were among the first that developing countries received from a research foundation on a competitive basis. It was a chance for health professionals from developing countries, who had good ideas but not much experience with grants, to present their ideas for consideration and have a realistic chance of being funded.

FIC, first representing NIH and subsequently the U.S. Department of Health and Human Services, played an integral role in WAF programs from the beginning. Moreover, WAF projects spurred more

than a dozen FIC International HIV/AIDS and tuberculosis training and research capacity-building programs in countries such as Poland, Mongolia, Peru, and Rwanda. WAF programs also enhanced NIH-supported HIV/AIDS programs in India, Russia, and South Africa and Centers for Disease Control and Prevention-supported HIV/AIDS activities in the Congo, Côte D'Ivoire, and Thailand.

WAF will continue to exist to support projects that have already been awarded. It is anticipated that these projects will continue for at least 2 more years. Funded projects have encouraged a cadre of qualified, independent researchers in the developing world and have helped prepare them to seek new sources of funding from major international funding organizations. "It is our hope," said Dr. Bridbord, "that the goals of the WAF will continue to be met, thanks to the efforts of all the talented and dedicated people who have been associated with this project over the years." •

Sad News

Alastair Clayton, Ph.D., who was at the forefront of the global effort to combat HIV/AIDS internationally, died in June in Montreal, Canada.

After leaving his post as Director of Canada's AIDS program, Dr. Clayton began an association with FIC that spanned almost 15 years. From 1990 to 1992, on loan from the Canadian government, he served as Senior Medical Science Advisor to the Center and conducted the first external scientific evaluation of FIC's newly established AIDS International Training and Research Program. He also played a leading role in the U.S. operations of the World AIDS Foundation (WAF), first serving as a member of the Scientific Advisory Committee for WAF and later assuming the responsibility of U.S. WAF Scientific Administrator on behalf of FIC. In this capacity, he oversaw the U.S. scientific operations of the Foundation, a cooperative endeavor between NIH and the Institut Pasteur in France. In appreciation of the extraordinary contributions Dr. Clayton made to FIC, then-Director Gerald T. Keusch recognized him with a FIC Distinguished Service Award, which was announced at a WAF scientific symposium in Paris in July.



Dr. Alastair Clayton

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Dr. Clayton is survived by his wife Denise of Montreal and three children, Ian, Fiona, and Veronique. He will be missed by his many friends and colleagues at FIC and around the world.

FIC Advisory Board News

Secretary Thompson has named four new members to the FIC Advisory Board. They are Elizabeth Barrett-Connor, M.D., D.C.M.T., University of California—San Diego; Patricia Danzon, Ph.D., the Wharton School, University of Pennsylvania; Wafaie Fawzi, Dr.PH., Harvard School of Public Health; Douglas Heimburger, M.D., M.S., F.A.C.P., University of Alabama, Birmingham; Lee W. Riley, M.D., UC—Berkeley School of Public Health; Jean A. Wright, M.D., Backus Children's Hospital; and May L. Wykle, Ph.D., R.N., F.A.A.N., Frances Payne Bolton School of Nursing, Case Western Reserve University. The new appointees will serve through January 2007.

The FIC Advisory Board is made up of world class experts, each of whom has relevant scientific expertise or is committed to advancing global health as a public member through the FIC programs and initiatives. New members join currently serving members: **Sharon Ramey**, Ph.D., Georgetown University School of Nursing and Health Studies; **Robert Redfield**, M.D., University of Maryland, Baltimore; **Burton Singer**, Ph.D., Princeton University, and **Dikembe Mutombo** (appointment pending).

At the last Advisory Board meeting in February, NIH Director **Elias Zerhouni**, M.D., gave his perspectives on global health and **Torsten Wiesel**, M.D., President Emeritus of Rockefeller University, discussed international programs for scientific interaction and training.

We are sad to announce the death on December 25 of **Theodore Reich**, M.D., who served on the FIC Advisory Board from 2000 until January 2004. Ted was the Samuel and Mae S. Ludwig Professor of Psychiatry and Professor of Genetics at the Washington University School of Medicine in St. Louis. Ted's NIH-supported work included genetic epidemiology, genomic study of bipolar disorder, and novel phenotypes for the genetic analysis of

alcoholism. In addition, he was Coinvestigator and Advisor on an Indian Department of Biotechnology grant in Bangalore, India, which is concerned with molecular genetic studies of schizophrenia and bipolar disorders, and he helped lead a team of geneticists in a 3-year study attempting to uncover the genetic basis of depression.

We also are sad to announce the death of Robert Shope, M.D., one of the world's foremost authorities on insect-borne viruses, who died on January 19 in Galveston, Texas. Bob Shope was a two-time member of the Advisory Board and a good friend of FIC. During his 30-year career at Yale, he directed the Yale Arbovirus Research Unit and helped develop a unique reference collection of thousands of virus strains. At the time of his death, he was a Professor at the University of Texas, Galveston, where he codirected the World Reference Center on Emerging Viruses and Arboviruses. Collaboration was a hallmark of Bob Shope's approach to science. Arboviruses were his specialty, but he is remembered just as vividly for connecting people as for the connections he discovered between pathogens and their hosts. �

FIC Launches New Program on Trauma and Injury in Developing Countries

FIC chose World Health Day (April 7), which this year focused on road traffic accidents, to announce the launch of a new program on trauma and injury in developing countries. This new program was cited by both Deputy HHS Secretary Claude Allen and Acting Assistant Secretary for Health Cristina Beato in remarks they made at World Health Day Events at the Washington, DC offices of PAHO. The program addresses the growing burden of morbidity and mortality in the developing world due to trauma and injury. Support will come from FIC together with seven NIH partners, the Centers for Disease Control and Prevention's National Center for Injury Prevention and Control, and PAHO. The goal of the program, which contributes to raising awareness of the human and economic costs caused by trauma and injury, is to build skills and knowledge on how to most effectively address these daunting problems in resource-constrained settings.

FIC and its partners are committing approximately \$7,000,000 over 5 years to support projects related to prevention, treatment at the scene, emergency medical facilities and services, post-acute care, development of low-cost prosthetic devices, and long-term care, including rehabilitation. Training may also focus on topics in low-cost technologies such as X-ray and ultrasound, ventilators, optimal resuscitation fluids, blood substitutes, and materials to cover wounds in burn victims. The focus on people and skills will have pay-off not only abroad but potentially back home as well to the extent that new technologies are transferable. �

Getting the Message Straight—Public Health and Medical Reporting

In this era of globalization in low- and middleincome countries, where access to the Internet and health care providers is limited, the media are a critical source of health information, particularly in defining health problems and building a public policy agenda.

FIC, with support from NCI and the National Institute of Environmental Health Sciences, sponsored a workshop to provide 25 Latin American and Latino health reporters an opportunity to share experiences and ideas about reporting on a range of health topics using the results of medical research. Topics covered during the workshop included AIDS, cancer and tobacco, and environmental health. Speakers addressed issues related to biology and the state of public health for each of the three topics, reporting barriers, and science communication, particularly related to risk and prevention. Breakout sessions focused on case studies and review and critique of recent health articles.

The journalists conducted a preliminary program evaluation immediately following the workshop. Overall, they found it highly rewarding, and 90% said they would strongly recommend a similar future workshop. Most agreed that it provided an excellent opportunity for exchange and direct dialogue between scientists and journalists and spurred further interest among the journalists to "visit the laboratories and see NIH scientists in action."

FIC intends to expand similar workshops to other regions of the world. �

FIC, NLM, and NIEHS Launch New Twinning Effort with Medical Journals

FIC, the National Library of Medicine (NLM), and the National Institute of Environmental Health Sciences sponsored a workshop that united editors from the *British Medical Journal, The Lancet, JAMA*, the *American Journal of Public Health*, and *Environmental Health Perspectives* with four African medical journal editors from Ghana, Mali, Malawi, and Uganda. Partnerships have been established between the Western and African editors. Recommendations regarding current challenges to publication of quality clinical research work were also discussed.

The African editors were asked to develop a proposal for a pilot project funded by Fogarty and NLM to help the journals improve their quality and content via improved equipment, access to experienced reviewers, mentoring relationships with the Western journals, and future training and capacity-building workshops to enhance and improve editorial expertise, journal content, and publishing issues.

Recent discussions among sponsors and Western journal editors, including Richard Horton of *The Lancet*, were held at NIH to assess the project's progress. The Office of AIDS Research was present to lend expert advice on how to interconnect NIH investments in Africa to the project. In addition, it was agreed that the Council of Science Editors would serve as secretariat of the pilot project. Sponsors hope eventually to include additional African journals in the pilot project and expand to other regions of the developing world.

Did you know...

More than 1.6 million individuals around the world lose their lives to violence every year. Violence, a leading cause of death for people aged 15–44, accounts for 14% of deaths among males and 7% of deaths among females worldwide.

Traffic injuries are responsible for more than 1.17 million deaths each year and are the world's leading cause of injury. Of this amount, 88% of

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According to World Health Organization estimates, approximately 1 million people died as a result of suicide in 2000, and 10 million-20 million more attempted suicide worldwide. This represents one death every 40 seconds and one attempt every 3 seconds. Suicide statistics from countries where stigma is attached to mental health-related problems and suicide may not be reliable.

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traffic-related deaths occur in the developing world. The majority of road traffic injuries occur in southeast Asia. From very limited data, it is estimated that pedestrians account for 41%–75% of all traffic-related deaths in the developing world.

Partnerships for Progress

FIC and Ellison Medical Foundation

FIC/Ellison Fellowships: Building U.S. expertise in global health, FIC and the Ellison Medical Foundation have teamed up to provide 1 year of clinical research training in the developing world for outstanding graduate-level U.S. students in the health professions who have a strong interest in international health and/or clinical research. The program is supported jointly with the Ellison Medical Foundation and is administered by the American Association of Medical Colleges (AAMC) and the Association of Schools of Public Health. Twenty-nine outstanding students applied for the first round of applications, of which 20 were selected in March after a rigorous 2-day interview and selection meeting. The successful students were matched to 14 previously chosen foreign research training sites, each with a strong track record of NIH-funded medical research and FIC training. Information on successful candidates and training sites is available on the AAMC Web site at: www.aamc.org/overseasfellowship.

Global Health/Local Health

FIC is partnering with the National Center for Minority Health Disparities (NCMHD) on a new effort to address global health disparities and to benefit minority populations in the United States. Recognizing that U.S. and foreign communities share many similarities, the FIC and NCMHD are exploring opportunities to encourage U.S. minority students to train abroad through FIC programs. Under a new agreement, NCMHD will provide \$750,000 in FY 2004 and \$1,000,000 in FY 2005 to support health science students pursuing international health research that addresses global health disparities relevant to minority populations in the United States. The initiative operates through the FIC/Ellison program, the International Research Scientist Development Award (IRSDA), and through dissertation research support for U.S. doctoral students

planning to study HIV/AIDS or other high priority research in developing countries that is relevant in the United States.

Environmental Health: FIC and NIEHS

FIC and the National Institute of Environmental Health Sciences (NIEHS) signed their second collaborative agreement to jointly support international initiatives of mutual interest. This agreement does not include NIEHS support for FIC's extramural programs, which totals \$1.65 million in FY04, but extends the relationship into priority areas that could become extramural programs or that inform current policy and practice. Included in the 2004 agreement are:

- Funding for regional meetings of International Training and Research in Environmental and Occupational Health grantees to plan, coordinate, and evaluate in-country research programs.
- Funding to support the development of environmental health programs at schools of public health in the Baltic region.
- Development of an environmental toxicology database in the National Library of Medicine World Library of Toxicology.
- Development of neurotoxicology programs in developing country neurosciences departments.
- Support for the NIH international Arctic health agenda.
- Support for training in scientific grant application writing in developing countries.

The FIC and NIEHS Directors have assigned responsibility for coordinating this agreement to Chris Schonwalder, Ph.D., Senior Environmental Health Advisor to the FIC Director. He comes to the FIC after 25 years in extramural programs and senior staff positions at NIEHS. NIEHS Director Kenneth Olden, Ph.D., Sc.D., L.H.D., notes the "...importance of coordinating environmental health efforts globally" through the FIC. Dr. Schonwalder has said that it is a joy and a challenge to work on these programs with the dedicated and enthusiastic FIC staff. "We work well together and enjoy sharing perspectives on the important things we can accomplish through this arrangement," he said.

Brain Gain: FIC, NIEHS, and the International Brain Research Organization

Recognizing the growing global burden of disease due to mental illness and cognitive disorders, the FIC led the development of a new partnership with the International Brain Research Organization (IBRO). The National Institute of Environmental Health Sciences (NIEHS), and the International Brain Research Organization (IBRO) have agreed to work together to support schools of neuroscience in developing countries. The schools are one of IBRO's main tools for building capacity in the neurosciences in low- and middle-income nations. School sessions tend to be 2 weeks long; teachers and mentors are leading neuroscientists. Recent schools have been held in Woods Hole, Massachusetts; Ofir and Obidos, Portugal; Warsaw, Poland; Cape Town, South Africa; Dubrovnic/Zagreb, Croatia; Mexico City, Mexico; and Nairobi, Kenya. Seventeen schools in as many countries are scheduled for 2004; FIC and NIEHS will identify up to three schools to be supported in FY 2004.

On the Diplomatic Front

FIC and Consejo Nacional de Ciencia y Tecnologia (CONACYT), the NIH of Mexico, signed an historic agreement in June 2003 to work together on common issues. Since that time, CONACYT and FIC have identified critical and innovative ways to move forward. Recently, CONACYT provided support to FIC for Mexican scientists who competed successfully in three FIC/NIH programs—Health, Environment, and Economic Development (HEED) Program, Fogarty International Research Collaboration Award (FIRCA), and Global Health Research Initiative Program (GRIP). This partnership benefits Mexico, FIC, and FIC's other partners in these programs—the National Eye Institute, National Institute on Aging, National Institute of Child Health and Human Development, National Institute of Environmental Health Sciences, National Institute of Neurological Disorders and Stroke, Office of Behavioral and Social Sciences Research, Office of Dietary Supplements, Office of Research on Women's Health, and the U.S. Geological Survey. FIC is actively seeking similar partnerships with other governments. �

Getting a GRIP on Brain Drain

FIC and eight NIH partners are supporting the Global Health Research Initiative Program (GRIP) to promote the productive re-entry of young NIH-trained foreign investigators from the developing world to their home countries. Awards provide \$54,000 annually for up to 5 years. The program is part of FIC's broader effort to enhance scientific research infrastructure in developing countries. It is combating "brain drain" and ensuring that developing countries do not lose the benefit of talented scientists, some of whom might otherwise decide not to return home after their training. In fiscal year 2004, FIC has awarded or will award the following GRIP awards:

- Leticia Marteleto, Federal University of Minas Gerais, Brazil—demography of the young and the elderly.
- Anneli Uuskula, University of Tartu, Estonia home screening of STDs.
- Denver T. Hendricks, University of Capetown, South Africa—esophageal cancer (funded by NCI).
- Alicia Aleman, University of the Republic, Uruguay—antenatal corticosteroids.
- Rosina Cianelli, Catholic University of Chile— HIV/AIDS prevention.
- Mario Caba, Universidad Veracruzana, Mexico—ontogenetic changes in control of rhythmicity in rabbits.
- Marcus Andrade, Universidad Federal de Minas Gerais, Brazil—mast cell toll-like receptors and parasitic pathogens.
- José Vazquez-Prado, CINVESTAV-IPN, Mexico—molecular mechanisms in polarized cell migration.

José Vazquez-Prado, Ph.D., was involved in early discussions with FIC on the need for the GRIP program. Now at his home institution in Mexico, he is working on molecular mechanisms in polarized cell migration of endothelial cells. His group is studying protein-protein interactions that are important for angiogenesis and is contributing to the identification of novel potential targets for antiangiogenic therapies. He mentors young graduate students who work in this important area. "I hope," he said, "that some of my students will eventually have the opportunity to train at NIH and to maintain and extend the scientific links that I established there, working with talented scientists from around the world." Dr. Vazquez-Prado praises FIC's efforts to promote the careers of new foreign investigators through the GRIP. "I am certain that this program will contribute to extending the benefits of training at NIH. I am confident that it will increase the scientific impact of my own country in global terms and will consolidate opportunities for collaborative efforts." �

Launching Independent Careers

The FIC teamed up with NCI, NIEHS, and other partners to host the first Career Fair for Foreign Fellows on the NIH campus. The Fair addressed a critical need, particularly for fellows from developing countries, by highlighting opportunities for them to pursue careers in biomedical and behavioral research in their own countries and by providing information on skill-building resources available to them as they navigate the transition after NIH.



Representatives of more than 25 embassies, institutions, and international organizations, including many who traveled from other countries to attend, came to the fair to present information on career opportunities. FIC Acting Director Dr. Sharon Hrynkow, who was key in the development of FIC's GRIP program and the establishment of the NIH Visiting Fellows Committee, lauded the Career Fair as an excellent and necessary step in providing information to visiting fellows and an especially useful resource for those from the developing world who are launching themselves on independent career paths. The Fair was praised, too, by Donna Vogel, M.D., Ph.D., Director of the Office of Intramural Affairs at NCI, who noted "it could only have been done as a partnership never before have the ideas, enthusiasm, motivation, and knowledge of career skill-building and the international scene been brought together in this way to benefit the Visiting Fellows, who form such a large and important part of the NIH research enterprise." �

Calendar of Recent and Upcoming Events

April 22–23—The 5th Global Forum on Bioethics in Research will take place in Paris, hosted by INSERM. Topics will center on intellectual property issues in health research. A tentative agenda has been constructed, including case studies of genetic databases, uses of medicinal plants from indigenous communities, community representation in research and IP activities, and benefit sharing. Meeting sponsors include NIH (FIC and NIEHS), CDC, the U.K. Medical Research Council, the Wellcome Trust, and the Rockefeller Foundation.

April 27—FIC, ORWH, and CIHR convene science-funding agencies, including partners across NIH, to consider gender, sex, and global health.

April 27–28—FIC will represent NIH as an observer to the European Medical Research Councils Meeting.

May 3–5—FIC will represent NIH as an observer to the Advisory Committee on Health Research, WHO.

May 17-18—FIC Advisory Board meets.

May 17–22—World Health Assembly.

November 11–16—Mexico Summit of Health Ministers/Global Forum for Health Research.

To be scheduled in spring—Science at NIH—a Day for the Diplomatic Corps. ❖

Other Paths for Daughters

Roundtable Examines Middle Eastern Research Opportunities for Women

By Carla Garnett

Imagine yourself as a teenager in science class, fascinated by a lecture describing the wonders of chemistry and biology. As various disciplines

John E. Fogarty International Center

unfold before you, your mind races with possibilities: What if science is it? Might this be what I was born to do? If you are growing up in Lebanon, Iran, or Iraq, however, your enthusiasm for further exploration is most likely tempered by realities: What job opportunities in science exist in my country? How far would I have to travel from home to study? And, if you're a girl in a culture that sees your potential solely as a wife and mother, the prospects for pursuing a career in science are more daunting still. Professional research seems improbable and unlikely. It should not seem impossible, though, according to the five NIH researchers—all women and all born in countries in the Middle East or North Africawho gathered on March 17 to discuss such issues in celebration of Women's History Month.

"The tremendous challenge in our countries is for parents who have not been educated themselves to realize that there are other paths for daughters besides marriage and children," said Iran native Helen Sabzevari, Ph.D., who left Tehran just months before the revolution at age 15 and who now works as a staff scientist and head of the molecular immunology section in NCI's Laboratory of Tumor Immunology and Biology under Lab Chief Jeffrey Schlom, Ph.D. "It is very important for those who have achieved in science to give young girls these kinds of dreams and to make them believe in themselves."

The benefit of role models cannot be overemphasized, agreed Senda Beltaifa, M.D., originally from North Africa. "I was very impressed with some of my female professors," she said, "but I was not given much opportunity to see much research at home. I had thought of doing research, being a professor, teaching and being a medical doctor, but then my life circumstances didn't allow me to pursue that. When we came to the United States and lived here in Bethesda close to NIH, it was like a golden opportunity I never dreamt about."

Hosted at the Stone House by the FIC, the program, "Remembering the Journey: A Middle Eastern Roundtable Discussion on Women and Science," was one of several March events planned by a trans-NIH committee under the theme "Women's Work and Women's Health: A Celebration of Knowledge and Achievement."

"NIH is a remarkably diverse place in many ways," acknowledged NIH Deputy Director

Raynard Kington, M.D., Ph.D., in introductory remarks. "We have 18,000 employees covering an extraordinary range of scientific disciplines, ethnicities, countries of origin and racial subgroups spread across 27 institutes and centers. I can assure you that throughout the leadership of NIH, we feel that it's one of our most distinguishing features and one of our greatest strengths."

A true commitment to diversity is when an organization's leaders believe that "without ensuring a diverse workforce, the agency won't survive," he continued. "We believe that. We can't do what we do best, we can't be the leading biomedical research agency in the country—in many ways, the world—without providing opportunities for the best minds to come here and excel, wherever they may begin."

Acting FIC Director Dr. Sharon Hrynkow championed the event as part of Fogarty's ongoing effort with the NIH Office of Research on Women's Health to examine career issues facing women in science in the developing world. "We must look at ways to enhance career options in the life sciences for women from all parts of the world," said Hrynkow. "Events such as this roundtable are rich opportunities for us to hear and to learn about where the needs and challenges are greatest as we work to strengthen partnerships globally." The discussion, moderated by FIC Acting Deputy Director Richard Millstein, covered a wide range of issues, focusing on the researchers' personal pathways to NIH.

Born and educated in Tunisia, Beltaifa worked as a primary physician for three oil companies in the United Arab Emirates before moving to the United States in 1999 with her husband and two children.

"I think it's important to exchange information in order to get to know each other better," she said. "We live here in your country and we have a chance to see you on a daily basis and interact with you, but given the distance of our places, I don't think many people have the opportunity to get close to people in our region and get to know them."

Beltaifa began her career in research after realizing that the rigorous schedule of a medical residency program in the United States "would be incompatible with my family life," she said. She volunteered in NIMH's Neuropathology Lab for 2 years before winning a postdoctoral fellowship there in June 2003.



Helen Sabzevari, Ph.D



Senda Beltaifa, M.D.



Aida Cremesti, Ph.D.



Dilyara Barzani, M.D., M.P.H.



Roshanak Tolouei Semnani, Ph.D.

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Conversely, Aida Cremesti, Ph.D., born in Lebanon, dreamed of conducting research as a child. A former research assistant at Memorial Sloan-Kettering Cancer Center and Columbia University who earned undergraduate and master's degrees at the American University of Beirut, she works as a postdoctoral fellow in NCI's Laboratory of Cellular Oncology.

"The reason I wanted a career in science is probably because I was so affected by my father who is a pharmacist," Cremesti said. "At a very young age I was so impressed by the fact that he could draw the structure of every drug and understand their compositions."

She said students in Lebanon can specialize in a discipline during their last 3 years of high school and she chose "experimental sciences. After I did my bachelor's and master's degrees, I realized that wasn't the end of it for me. I really wanted to learn more and actually do those experiments with my own hands that I was reading about in books."

A physician who did an internship in pediatrics and a fellowship in oncology, Dilyara Barzani, M.D., M.P.H., grew increasingly depressed seeing so many of her young leukemia patients suffer and die. "I thought that we would be helping people," she recalled, "but whatever we did never seemed to be helpful and I just thought there's got to be another way. I thought that the concept of prevention was the way to go. I still feel that way." She began pursuing cancer research as an alternative angle from which to tackle the disease.

A native of the Kurdish region of Iraq, Barzani was reared in Central Asia, earning an M.D. from Kyrgyz State Medical Academy in Kyrgystan. Wanting to enhance her research training, she came to the United States as an NCI cancer prevention fellow and earned a Master of Public Health degree at Johns Hopkins as part of the fellowship. Now completing epidemiological studies in the Tobacco Control Research Branch of NCI's Division of Cancer Control and Population Sciences, Barzani hopes someday to return to Iraq to establish a research infrastructure there and to enhance cancer control efforts.

Roshanak Tolouei Semnani, Ph.D., came to the United States to complete her education at age 17, 3 years after revolution closed universities in her native city of Tehran. A biology major in high school in Iran, she earned a bachelor's degree in genetics at the University of California, Berkeley. Fascinated by the lab work she was doing after college, she recalled being inspired by her supervisor. "My mentor at that time was a female scientist, an excellent scientist who was very enthusiastic and very encouraging. I was certainly influenced by her."

Tolouei Semnani then earned her Ph.D. in immunology at the University of Chicago and joined the helminth immunology section run by Thomas Nutman, M.D., in NIAID's Laboratory of Parasitic Diseases, where she was recently promoted to Staff Scientist.

Asked about constraints facing women in the Middle East, Tolouei Semnani described a multilayered problem. First, she said, the educational system "is very strict and very rigid," largely based on social policy. "We have sciences, but it was very much on a theoretical basis. We did not have laboratories, for instance, as a regular way of business—maybe once a month or less. We learned science in books, not by having labwork or benchwork. And that's where you get very excited."

"Economic factors also enter the equation," she pointed out. Given that there are no professions in research after graduation, most students are steered toward science studies leading to practical jobs in medicine, dentistry, or engineering. "Ironically, in the last decade a lot more women are entering

university," she noted, "but after that, the jobs are more for men. Research is not feasible, either economically or politically."

Beltaifa agreed that social and cultural structures often predetermine the roles of the sexes. "In the Middle East, women are not supposed to be the primary breadwinners of the family," she explained. "It's men's responsibility. It's a men's society. No matter how hard women work or how educated they get, men would never let [women] take over and pass them."

"Besides," she said, "the financial resources of most Middle East countries are necessarily focused on building roads, schools, hospitals, and other basic services, before scientific research."

"The Middle East places a lot of emphasis on family structure," agreed Cremesti, who said she was lucky to be born in a family where her gender did not matter—sons and daughters were reared equally. Many of her friends are not as fortunate. "Girls are raised to believe they should get married and have children. The challenges of pursuing science are well known. It is believed that if women commit to the rigors and demands of a career in science, they will become so smart and so overqualified that it will be hard for them to find a matching husband."

Sabzevari said that's why encouraging dreams, and providing role models is crucial for the future of young girls in the region. "I believe it is so important the role that other women play in your life," she concluded, recalling a female Ph.D. who had been dismissed from a university for political reasons, but ended up teaching high school biology and inspiring at least one young woman to follow her own path to research. "She saw the way it should have been, although it did not work out that way for her. It was the vision she had that she transferred to me." •

FIC Staff: Who We Are

I joined FIC in December 2002 after working at the Smithsonian Institution for 24 years. I love working at Fogarty because I truly believe in our mission to end health disparities throughout the planet and because the staff is so friendly and professional. The commute from College Park, Maryland, on the subway gives me a lot of



Brinah White, Budget Analyst

spare time, so I'm trying to learn Spanish from some tapes I got for Christmas.

My husband's 14-year-old son spends every other weekend with us, and that usually involves a

house full of teens. He also plays baseball, and I'm proud to say is a dynamite catcher. In addition, I have a 37-year-old son named Chuck who works for the U.S. Customs Service and just got married in December in Las Vegas. I went along and it was a blast!

In my spare time, I like to quilt, do needlework, spend time with my family (including my rescue dog, Roscoe), camp, travel, go to yard sales, and, whenever I get the chance, scuba dive. Once a month, I give the children's sermon at my church, using one of a selection of puppets. I am thinking of taking up agility training with my dog because I think it would be a lot of fun for us both. ❖

On the Move

Welcome to:

Gregg Davis, the new Program Officer for East Asia and the Pacific in FIC's Division of International Relations. Gregg is a Lieutenant Commander in the Commissioned Corps of the U.S. Public Health Service and a registered pharmacist.

He comes to the FIC from the Office of Generic Drugs in the Center for Drug Evaluation and Research at the FDA, where he served most recently as Deputy Director of the Division of Labeling and Program Support. This Division was responsible for regulatory affairs and patent/legal issues as well as project management and substantive labeling reviews for firms filing abbreviated new drug applications.

Welcome back to Jean Flagg-Newton. Jean recently returned to FIC as a Special Assistant in the Office of the Director. She had been serving as Deputy Director and Chief, Office of Research, at the National Center on Minority Health and Health Disparities. She played an important role in the early development of the NCMHD, including the development and implementation of the three programs authorized in the legislation that established the Center—the Loan Repayment Programs, the NCMHD Endowment Program, and the Centers of Excellence Programs (also called Project EXPORT). Prior to the establishment of NCMHD in January 2001, Jean was Deputy Director of the Office of Research on Minority Health and, before that, a Program Officer in the FIC's Division of International Training and Research.

Farewell to:

Allen Holt and Luis Salicrup.

Allen Holt, Ph.D., who had been at FIC since 1990, retired from government service on October 31. Prior to his retirement, Dr. Holt was Program Officer for the Far East in FIC's Division of International Relations. Over the course of his tenure at FIC he had also served as Program Officer for Central and Eastern Europe and Western Europe and for Latin America and the Caribbean in an acting capacity.

Luis Salicrup, Ph.D., who was FIC
Program Officer for Latin America and the
Caribbean, left the Center to become Senior
Advisor for International Technology
Transfer in the Office of Technology
Transfer, Office of the Director, NIH. ❖

Colloquium on Career Paths for Women in the Health Sciences: A Global Perspective

Women health scientists in developing countries face an environment in which pursuit of a research career, career advancement, and re-entry into the work force after childbirth are stymied by cultural, social, and economic factors. These may include little government support for education and research, a cultural bias against women entering the scientific field, and limited access to international funding agencies.



Dr. Vivian Pinn addresses colloquium participants.

FIC, along with the Office of Research on Women's Health and the National Institute on Environmental Health Sciences, hosted a meeting October 17–18 to stimulate discussion about barriers to the advancement of women scientific leaders and best practices used around the world to enhance opportunities. More than 14 countries were represented, including 21 developing country participants.

NIH Director Elias Zerhouni, M.D., and DHHS Director for Women's Health Wanda Jones opened the colloquium, whose speakers challenged the audience to think practically about how to engage the best and brightest women in the biomedical and behavioral research enterprise in the coming decades.

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Participants included Wagida Anwar, Ph.D., Ain Shams University, Egypt; Seth Ayettey and Isabella Quakyi, University of Ghana; Viji Ravindrinath, National Brain Research Center, India; Susan Johnson, Dikembe Mutombo Foundation, Atlanta, Georgia; and Shirley Malcom, AAAS, who challenged the group with the statement "No country can afford to waste half of its brain power." Many speakers honored Ruth Kirschstein, M.D., Senior Advisor to the NIH Director, who had served as a mentor for many participants and hundreds of others during her career.

Outcomes and recommendations included the following:

• More data are needed to better understand the status of women in science in developing

- countries. Some data exist on women's status in Organization for Economic Cooperation and Development member countries, including the United States and Sweden, but relatively little other information is available.
- Women need to do a better job of networking, particularly through informal means.
- Encourage and reward women leaders in academia who serve as mentors to the younger generation.
- Promote a "women in science" agenda that includes input from both men and women government policymakers and academic leaders.

- Support career development workshops and training sessions for women scientists.
- Explore support for family care while women participate in study sections or other administrative tasks.

FIC will work with NIH partners to explore each recommendation and identify support for additional work in this area. ❖

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

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