

Chapter 2

THE WEILL CORNELL MEDICAL COLLEGE¹

From Scudder to Qatar – More than A Century of International Impact

In 1898 Ida Scudder rode her bicycle from Philadelphia to New York to enroll in Cornell's new medical school, one of the first coeducational medical schools in the U.S. In much less than the time it took her for that journey, faculty members of the school today travel the 6700 miles from New York to Doha to teach classes in the Qatar branch of the Weill Cornell Medical College. In some ways, a great difference — yet, a thread joins these two extraordinary circumstances and it reflects the impact Cornell has had beyond New York in the field of medicine. That thread is the tradition of reaching out beyond the facilities at 1300 York Avenue on the east side of New York City to far off places such as Haiti, Brazil, India, Tanzania, and Qatar to share health resources wherever they are needed. Throughout its existence, the Medical College's international initiatives have been multi-faceted, including research and institution building, technical assistance, patient care, and medical training. As Dr. Antonio M. Gotto, Jr., the Dean of WCMC said: "We know that all the world is our hospital, our laboratory, and our classroom."²

From New York to India

Ida Scudder was among the earliest women graduates of the Medical College. There were 12 women in the first graduating class in 1899 — a rarity for the time. In 1900, influenced by her missionary parents and by her visits to South India at the turn of the century, and armed with her new Cornell MD credentials, Dr. Scudder returned to India to start a one 8x10-room clinic in Vellore. In two more years she established a 40 bed Hospital for Women and Children for which she initially was the entire medical staff. In 1909 she started the School of Nursing and was influential in the establishment of a medical school that trained women — forerunner of the Christian Medical College, a recognized unit of Madras University. Her fondest dream came true in 1918 with the opening of a medical school for women. With the training of these women as doctors and nurses, Indian women would now begin to have much easier access to health care professionals. (Men were admitted in 1947).



Dr. Scudder's earliest vision included a primary concern for the health of women, the poor and other marginalized people, resulting in her efforts to reach outlying villages "taking medical care to the doorstep of those lacking access to health care"³ and to many who had never seen a real doctor or nurse. It was a theme that was to appear frequently in Weill Cornell Medical College's activities throughout that century and into the 21st century. And, in 1916, this was the beginning of Christian Medical College's first "roadside" dispensary. Over the years, these roadside dispensaries have developed into extensive rural health and development programs that have become internationally acclaimed in the community health field. These dispensaries have attracted members of

¹ We wish to acknowledge the assistance of Joan May in supplying material for this chapter.

² Antonio M. Gotto, Jr., "All the World," *Weill Cornell Medicine*, Winter 2007, p. 2.

³ *Facts and Figures, 2003-2004*, Christian Medical College, Vellore, Tamilnadu, India.

the medical community from around the world — from young medical students to nurses to highly skilled surgeons — to study and to contribute their skills to health services

The 100 years since Ida Scudder opened the first small clinic have seen remarkable growth in the healthcare delivery in the Vellore area. The typical daily activities that go on there today involves 2,000 outpatients per day, 1,000 inpatients, 43 operations, 22 clinics, and 16 births.⁴

At the 60th anniversary (1959) of its first graduating class, the Cornell Medical College presented Dr. Scudder with its annual Award of Distinction. On the occasion, Dr. S. Lawrence Samuels, Class of '29, commented: "[Our recipient] is not only an outstanding physician and teacher, and the founder of a hospital, a medical college and nursing school, but one of the best goodwill ambassadors ever sent from these shores to foreign lands."⁵ The Cornell-Scudder relationship continues to this day with the Scudder Family Foundation offering a scholarship each year to a graduating WCMC student to spend an elective month at the medical facility in Vellore.

Landmarks in WCMC going global

For much of the 20th century, many Cornell Medical College faculty members and medical students embarked on projects in various parts of the world without the formal structure of an international or global program, and students from abroad obtained medical training at the New York City facility. For example, Cornell deans and faculty played a prominent role on the China Medical Board, a major program of the Rockefeller Foundation in 1914 which was dedicated to bringing modern medicine to China. The initial charge to the China Medical Board was to establish and operate the Peking Union Medical College in Beijing which it carried out from 1914 through 1950. The Board — endowed in 1928 as an independent foundation incorporated in New York — was chaired in 1956-57 by Dr. Joseph Hinsey, who served as director of the New York Hospital Cornell Medical Center for 13 years until his retirement in 1966. Dr. Hinsey was regarded as "a noted teacher of physicians."⁶

But fast forward to the first decade of the 21st century, and one can see listed on its web page official Weill Cornell Medical College activities taking place in many parts of the world. The list includes:

Austria - Rural healthcare
Bolivia - Rural Health Care
Brazil - Leishmaniasis, HIV, AIDS, Tuberculosis
Costa Rica - Cardiology, Rural Health Care
Ecuador - Pediatrics
Ghana - Infectious Diseases
Guatemala - Rural Primary Care
Haiti - AIDS, Tuberculosis
Honduras - Public Health
India - Rural Health, Ophthalmology, Infectious Disease
Kenya - Substance abuse, AIDS education, Malaria

⁴ From the Christian Medical College webpage <http://cmch-vellore.edu/pages/?id=scudder> accessed May 20, 2008. A recording of Dr. Scudder telling her story is available at the web page.

⁵ "Dr. Ida Scudder Given Annual Award of Distinction by Cornell University Medical College," *Scudder Association Bulletin*, Bulletin XIX, October 1959, p.10.

⁶ "Joseph Hinsey, Noted Teacher of Physicians," *New York Times*, March 26, 1981.

Malawi - Infectious Diseases
Mexico - Pediatrics, Reproductive health
Qatar – Weill Cornell Medical College in Qatar, offering Cornell M.D degree
South Africa - Woman's Health, Rural Health Care, Malaria, HIV
Tanzania - Infectious Diseases

In addition, since the early 1990s Cornell has participated in training young European doctors through the Salzburg Cornell Seminars. The program is described later in this chapter. Some international activities were largely the result of individual efforts rather than a systematic institutional attempt to build an international presence in the health and medical fields. For example, Dr. Henry Murray, a faculty member who was also a Cornell med student, tells of setting up his own lab at WCMC in the 1990s to do research on visceral leishmaniasis (VL), also known as kala azar ("black fever"). VL is a fatal disease transmitted by sand flies. They spread leishmania parasites that attack humans' internal organs. VL is endemic in 62 countries, and the number of new VL cases per year is estimated at 500,000. With the exception of malaria, VL kills more people than any other parasitic disease. VL is especially prevalent in the rural communities of India, Bangladesh, and Nepal.⁷ Dr. Murray reports that a medical researcher from India offered him the opportunity to extend his research into a remote spot in Bihar, a geographic area where VL was prevalent. Through years of collaboration and with relatively few resources, by 2008 the modest initiative had resulted in a major Indian tropical medical research enterprise where some Cornell medical students now go for internships.

In 1979, to formalize its commitment to global health, Cornell established a Division of International Medicine in the Medical College's Department of Medicine. This was supported by a million dollar gift from Stavros S. Niarchos, a Greek business man and builder of mammoth ocean-going tankers. Niarchos, according to his Foundation, "understood the meaning of thinking and acting globally long before the term globalization became so prominently used in public policy and economics."⁸ His business operations began in Greece, the country of his birth and heritage, yet his accomplishments were notable worldwide. He was considered to be one of the most successful businessmen of the twentieth century. Dr. Tom Jones, whom we will meet later in this chapter, headed the Division from its beginning through 1986.

In 1995 the Division incorporated infectious diseases and the College's AIDS program in its mandate thus becoming the Division of International Medicine and Infectious Diseases. In 2005, Weill Cornell created the new position of Associate Provost for International Initiatives and Executive Vice Dean to reflect "the College's commitment to its growing international scope, transnational reach, and global vision for medicine in the 21st century."⁹

The New York City based Medical College became more closely linked to health-relevant activities on the Ithaca campus in 2006 with the establishment of a Global Health Program that included Weill Cornell, Human Ecology, Veterinary Medicine, Arts and Sciences, and Agriculture and Life Sciences. Funded by National Institutes of Health

⁷ "\$30M Gates Foundation Grant Aims To Greatly Reduce Visceral Leishmaniasis (Black Fever) Deaths, Institute For OneWorld Health," *Medical News Today* on-line, accessed May 20, 2008 at <http://www.medicalnewstoday.com/articles/34489.php>.

⁸ Stavros S. Niarchos - Biography, Stavros Niarchos Foundation available at <http://www.stavrosniarchosfoundation.org/page/default.asp?la=2&id=7> accessed May 14, 2008.

⁹ "Weill Cornell Names Steven Rosalie as Associate Provost for International Initiatives and Executive Vice Dean," *WCMC News*, Cornell University Weill Medical College. April 27, 2005.

its co-leaders were Professor Rebecca Stoltzfuz, co-director of the International Nutrition Program on the Ithaca campus, and Dr. Warren Johnson, Chief of the Division of International Medicine and Infectious Diseases at WCMC in New York City. The vision of the program was spelled out in Cornell's application for funding:

Our vision is to create a sustainable and innovative university-wide Global Health training program...that engages undergraduate, graduate, and medical students and faculty from multiple disciplines to solve problems of global health [so that its students] will make lifelong contributions to global health, particularly problems of resource-poor countries.

The Global Health Program combines courses with domestic and international research experiences "to provide a career pathway for the next generation of global health scientists" to solve global health problems.¹⁰ The Program focuses on undergraduate and graduate students on the Ithaca campus, and med students in New York. WCMC hosts a 10-week summer internship in global health. The overall theme of Global Health is reflected in Global Health courses that draw on a variety of disciplinary perspectives, including economics, sociology, biology, ethics, public policy, nutrition, agriculture and others, and explore issues such as poverty, poor water and sanitation, and environmental degradation. Global Health students also participate in international internships at various collaborating sites. Initially the sites that agreed to collaborate included the School of Medicine, Federal University of Bahia in Brazil, the GHESKIO Centers in Haiti, the Instituto de Investigación Nutricional in Peru, The Public Health Laboratory in Zanzibar, Tanzania, the Federal University of Rio's School of Medicine in Brazil, the Oswaldo Cruz Foundation in Brazil, the Center for Health and Population Research in Bangladesh, and the Noguchi Memorial Institute for Medical research in Ghana.

The program's globalization dimension became highly visible in the winter of 2007-08, when a delegation from WCMC and from various units on the Ithaca campus traveled to India as part of an effort to understand better the links among agriculture, nutrition, and infectious disease. Dr. David Hajjar, Dean of the WCMC Graduate School of Medical Sciences, put the issue succinctly: "Better farming could mean better health."¹¹

Major international programs

Since it was established in 2000 by Dean Gotto, the Medical College's Office of International Medical Education (OIME), renamed the Office of Global Health Education (OGHE) in 2006, has expanded the number of international programs available to Cornell medical students. For example, there are medical student exchange programs with several countries: The United States-European Union Medical Educational Exchange program's partners include medical schools in Denmark, Germany, and England. The Max Kade Foundation program enables Cornell University medical students to do an elective in Vienna, Austria. The Weill Cornell-University of Sydney exchange program enables students to obtain both an urban and a rural clinical experience in Australia. The Klinikum rechts der Isar/Technischen Universität (Germany) program involves both student and faculty exchanges. In addition, Weill Cornell has international affiliation agreements with several institutions around the world including

¹⁰ Framework Program for Global Health, proposal to the National Institutes of Health. The three year program was funded in 2006.

¹¹ David P. Hajjar, "Beyond the Lab", *Weill Cornell Medicine*, Winter 2007, p. 3.

the American Hospital of Paris (France), the American Hospital in Istanbul (Turkey), Hallym University Medical Center (South Korea), and the Weill Bugando Medical School in Tanzania.¹² International programs have also involved monumental research and institution-building activities.

In this chapter, we highlight some of the Weill Cornell international initiatives both abroad and in the USA, acknowledging that it is not a comprehensive encyclopedic exploration. Many international ventures during the latter 20th century and into the 21st century are programs based in developing countries such as Brazil, Haiti and Tanzania. These represent the earliest formal attempts in the Medical College's history to build health and medical capacity abroad. We start with Brazil.

In 1964, Doctors B. H. Kean, E. Hugh Luckey, and E. W. Hook established a relationship with Brazil's Federal University of Bahia in Salvador, Brazil that reflects an approach characterizing many of the WCMC's programs abroad — an exchange in which partners each benefit from and contribute to the programs. In his autobiographical book *M.D., One Doctor's Adventures Among the Famous and Infamous from the Jungles of Panama to a Park Avenue Practice* Dr. Kean tells about an early episode (1967) in the Cornell involvement with Brazil that reflected this early collaboration. As part of his so-called "medical sleuthing," Kean and a colleague had attacked the problem of schistosomiasis by experimenting with a blood filtration scheme on baboons. Kean reported that

The results in all six baboons were so precise, so mathematical, and so predictable that we felt further experimental trials were unnecessary. It was high time, we thought, to try out our system on a human subject. And it was then that we encountered the most important, difficult problem facing all researchers who work in medicine: medical ethics.¹³

Thus an important question remained: How does one go about translating an animal experiment into a standard operation on human patients? Dr. Aluizio Prata, a parasitologist and then a visiting scholar at Cornell, urged Dr. Kean to go to Prata's native Brazil where *mansoni*, one of the major parasite agents of schistosomiasis, was a "raging national crisis." Properly following medical ethics and piggy-backing on procedures then being used at the Hospital Edgard Santos at the University of Bahia in the treatment of schistosomiasis patients — and with the approval of the human rights committee at Cornell — Kean, an American colleague Ed Goldsmith, and a Brazilian team conducted a blood filtration process that captured 799 worms from a 14-year old male student. Ultimately, Kean admits, the age and success of extracorporeal hemofiltration proved to be a brief one. He recalled that "Soon clever pharmacologists sent all of our cumbersome tubes, pumps, and filters the way of the Edsel, platform shoes, and the four-track stereo by developing drug therapies so effective as to render surgery for schistosomiasis unnecessary."¹⁴ However, it was a step toward a long-lasting partnership with Bahia. Kean noted that he was not complaining about the new drug therapies preempting his blood filtration system because much of the pioneering work on the clinical use of an effective drug *praziquantel* was done by the World Health Organization's schistosomiasis unit under the direction of Dr. Ken Mott, a former student

¹²The International Gateway, <http://www.international.cornell.edu/unit/med/>, accessed May 16, 2008.

¹³ Kean, B. H., *M.D., One Doctor's Adventures Among the Famous and Infamous from the Jungles of Panama to a Park Avenue Practice*, Ballantine Books, New York 1990, p. 345.

¹⁴ Kean, p. 362.

of his. Mott was an example of Cornell's multi-directional reach into the international health arena. He obtained medical degrees from Cornell Medical College and the Federal University of Bahia in Brazil and a Masters in Tropical Medicine from Harvard School of Tropical Medicine. He joined WHO in 1977 and until his death in 1997 was in charge of programs dealing with the disease schistosomiasis and internal parasites, especially in third-world countries. He was one of the first WHO officials to visit China in the late 1970s and continued to travel there frequently to advise the Government on health matters.¹⁵

According to Dr. Warren D. Johnson, Jr., the B. H. Kean Professor of Tropical Medicine and Director of the Division of International Medicine and Infectious Diseases, "more than 350 Cornell students, residents, fellows and faculty members have participated in Cornell-Bahia programs, and more than 250 peer-reviewed journal publications have emerged from the research." He notes that the Cornell-Bahia collaboration may be the longest collaboration of its type in the world today. It was a model for Cornell then to build a systematic commitment to the education of medical personnel in the developing world. Bahia had the facilities and patient population for the training and research in infectious diseases that Cornell wanted, and Cornell could provide the training in clinical and basic sciences needed by Bahia's School of Medicine.

Prominent in the Cornell-Bahia program was the exchange of faculty and students that began in 1964 — supported by the Commonwealth Fund. This long lasting collaboration opened the way for the establishment of Cornell's Tropical Medicine Research Center and a variety of research efforts on health issues. They addressed and continue to address problems relevant to Brazil and beyond. For example, leishmania (spread principally by sand flies) has become a problem in such diverse places as Afghanistan, Bolivia, Brazil, India, Iran, Nepal, Peru, Saudi Arabia, Sudan and Syria — and possibly in as many as 88 countries affecting some 12 million people. Dr. Johnson says that "during the past three decades, Cornell and Brazilian collaborators have characterized the clinical manifestations, epidemiology, pathogenesis, genetics and therapy of the disease." A former faculty member Dr. Steven Reed at WCMC received a \$32 million grant from the Gates Foundation in 2006 to field test a leishmaniasis vaccine based on research he initiated while at Cornell in the 1980s.

In 1996, Cornell joined with the Oswaldo Cruz Foundation and the Brazilian Ministry of Health to address infectious disease problems related to urban poverty, a dramatically spreading problem in Brazil and elsewhere because of rapid urbanization and the migration of the rural poor to cities. This problem is especially significant because a billion of the world's population lives in slum settlements. In less than half a century the rural-urban migration in Brazil has resulted in a 350% growth in the favelas (slum) population, and to a new pattern of infectious diseases. The Cornell-Bahia partners established a research and training program focusing especially on respiratory infections and bacterial meningitis. An example is the problem of leptospirosis, one of the most common animal diseases that can be transmitted to humans through contaminated soil or water. The disease is often transmitted by rats and thus is associated with slum living conditions. Initial flu-like symptoms can be followed by jaundice and kidney complications. The National Institutes of Health (NIH), which began supporting the Brazil initiative in 1979, agreed to fund WCMC's Tropical Medicine Research Center and a leptospirosis research program in Salvador, Brazil through 2012. A longitudinal study of 9,000 residents in a poor urban slum community in Brazil has helped uncover vaccine development strategies and other interventions to address

¹⁵ "Kenneth Mott, 58, Tropical Disease Expert," *New York Times*, June 23, 1997.

epidemic conditions. One of the very tangible successes of the initiative was summed up by Dean Hajjar:

In Brazil, researchers were able to single out a protein located on the surface of the bacterium *Leptospira interrogans*, a major public health threat in the urban slums of developing countries like Brazil. The disease is passed from animals to humans through close contact....Contributing researchers like our Dr. Albert Ko were able to discover the active agent causing the disease — which was previously unknown — where it wreaks the most havoc.¹⁶

The world is our classroom: Jamaica and the Elderslie Plan

In 1969, faculty and students in the Medical College highlighted a significant dimension of public health when they embarked on a rural health project on a hilltop in Jamaica's Elderslie district and where the "classroom" included reaching out into the community to learn about the living conditions and resources before prescribing solutions. Dr. Michael Alderman, an assistant professor of Public Health, led the program that involved the Jamaican Ministry of Health, the University of the West Indies and some of the fourth year Cornell medical students. The project site was Black River, a coastal town on a hilltop town in Elserlie district, population 5500, with semi-paved roads leading in and out, no electricity and a tenuous water supply. However, the district had a modern clinic which was the site for most project activities during the first year.¹⁷ The formal health establishment was sparse, running alongside indigenous health providers that included a voodoo practitioner, a balmist who practiced a kind of psychological catharsis therapy, and an untrained midwife. It was a long distance from New York's sky-scraper-punctuated upper east side! The Cornell students cooperated with the local health staff to design and carry out community health projects and to assist in the delivery of health care. The project also trained local community health aides in order to build a local system that would continue beyond the project's official life span.

Demographic data on child health pointed to malnutrition as a major factor in two thirds of under-five-year-old deaths. Because malnutrition was perceived by the project team to be a product of social, economic and education factors, a modern "clinical physician" approach did not seem to be a sufficient solution to the problem. Thus,

As a beginning, an attempt to improve child nutrition seemed more feasible because the necessary technology (knowledge of good nutrition), the required resources (local foodstuffs and government provided dried skim milk) and the means of delivery (Community Health Aides) were all available at Elderslie.¹⁸

The Elderslie project emphasized the importance of *flexibility* in developing health delivery systems: Alderman and his Cornell and Jamaican colleagues stressed that assessment of pertinent resources and problems ought to precede the design of each delivery system. They suggested that the physician's major impact may not be as a clinician, but "rather as an innovator, evaluator and consultant." In Jamaica, this was the role in developing a child health program, with the Community Health Aides (trained by

¹⁶ Hajjar, " p. 3.

¹⁷ Much of this description is based on M.H. Alderman, D.S. Cadien, P.B.H. Haughton, H.M. Johnston and K. G. Johnston, "A Student Rural Health Project in Jamaica," *West Indies Medical Journal*, XXI, 20, 1972.

¹⁸ Alderman *et al*, 1972.

the project team and expected to sustain the program) providing the primary services — supervised by nurses with the general guidance of physicians.

The most incredible experiment in medical education

Dr. Tom Jones described a Cornell Medical College experience in Thailand as "one of the most incredible experiments in medical education." The College had created the Division of International Medicine in 1978, initially headed by Dr. Jones. It provided the setting for what became the Cornell-Thailand Experiment. Led by grad Ted Li '77, a Cornell medical team responded to a massive medical crisis on Thailand's border that included malnutrition, malaria, and infectious diseases of all kinds. Political unrest and violence in Cambodia sent refugees streaming into refugee camps, including Khao I Dang, where the Cornell Medical Team was posted under the overall administration of the International Rescue Committee. The Cornell Team initially consisted of 18 persons: eight nurses, five medical students, three residents, and two faculty members. Using a rotation system, ultimately 50 medical students, 50 nurses, 40 medical residents and 10 faculty members contributed to the Cornell Team, including personnel from other universities. The nurses were experienced emergency room and intensive care nurses from all over New York City. Some hospitals continued the nurses' salaries while they were on the Cornell Team; some physicians and nurses participated at their own expense. The medical students received credit toward graduation. In addition to helping provide 24-hour emergency service covering a wide range of critical medical problems for the refugees, the Cornell Medical Team initiated a camp-wide education program for health workers focusing on weekly "ground rounds" where key medical problems were discussed in open forum and their solutions sought. Such problems might be vitamin deficiencies not seen in Western countries, unusual manifestations of infection, and tropical diseases — which were all part of the "curriculum." In addition, the Cornell Team provided a series of lectures to the Cambodian assistants on all aspects of health care epidemiology and intervention treatment, "ensuring that subsequently the full medical care of the people here would one day be in the hands of Cambodian health workers." Patient care, education of local health people, and medical school learning were all part of this experience which "is but one chapter in the Cornell mosaic of international education."¹⁹

Cornell's move against HIV/AIDS in Haiti

Cornell had established programs in Haiti prior to 1980. Weill Cornell's Department of Pediatrics was a major actor in there with its sponsorship of Dr. Florence Marshal for work at Haiti's Hospital Albert Schweitzer. She and her team had worked on the epidemiology, management and prevention of neonatal tetanus. In 1980, Cornell continued its involvement there with a focus on infantile diarrhea. Med school people participated in the establishment of a unit at the State University Hospital and Medical School for the study and treatment of infantile diarrhea. The program reduced in-hospital mortality from 40% to 1%. A new major international health challenge — HIV/AIDS — expanded Cornell's involvement in Haiti. Box 3.1 is a first hand account by Dr. Kean describing how he saw a new challenge in solving questions about AIDS and its pathway to Haiti.

¹⁹ Thomas C. Jones, The Cornell-Thailand Experiment — The Role of an Academic Medical Center in Cambodian Refugee health Care —1980-82, unpublished paper, p. 4.

Box 3.1 Dr. Kean and Haiti

...AIDS, so enigmatic and deadly, was something completely new in my experience. Although I would be little more than an armchair medical detective in the attempt to unravel its conundrums (the important research would be done by much younger men, many of them my former students) I couldn't resist being drawn into one last scientific manhunt....There were two basic riddles to be solved: What caused AIDS, and where had it come from?....

The first answer came relatively quickly... a strange retrovirus which became known as HIV.... That left the question of the origin of the disease and thanks to my peripatetic wanderings as a tropical medicine man I had something to contribute. The first major clue, ignored by those less familiar with obscure illnesses, hit me like a ton of bricks. This was the sudden appearance among AIDS sufferers of a brutal cancer known as Kaposi's sarcoma....

So in 1982, I asked Jean Pape [his former medical student at Cornell] to make a thorough check of pathology records at all major hospitals, clinics and morgues in Haiti. The results were crystal clear. Not a single case of Kaposi's sarcoma had been recorded on the island until 1979. Kaposi's sarcoma, an old disease in Africa, was new to Haiti. So then was AIDS. Now the \$64 million question: How did they get there in the first place?... To my mind, the epidemiological route of AIDS was now clear. It ran from Africa to the United States, and cut straight through the heart of Haiti. The disease had been transmitted to Haiti by the local equivalent of returning Peace Corps volunteers....

Whatever the route or routes, it became apparent...that what started as a disease of the tropics had evolved into a health crisis of truly global proportions....[T]he tropics had risen and penetrated the gates of Western civilization in a most disastrous fashion.... I reflected on the return of my parasitic foes with glum irony. It was, in the immortal words of the philosopher Yogi Berra, like *déjà vu* all over again....

[Dr. Keane, at age 80, then was sitting with Jean Pape at the Oloffson bar reviewing the glum statistics of AIDS in Haiti. Pape is talking:]

"Did you ever think... that we'd be sitting around talking about how parasites were dominating a brand new epidemic like AIDS?"

I [Kean] shook my head and stared blankly ahead into the gloom. After a lifetime filled with encounters with strange parasites, to say nothing of even stranger encounters with some of my patients, even I found this final irony a little hard to swallow.

"Well," said Pape, breaking into his wide grin, "I guess this means you'll just have to train a whole new generation of parasitologists to cope with the problem — the way [Francis W.] O'Connor trained you and trained me."...

"Enough!" I shouted in the abrupt, irascible manner of my old teacher. "Bartender, bring me another rum punch, and step on it." Out of the corner of my eye I could see Jean Pape smiling even more broadly now; he had me, and he knew it. I ignored him. After all I needed time to think about just how I was going to tackle this new assignment.

— from B.H. Kean, *M.D., One Doctor's Adventures Among the Famous and Infamous from the Jungles of Panama to a Park Avenue Practice*, Ballantine Books, New York, 1990, pp. 396-40.

A Cornell team began AIDS research in 1982 and participated in forming the Haitian Study Group on Kaposi's Sarcoma and Opportunistic Infections (GHESKIO)²⁰ — a non-governmental institution whose mission continues today to provide the service, training and research that has the potential to improve health care in Haiti. GHESKIO is the second oldest institution in the world, after the U.S. Centers for Disease Control and Prevention, dedicated to the fight against AIDS, and it has been in the forefront of many medical achievements. Dr. Johnson, who was a significant figure in organizing the initial funding for GHESKIO and guided its beginning, received the *Honneur et Merite Award* for his years of support to the improvement of the health of the Haitian people. One of its founders was Dr. Jean Pape, Cornell Medical College Class of 1975, who became a professor of medicine at Weill Cornell and who was honored by former United Nations Secretary-General Kofi Annan at a special UN ceremony in the General Assembly Hall. There Mr. Annan — noting that he was "honoring heroes whose actions and courage make the world a better place" — praised Dr. Pape's achievements, courage and inspiration in contributing to breaking the silence on HIV/AIDS."²¹

As indicated in the name GHESKIO, Kaposi's sarcoma (KS) was a key factor in the AIDS work in Haiti. KS is a cancer that causes patches of abnormal tissue to grow under the skin, in the lining of the mouth, nose, and throat, or in other organs. The patches are usually red or purple and are made of cancer cells and blood cells. The red and purples patches often cause no symptoms, though they may be painful. If the cancer spreads to the digestive tract or lungs, bleeding can result. Lung tumors can make breathing hard.²² KS has been significant in Haiti because — although it usually develops slowly — for persons with AIDS (which was just emerging Haiti in the early 1980s) researchers found that the disease moves more quickly. So, a major focus then and now is on AIDS and associated afflictions. For example, Cornell and GHESKIO researchers defined the optimal treatment and prophylaxis of tuberculosis in AIDS patients.

In the early 1980s, research by Dr. Johnson and his colleagues tracked the early history of AIDS in Haiti. They published an article in the *New England Journal of Medicine* documenting the first cases of AIDS in a developing country.²³ In 1990 Dr. Johnson received the National Institute of Allergy and Infectious Disease MERIT award for his study of the "Natural History of HIV Infection in Haiti". It was one of a large collection of papers generated by research on the AIDS program in Haiti. For example, since 1983, Cornell-GHESKIO has had uninterrupted U.S. National Institutes of Health (NIH) support contributing more than 80 health-related publications to the medical literature.

The GHESKIO research program has evolved from early observational studies to large clinical trials and to its designation as an international research center of excellence.²⁴ A research study titled Targeted Evaluation of AIDS Treatment in Haiti

²⁰ Groupe Haitien d'Etude du Sarcome de Kaposi et des Infections Opportunistes

²¹ *Dean's Bulletin*, Weiss Cornell Medical College, 2000.

²² *Medline*, U.S. National Library of Medicine and the National Institutes of Health, <http://www.nlm.nih.gov/medlineplus/kaposissarcoma.html>, accessed April 22, 2008.

²³ J.W. Pape, B. Liataud, F. Thomas, J. R. Mathurin, M-M St. Amand, M. Boncy, M. Pean, M. Pamphile, A. C. Laroche, and W. D. Johnson Jr. "Characteristics of the acquired immunodeficiency syndrome (AIDS) in Haiti." *New England Journal of Medicine*, 1983: 309(16) (Oct 20): 945-50.

²⁴ Caribbean HIV/AIDS Regional Training Network webpage, http://www.techvisionjamaica.com/chart2/index.php?option=com_content&task=view&id=135&Itemid=1, accessed April 14, 2008.

(2003-2008) is indicative; this was the largest study of treatment outcomes for AIDS patients in a developing country. It followed 1,000 AIDS patients receiving antiretroviral therapy.²⁵ The UN Global Fund to Fight AIDS, Tuberculosis and Malaria and the U.S. President's Emergency Plan for AIDS Relief funded the six year research program. Another example of its international research prominence is the support of the World Health Organization's Special Programme for Research and Training in Tropical Diseases. Led by Weill Cornell's Dr. Daniel Fitzgerald and Dr. Pape, the project continues GHESKIO's work to improve diagnostics and treatment strategies by conducting laboratory and field evaluation of rapid syphilis diagnostics in Haiti.

However, the work in Haiti goes beyond research. Research is carefully integrated with training and patient care. According to Dr. Johnson, Cornell-GHESKIO has established a national network which provided HIV counseling and testing to more than 100,000 persons in 2006. He reports that the prevalence of HIV infection decreased from 6.2% in 1993 to under 3% in 2008. GHESKIO is also a training center for persons involved with HIV/AIDS and related health issues. In addition to HIV/AIDS research, training and services, GHESKIO became involved with TB, family planning, health education, and counseling for approximately 28,000 persons annually. The Cornell involvement with Haiti and GHESKIO has, in turn, involved cooperation at different times and at different levels with such international organizations as the Institute Alfred Fournier, Pan American Health Organization/WHO, the Canadian International Development Agency, the French Government's National Agency for AIDS Research, USAID, UNICEF, and UNFPA.

According to Dr. Hajjar, "Perhaps no institution exemplifies the benefits of conducting research on the front lines better than GHESKIO." That view is echoed by Dr. Pape, who has also served as Director of GHESKIO and Professor of Medicine there: "The beauty of the work we do is that we're able to do the research and implement the results right away."²⁶ For his work in Haiti, Dr. Pape received the Legion d'Honneur, France's highest award. France's President Jacques Chirac made the award, citing Dr. Pape's "contributions to the improvement of the health of the Haitian people and that of people around the world."

The Cornell-GHESKIO partnership has led to another step in building the health infrastructure of Haiti — the establishment in the early 2000s of the Institute of Infectious Diseases and Reproductive Health, which not only is designed to administer care to the local community but is also intended to allow promising Haitian students to remain in their country for their medical studies.²⁷ In addition, the WCMC's Department of Pediatrics research at GHESKIO has further expanded into the early diagnosis and treatment of HIV in children. The College's Department of Public Health has also been active in Haiti providing statistical support for clinical trials and guidance of the ethics of international health research.²⁸

The best medical school in East Africa

In 2001 Weill Cornell undertook the challenge of building the capacity of a medical school in Tanzania. The Weill Cornell Medical College's Board of Overseers decided to become part of the founding team of The Bugando University College of Health Sciences (BUCHS) in Mwanza through commitments of financial aid and gifts-in-

²⁵ See: "Antiretroviral therapy in a thousand patients with AIDS in Haiti" in the *New England Journal of Medicine*, 2005:353:2325-34.

²⁶ Hajjar, p. 3.

²⁷ Gotto, 2007.

²⁸ Framework Program for Global Health.

kind. The Bugando institution was a joint venture of the Catholic Church and the Tanzanian Ministry of Health. The momentum toward building BUCHS accelerated when, in late 2003, the Board of Overseers viewed the video *Touching Tanzania* that documented both the need for healthcare in Tanzania and the official founding of BUCHS in March 2003. Among the viewers was Sanford Weill, Citigroup Corporation's president and WCMC Board member. A newsletter item caught the reaction of Board members:

The Board members watching the video were deeply impressed by the results achieved in a short time since [BUCHS' beginning]. The impact of the video was dramatic. As Dr. Carol Storey-Johnson, Weill Cornell's Senior Associate Dean (Education), observed, "I was in the meeting ...when the *Touching Tanzania* video was played [and] at the end of it, there was complete silence as everybody struggled to feel what was happening in Bugando....Mr. Weill was the first person to speak and he said, 'We have to find a way to help here.'"²⁹

Also among those present were Father Peter Le Jacq, a Maryknoll missionary, physician and graduate of Cornell Medical, Class of 1981, and Chip Raymond, President of Citigroup Foundation, which has been a major supporter of BUCHS. As in the cases of Dr. Ida Scudder and Dr. Jean Pape, Father Peter Le Jacq illustrates the far reaching and long-lasting impact of the WCMC educational program — where its graduates go out and continue the global health legacy. Peter Le Jacq entered the Medical College in 1976 launching a 12-year personal journey that combined medical training at Cornell with theological studies at Maryknoll Seminary in New York State. After earning his MD in 1981, he completed a Masters in Divinity from Maryknoll in 1987. He then earned a Diploma in Tropical Medicine and a Diploma in International Health from the Royal College of Physicians and Surgeons in England. While he notes that, as a child, he wanted to be a priest in Africa, his overseas experience had included "stints" as a medical missionary in a Cambodian refugee camp, in a Guatemalan Jungle Hospital, and in Ireland's inner cities."³⁰ He was also a special consultant to Pope John Paul II on matters related to AIDS in East Africa. Father Le Jacq's early hopes materialized when the Maryknoll Mission assigned him to the Bugando Medical Center. The Roman Catholic Church, which had been working with the Tanzanian government since the early 1990s to establish a fifth fully accredited medical school in the country, asked Le Jacq in 2001 to develop academic, professional, and financial relationships with U.S. institutions.³¹ As a result, Father Le Jacq was an instrumental figure in the emergence of the new health institution in Tanzania.

In February 2004, soon after Sanford Weill's comment about needing to find a way to help in Tanzania, Sandy and Joan Weill led a delegation of key U.S. institutional supporters to observe personally the progress at BUCHS. During their visit to the 870-bed Bugando Medical Center, they were met with gift giving, music and dancing, including a hospital choir that sang an original song in Swahili honoring the visitors. Then in early 2006, WCMC established a formal affiliation with the Bugando Medical Center (BMC) and the Bugando University College of Health Sciences (BUCHS) in Mwanza,

²⁹ "Sandy and Joan Weill and Representatives from Citigroup and Weill Cornell Medical College Meeting Tanzania's President Mkapa," *TOUCH*, Vol. 1, No. 1, p. 3.

³⁰ Linda Errante, "A Man of Multicolored Cloth - Father Peter Le Jacq, M.D.," *Cornell Medicine* (2(1): 18-23, Spring, 1998.

³¹ Tobin Levy, "25,000:1," *WeillCornellMedicine*, Winter 2007, p. 34.

Tanzania. The objective was to train health care professionals (physicians, nurses, technicians and other staff) to work in Tanzania and to create an excellent medical school in East Africa. In September, 2006, First Lady Salma Kikwete, wife of Tanzanian President Jakay Kikwete, visited Weill Cornell in New York to discuss the Bugando affiliation. During January – June 2007, senior residents and postdoctoral fellows at Cornell began their work teaching and training in Bugando.

Another important actor in the Weill Cornell story in Tanzania is the TOUCH Foundation, established in 2004 to oversee institutional development and fundraising. TOUCH is a public charity whose name stands for Training Our Underdeveloped Countries' Healers" which began operations under the presidency of Lowell Bryan, a Director of McKinsey & Company, Inc. Citigroup Foundation gave \$1,500,000 and the Weills' private foundation gave \$750,000 for TOUCH-approved BUCHS projects. The TOUCH Foundation provided a grant that enabled Cornell Medical to address the educational needs of BUCHS. Later, when Sanford Weill retired from the presidency of Citigroup in 2006, Citigroup gave \$5-million to TOUCH for its efforts at Bugando. In honor of all the Weills' support, the Tanzanian Episcopal Conference changed the name of the medical college to Weill Medical College of Bugando University College of Health Sciences, or "Weill Bugando" for short.

As noted above, for Weill Bugando's first year (2007), WCMC began rotating 50 of its senior teaching residents and fellows in medicine, pediatrics, and obstetrics and gynecology to Tanzania. Two WCMC faculty members were based in Mwanza to serve as mentors for the Tanzanian medical students and physicians at BUCHS/BMC, and for the WCMC medical students from New York who participated in the project. After viewing the advances in both teaching and patient care — including now-routine teaching rounds on the medical wards in the mornings and afternoons — that had been made in less than a year, Dr. Daniel Fitzgerald, a faculty member at WCMC, highlighted the importance of the Cornell-Bugando relationship:

It's not that the Tanzanian doctors don't know those things existed. There just wasn't the manpower. You had a handful of physicians trying to provide all of the patient care and teach the medical students. I view Weill Cornell's role as giving them a little breathing room, so they can have time to train more people and bring another generation of physicians to build that critical mass of faculty.

The potential impact of this training in Tanzania is impressive: the World Health Organization estimates that each new health professional will save approximately 150 lives over the course of his/her career.³² WCMC Associate Professor Estomih Mtui has noted the importance of training medical personnel to serve the Tanzanian population.

There are diseases in Africa that could clearly be eliminated with the proper number of health-care providers. Malaria is one of the greatest killers, along with malnutrition, tuberculosis, and HIV. By training the appropriate individuals to deliver health care, all of these things could be eradicated.³³

According to Dr. Johnson, the goal has been to make BUCHS/BMC "the best medical school and teaching hospital in East Africa" with WCMC emphasizing the exchange of faculty, fellows, residents and students. He notes that the long-term goals

³² Levy, p. 36.

³³ Quoted from Levy, p. 36.

are "to create a platform for self-sustaining research programs and clinical knowledge transfer as in our Haiti and Brazil programs."

The collaboration between Weill Cornell and Weill Bugando goes beyond the common name they share: Johnson has emphasized that the students and faculty from New York can learn much from the experiences in Tanzania and other collaborating sites, including how to carry on without benefits of new technology. For example, the case of Anna Jackson '08 illustrates the reciprocity in learning between the Cornell students and those in Bugando. She used time between her third and fourth years at WCMC in New York to undertake an activity that would foreshadow a more formal WCMC exchange program. She spent three of her nine months in Tanzania at Bugando. She reported that the Tanzanians were "open and receptive....It was great," she said, "because we learned a lot from each other and benefited from the exchange."³⁴ For example, Jackson noted that she had never seen a case of malaria, and many of the Weill Bugando interns had never read an EKG.



Weill Cornell medical student Anna Jackson (far left) doing an internship in global health in Tanzania, and nutrition doctoral candidate Jacqueline Kung'U (to Jackson's left) researching global health for her dissertation. On the far right is Sabra Said Khalfan, an MPS graduate from Cornell's International Development program. (Photo from the *Cornell Chronicle*, February 9, 2007.)

The Global Health electives

Although early student experiences in other countries were somewhat opportunistic, an International Health Elective introduced in 2005 formalized the involvement of Cornell medical students in activities abroad during their first or fourth WCMC years. In the elective, students spend six to eight weeks in a clinical or community health setting, or in a research project initiated by the student or as part of an on-going research study such as those in Tanzania, Brazil and Haiti. Not only do participating students broaden their perspectives on health, illness and health care delivery in other countries, they also gain an appreciation of cultural diversity and a greater understanding of local and epidemiological consequences of disease and the determinants of health and disease. After her first year at WCMC, Anastasia Grivoyannis spent an international elective in the obstetrics ward of the Kilimanjaro Christian Medical College in Tanzania where she conducted research on HIV transmission from mother to

³⁴ Levy, p. 37.

child. She was challenged by electricity shortages (delivering babies by flashlight) and the difficulties the facility had in maintaining donated state of the art equipment such as CT scanners.³⁵

Second-year student Ian Huntington's five-week experience during the summer of 2007 in Quetzaltenango, Guatemala, reflects what the College's program has achieved and what it seeks to do in the future. "I kept my proposal pretty open. I wanted to remain flexible and keep looking around for questions that grabbed me," said Huntington. While observing in a general clinic, he realized that diabetes typified something of a social change in Guatemala; as the country undergoes globalization, diseases associated with obesity are on their way to becoming as important as those associated with malnutrition. Huntington began looking closely at diabetic health-care delivery, from observing patient-doctor interactions in a government-sponsored specialty diabetes clinic to researching records at the regional public health office.³⁶ A first-person account of his experience was published in *Global Pulse*, the international health journal of the American Medical Student Association.³⁷

The international experience is a vital part of Weill Cornell's educational program. Dr. Oliver Fein, Associate Dean for Affiliations at Weill Medical College, is involved with diversifying the clinical educational experience for medical students through affiliations with hospitals and physicians who deliver healthcare services to vulnerable populations. He says that an endowment program and other funding sources allow all WCMC students to have a global health education experience. WCMC established the Office of Global Health Education (OGHE) to support student interest in participating in international programs. OGHE and Cornell have collaborated with the National Institutes of Health in giving American medical and graduate students a chance to do mentored clinical research at 16 developing country sites (as of 2008). The Weill Cornell sites in Haiti and Brazil are part of the program that began in 2003. Called the Fogarty International Clinical Research Scholars Program, it is one of the ways that helps WCMC students and students at other medical schools incorporate an international experience in their medical training. The first Cornellian to receive a Fogarty Fellowship was Ashita Batavia '09 and it enabled her to take a year off from medical studies to do research at a tertiary-care HIV hospital in Chennai, India. In addition, Cornell's decade-old US-EU Medical Education Exchange provides a mechanism for three WCMC students annually to learn about health care systems in Denmark, Germany and the UK through the eyes of a patient with a chronic disease. The students meet patients, their families, and those in the patient's health support scheme to learn about universal care systems elsewhere in the world. Weill Cornell also receives medical students from those places and they undergo a similar experience at WCMC. Students in the Exchange prepare detailed reports that become teaching tools for the medical schools involved.

Alumni of the Medical College have been instrumental in supporting the international electives program. A fellowship endowed by the Class of 1959 named after Dr. David Barr '14 is one example. Another is an endowment established by the Classes of 1964 and 1965 to honor Dr. Kean, who was "instrumental in inspiring student concern about the state of health developing countries" and who — with the help of a wealthy

³⁵ Beth Saulnier, "Mother's Helper," *WeillCornellMedicine*, Winter 2007.

³⁶ "Going Global: Weill Cornell Students Study Emerging Global Public Health Issues," *Dean's Bulletin*, Weill Cornell Medical College, 2006. Available on-line:

http://www.med.cornell.edu/deans/2006/11_20_06/article_01-11_20.shtml

³⁷ Ian Huntington, "At the Frontlines of the Global Diabetes Epidemic: A Personal Account from Western Guatemala," *Global Pulse*, Spring 2007. Accessed April 24, 2008

http://www.globalpulsejournal.com/2007_huntington_ian_frontlines_diabetes_epidemic.html.

benefactor — had previously funded student experiences abroad.³⁸ An anonymous gift honoring Joan M. May, who served 25 years as assistant dean for financial aid and later as coordinator of the Office of Global Health Education, created a scholarship that allows one medical student each year to take an international elective in a developing country. The first recipient was Michael Watson who traveled to Argentina to study Chagas disease, a regional malady transmitted by insects.

Of the medical students' international experiences, Dr. Madelon Finkel, director of the Office of Global Health Education, said: "If it doesn't affect you, there's something wrong with you."³⁹ More than 50% of WCMC students will have had international experience by their graduation time.

While many Cornellians go abroad and experience "limited resource" situations, the global dynamic operates in the other direction. Medical students from as many as 24 countries around the globe have participated in Cornell's Global Health Education Program that invites "roughly a dozen international students a month to learn from Weill Cornell Medical College physicians and take fourth year electives with American colleagues [students]."⁴⁰ The program quadrupled the number of foreign students taking short term training at WCMC, many seeing for the first time state-of-the-art health and medical care.

An important means for helping students from abroad take advantage of WCMC training resources is the Arthur Ashe Endowment. In 1995, the day before the start of the United States Open tennis competition at the National Tennis Center in Flushing Meadows, champions in the tennis world and other celebrities (co-emcees, co-umpires, co-coaches and comedians) joined in a program to honor the memory of Arthur Ashe, the lone Black male up to that time to have won Wimbledon or the United States Open. Ashe had contracted AIDS from a blood transfusion during heart surgery. At a break in the program, Jeanne Moutoussamy-Ashe, Arthur's widow, presented a check for \$1 million in the name of the Arthur Ashe Endowment for the Defeat of AIDS to New York Hospital-Cornell Medical Center.⁴¹ Earlier, Ashe had founded The Arthur Ashe Foundation for the Defeat of AIDS to raise money for research into treating, curing and preventing AIDS, the end goal being the eradication of the disease. Weill Cornell matched foundation funds to establish the Arthur Ashe Endowment at the Medical College. WCMC faculty member Dr. Henry Murray, who was Ashe's AIDS physician, has served as director and spokesperson for the Endowment. The Endowment provides the financial support to run the International Healthcare Worker HIV Training Program, the Arthur Ashe Professorship of Medicine, and the Arthur Ashe Endowment Lecture, as well as support for clinical trials for patients receiving HIV/AIDS treatment and other programs. The Healthcare Worker Program each year enables eight healthcare workers to come to New York for four weeks to receive specialized HIV/AIDS care training at Cornell. Health practitioners must work in AIDS treatment and come from a developing nation that has a substantial AIDS population. During their time at Weill-Cornell, they learn about treatments and alternative practices for treating the disease that are not

³⁸ "Wanted: New View of Medicine," *Cornell Medicine*, Winter 2000, pp. 8, 10. For years after Kean was no longer there, people referred to the popular med school parasitology course as "Kean's parasitology course." For example, Dr. Linnie Golightly, a student and then faculty member at Cornell Weill, says: "In my second year I took the Ben Kean course in parasitology, taught by Drs. Tom Jones and Warren Johnson."

³⁹ Jennifer Armstrong, "Going Global," *WeillCornellMedicine*, Winter 2007, p. 21.

⁴⁰ Gabriel Miller, "Foreign Exchange," *WeillCornellMedicine*, Winter 2007, p. 13.

⁴¹ Ira Berkow, "Sports of The Times; A Monumental Man on Monument Avenue," *The New York Times*, August 28, 1995.

available in their home countries. Since its inception, more than 80 healthcare workers from more than 30 countries — from Cambodia to Zimbabwe — have received training through the program.

An example of the ripple effect of WCMC international initiatives such as the Arthur Ashe Endowment is the Starfish Project. This project began in 1998 when a Nigerian physician who had received training through the Arthur Ashe program requested medication for the treatment of a nurse in the physician's clinic in Nigeria. The nurse was dying of AIDS. The effort to provide anti retroviral (ARV) for that one patient triggered the Starfish Project at New York-Presbyterian Hospital/Weill Cornell Medical Center that now collects the unused portions of people's ARVs to support hundreds of people in Nigeria who are HIV-positive. Teams of clinicians in New York collaborate with Nigerian clinicians at two teaching hospitals in southwest Nigeria, one in Sagamu town and one in Ife town, to care for people with HIV and to build the capacity of local clinics to provide comprehensive HIV care. In Sagamu, there had never been a support group for HIV/AIDS persons until this project began. While the price of ARVs has dropped in recent years, they remain far out of reach for most of the world's population living with the virus. For many, the "leftovers" like those in the Starfish Project are their lifeline.⁴²

The Cornell campus reaches the Middle East

April 2001 marked a dramatic new reach across the globe for Cornell and its medical program. Cornell's 10th president, Hunter R. Rawlings III and Her Highness Sheikha Mozah Bint Nasser Al-Missned, consort of the Emir of Qatar, signed an agreement in New York to establish the Weill Cornell Medical College in Qatar (WCMC-Q) in a partnership with the Qatar Foundation. It was the first coeducational institution of higher education in Qatar. The Emir had set up the Foundation in 1995 as a private, non-profit organization. Although Cornell had been deeply involved in capacity-building in Haiti, Brazil, Tanzania and other places for many decades, the Qatar venture represented the first time an American university had established a medical school overseas that was part of the university's own institutional structure or had offered an MD degree overseas. The Qatar Foundation for Education, Science and Community Development had established Education City near Doha, the Qatar capital. It was to be "a campus where branches of some of the world's leading universities would offer education and training to future leaders across the region."⁴³ Virginia Commonwealth University was the first occupant in 1998. Cornell was next with the 2001 signing ceremony, and it brought Cornell and the Qatar colleagues together for the triple mission of medical education, patient care, and research that had marked Cornell's earlier work in Haiti, Brazil and Tanzania.

How did it all begin? In a 2007 *WeillCornellMedicine* (WCM) interview, Dean Gotto (AG) and Sanford Weill (SW) explained:

WCM: [In May 2008] the Qatar branch will graduate its first MDs. How did the project come about?

AG: We didn't seek the Qatar opportunity; it was presented to us from two New York congresswomen [Sue Kelly and Carolyn Maloney] who had been over as observers for local elections where women were allowed to vote for the first time. They had met with Sheikha Mozah about her vision for

⁴² See <http://www.thestarfishproject.org/>

⁴³ *New Horizons, The New Building of the Weill Cornell Medical College in Qatar, 2003*, Weill Cornell Medical College in Qatar, Doha, 2003.

Education City. We then had to take it up with Cornell University, and as far as I know Cornell had not given a degree of any kind outside the country — and it would be not only a degree but a medical degree in a potentially volatile part of the world.

SW: And a place where a lot of people felt, why should we do something in an Arab country until there's peace between the Palestinians and the Israelis? And we worked our way through those arguments to become a leader. Texas A & M followed us and Carnegie Mellon, and Georgetown, and now Northwestern is building a campus there. None of that would have happened if we hadn't been the first mover. Robert Gates, the former president of Texas A&M....told me as much. He said we gave them the courage to do it....[W]e now have a base to build something that can really make a difference in the world.⁴⁴

The WCMC-Q building, designed by a team led by the renowned Japanese architect Arata Isozaki, was inaugurated in 2003. It coincided with the initial ceremony in the inauguration of Jeffrey Lehman as Cornell's 11th president. This initial ceremony in Lehman's inauguration took place in Doha as part of the WCMC-Q building-opening event. On the occasion, President Lehman called the Cornell-Qatar partnership "a truly historic enterprise."



WCMC-Q Dean Daniel Alonso with Qatar's Minister of Education H.E. Sheikha Ahmad Al-Mahmoud for 2003 Opening Exercises.
– Photo by Khaled Al-Marzouqi, courtesy of WCMC-Q.

WCMC-Q initiated its two year Pre-Medical Program in 2002 and the four-year Medical Program opened in the fall of 2004. The physical setting was a sharp contrast to Cornell's earlier experiences in developing countries. In those settings medical students — Cornell and native students — learned under conditions of minimal technical infrastructure; in Qatar students are learning in state-of-the art facilities, including

⁴⁴ Beth Saulnier, "International Intrigue", *WeillCornellMedicine*, Winter 2007, p. 24.

classrooms, laboratories and libraries. There are videoconference and telelecture connections with WCMC-NYC and with the Ithaca campus. Dean Gotto said "It's unlike any other medical school I've ever been in, and I've been in medical schools all over the world."⁴⁵ Since Cornell is replicating in Qatar the curriculum taught at Weill Cornell Medical College in New York, WCMC-Q students are introduced to patient care from the earliest stage of their medical education. Through an affiliation agreement with the Hamad Medical Corporation (HMC), this takes place in primary healthcare centers in the community, and at HMC hospitals in Doha. Students in the Medical Program start observing the doctor-patient relationship in the first year, and go on to take their clinical clerkships at the hospitals in the third and fourth years.

There are continuing threads that link Doha, New York City and Ithaca. Weill Qatar has a Joint Advisory Board that consists of four members appointed by Cornell, five members appointed by Qatar Foundation, and three additional, external members jointly appointed by these institutions. The Chairman of the Board of Overseers of Weill Cornell Medical College, the Dean and Vice Dean – Administration of WCMC-Q, and an official of the Qatar Foundation are *ex-officio* members. New York and Ithaca faculty members travel to Doha to lecture. Some guest faculty give lectures in a familiar setting because the lecture halls "re-create" the facilities at WCMC-NY. Courses are shared among the key sites — Doha, Ithaca and New York City. For example, Professor James Maas' popular Psychology 101 lectures on the Ithaca campus have been recorded and transmitted to classrooms in Doha. Professor Maas and the students meet in person in Doha during the Cornell-Ithaca fall break when he lectures in person at WCMC-Q. During the semester Maas and the students in Doha also interact long distance via teleconferences. A second year Egyptian pre-med student raised in the United Arab Emirates commented on the Maas course: "We probably get more time than the students over there [in Ithaca], because every two weeks we sit down with him in a video conference to ask questions."⁴⁶ There are also on-going research links. In 2006, for example, Dr. Ronald Crystal, Professor and Chair of the Department of Genetic Medicine at Weill Cornell in New York, led a team of faculty, physicians, medical students and staff from Weill-New York, Weill-Qatar, and HMC working collaboratively on a study of gene expression in patients with lung disease which is an ongoing research project. And as part of its goal of being an outstanding research institution, during the summers, WCMC-Q students carry out research alongside WCMC faculty, post-docs, graduate students and staff in Ithaca, New York City, and Doha. Another link is provided by recent Cornell graduates who go to Doha as teaching assistants in a variety of disciplines including physics, chemistry, mathematics, biological sciences, and psychology.

⁴⁵ "Historic Day for Cornell University," *Weill Cornell Qatar Chronicle*, Vol. 1, No. 4 (December 2003), p. 5.

⁴⁶ Beth Saulnier, "Oasis of Knowledge," *Weill Cornell Medicine*, Winter 2007, p. 31.



Professor James Maas in a teleconference between Ithaca and Qatar.

Medical students at WCMC-Q come from Qatar and other countries in the Middle East and beyond. In 2008, the Pre-medical and the Medical Programs enrolled 200-plus students from more than 30 countries. The Class of 2009 included men and women from Bangladesh, Bosnia, Egypt, Iraq, Jordan, Lebanon, Oman, Tunisia, the UAE and the USA.

Training young physicians in Europe — the Salzburg Weill Cornell Seminars⁴⁷

Cornell's keen interest in sharing medical skills abroad led to another fruitful European connection. The American Austrian Foundation, Inc. (AAF) was founded in 1984 by a group of Americans and Austrians with a keen interest in promoting a positive relationship between the two countries. Through exchanges in medicine, communications and arts, the AAF was intent on using Austria's central location and infrastructure to bring East and West together in the interests of peace and prosperity. AAF's largest program, the Open Medical Institute (OMI) is a global initiative founded by the AAF, Weill Medical College, New York-Presbyterian Hospital and the Open Society Institute. OMI's objective is to expose mid-career level, English-speaking doctors from countries in transition to Western medical knowledge and technology, offering them multiple opportunities to attend seminars and internships. This allows them to update their skills on an ongoing basis, without having to emigrate from their countries, thus preventing brain drain and promoting brain *gain*. AAF and Cornell created Salzburg Medical Seminars International — dubbed "Medical Education without Borders" — and in 1993 offered the first Salzburg seminar in cardiology. Since the Salzburg Weill-Cornell Seminars began, Weill-Cornell faculty members affiliated with the New York-Presbyterian Hospital, Memorial Sloan-Kettering Cancer Center and The Hospital for Special Surgery have volunteered their time to teach and guarantee the quality of intensive one-week seminars attended by physicians from Central and Eastern Europe, Central Asia and the former Soviet Union.

⁴⁷ The principal source for this section was the Austrian American Foundation web page at <http://www.aaf-online.org/medsemin.htm#cornell>, accessed May 16, 2008.

In 1994 the Cornell faculty was joined by faculty from The Childrens' Hospital of Philadelphia to teach the Salzburg Philadelphia Seminars in Pediatrics. They were later joined by faculty from Duke University Medical Center for family medicine and the College of Physicians and Surgeons of Columbia University. The seminars include state-of-the-art lectures, problem-based learning, hands-on workshops, case presentations and computer training. The fostering of freely exchanged ideas and the opportunity to develop professional relationships are two of the most important aspects of the program. From one lecture-seminar in 1993, the program expanded to five in 1994 and to 37 in 2007 — providing training through 2008 for approximately 1200 interns from 90 countries and regions.

Linked to the Salzburg program are the Satellite Symposia (no relation to communication satellites). These symposia take advantage of the availability of the Salzburg lecturers —before or after the seminars — by staging additional 1½ day programs in the Salzburg region. One can gain a picture of the extent of Cornell participation by looking at the 2003 schedule of the Satellite Symposia. The doctors, their symposia topics, and the places were: Richard Roberts, infectious diseases, May 2-6 — Bucharest; May 30-31 — Maribor, Slovenia; and June 5-7 — Bialystok, Poland; John Caronna and Igor Ougurets, neurology, June 12-14 — Juodkrante, Lithuania; Wolfgang Aulitz, urology, June 12-14 — Tbilisi, Georgia; Stephen Scheidt, cardiology, October 10-11 — Kaunas, Lithuania and St. Petersburg Russia, October 19-21— Kiev, Ukraine, and later in Moscow. Several physicians from other American medical schools also participated in 2003.

Medical and health globalization

From the days of Dr. Scudder, many members of the faculty, staff and student body have played a major role in helping make Cornell a "transnational university." Dr. Benjamin Kean was a major contributor to this history. The Winter 2007 special issue of *Weill Cornell Medicine* devoted to "Going Global" saluted Dr. Kean as being instrumental in establishing overseas research programs in Haiti, Brazil and Cuba, founding the Tropical Medicine unit in 1963 (directing it until 1978), and teaching some 5,000 students during four decades. "His name still reverberates, with a professorship, fellowship, scholarship, and course all established in his name."⁴⁸ Among his many exploits was an attack on traveler's diarrhea. In an interview in *Alumni Quarterly*, Dr. Kean explained his experience with "turista":

The story is too long, but [it] started in 1945 when I "died" of turista in the Excelsior Hotel in Rome the night before an official audience with His Holiness, the Pope. But the important point to make about turista is that a 20-year effort by almost 100 people from Cornell finally settled the problem. When everybody of consequence in infectious diseases had perverted ideas about the nature of turista, Cornell backed the appropriate research. In the early 1950s I went to see Dr. Stanhope Bayne-Jones, the director of the medical center, and told him that I wanted to study diarrhea in the tourist and find the cause of that diarrhea. He noted that the armed forces were studying diarrhea. I told him that I had applied for a grant from them and that they had told me there was no point in discussing turista, because it was salmonellosis. I asked Dr. Bayne-Jones for \$800 to initiate a study by two Cornell students, a technician and me, a study to involve two trips to Europe, two months in Europe and nine months in the laboratory. He said, "You can't do it for \$800 — here's \$1200." That was our

⁴⁸ Susan Kelley, "Kean Insights," *WeillCornellMedicine*, Winter 2007, p. 48.

"seed" money, and every year after that for 15 years we went to Mexico, and much of what is known about turista today can be assigned to the efforts of the Cornell students who worked in Mexico.⁴⁹

Cornell's leadership in the health field continued throughout the 20th century and into the 21st century. The Medical College was among the founding members of the International Health Medical Education Consortium (IHMEC), a group of medical colleges committed to global health education, research, and service. In 1991, a small group of faculty and administrators interested in international health formed IHMEC — with the goal of sharing information about appropriate sites, curriculum and evaluation for student experiences abroad. Joan May was one of the founders, and Dr. Fein has served on its Governing Council. The organization, which now has institutional, faculty and student members from the U.S., Canada and Central America, holds national and regional meetings involving faculty and student presentations. In 2005, IHMEC changed its name to the Global Health Education Consortium (GHEC) to reflect the consortium's desire to include other health professions besides medicine and a preference for the more inclusive term of 'global' over the traditional one of "international" — expressing an approach to health issues that transcend national borders, class, race, ethnicity and culture. This approach has been a significant force underlying Cornell's medical school activities in its more than a century of education, patient care, and research. WCMC has reached out across the globe from its Manhattan home to help strengthen the health infrastructures of many nations, to train health professionals, combat harsh diseases, build medical knowledge, and to provide health care for enumerable people from Brazil to Tanzania.

"Reaching out", as various Weill Cornell faculty members have suggested, has a new meaning in the age of globalization: there is increasing emphasis on learning from colleagues abroad and *exchanging* knowledge with health professionals from across the world.

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⁴⁹ Tom Jones and Neil Klein, "Never Go Back the Way You Came: A Profile of Dr. Ben Kean," *Cornell University Medical College Alumni Quarterly* 44(4):12-18, December 1981, pp. 14-15.