



David H. Adams, MD (left), and Khanh H. Nguyen, MD (right), check in on a patient recovering from surgery.

## Mending Hearts Building Bridges

For ten years, Khanh H. Nguyen, MD, Chief of Pediatric Cardiothoracic Surgery, has taken time away from his busy schedule as a pediatric cardiothoracic surgeon to volunteer in underserved countries, including China, Honduras, and Romania. This year, Dr. Nguyen returned to his birthplace, Vietnam, where he is building a partnership with The Hue Central Hospital in the city of Hue.

"I left Vietnam when I was a teenager and still have memories of Saigon, where I grew up," says Dr. Nguyen, who was educated in the United States and United Kingdom. "Medical missions like these can have a dramatic impact on the lives of children in underserved countries where treatment of congenital heart disease is not available. Without treatment, children with congenital heart disease will have significantly shorter life spans and reduced quality of life."

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### Look inside

- Cancer Rates Rise in Ethiopia
- Fighting Heart Disease in Africa
- Helping Hands Around the World

### Global Health and Conservation A Unique Partnership

At first glance the potential for partnership between Mount Sinai and Panthera, an organization dedicated to the conservation of wild cats, appears far from evident. But, thanks to a personnel connection and creative thinking these two organizations are now collaborating to improve health care for underserved populations while protecting animals and their habitats.

"Alan [Rabinowitz, PhD, President of Panthera] and I have been friends for years," says Paul Klotman, MD, Chairman of the Department of Medicine.

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LEFT TO RIGHT: Paul Klotman, MD, and Alan Rabinowitz, PhD, landing in Brazil's Pantanal region

# Cancer in Ethiopia

## Overlooked, but on the Rise in the Developing World

Cancer in Ethiopia is responsible for 4 percent of deaths, a figure expected to double by 2030. Yet new research from Mount Sinai found that a third of cancer patients surveyed in Ethiopia believed their illnesses were caused by wind or temperature changes, and another 40 percent believed their cancers were divine punishment for sin.

“Cancer is a disease under the radar in developing nations like Ethiopia,” said Stuart Prenner, a second-year medical student who traveled to Ethiopia in 2008 to study the perceptions and prevalence of cancer. “These countries have been focused on preventing and treating communicable diseases like HIV/AIDS and tuberculosis, but cancer is here and growing, and people here are undereducated about cancer. The number of cancer cases is expected to double over the next 40 years as people live longer and adopt more western lifestyles.”

In Ethiopia, Mr. Prenner found that the average patient living with cancer waits more than two years before seeing a physician. By then, the cancer is so far advanced that it is often impossible to treat.

Mr. Prenner wanted to understand why patients wait so long. He interviewed 15 cancer patients about their knowledge and perception of cancer, and their barriers to health care. Ninety percent of patients had never heard of the word cancer and could not explain their disease. Due to an overwhelming belief in western medicine, another 40 percent



**Stuart Prenner, second-year medical student, studied in Ethiopia.**

Advancing Idealism in Medicine Program, and Assistant Professor of Medicine, says the study will help raise awareness about barriers to treatment in Ethiopia and may serve as a model for studying cancer and raising awareness in other developing countries.

sold their personal possessions to receive health care, undergo tests like X-rays, and receive treatments like chemotherapy.

“Cancer may not be as big of an issue as clean water, HIV/AIDS, or tuberculosis, but it is still something that needs to be addressed,” said Mr. Prenner. “It is impossible to treat cancer when patients present so many years later. We need to raise awareness and set up a national registry to get a stronger sense of the epidemiology.”

Jonathan Ripp, MD, Associate Director of the Global Health Center, Co-Director of the

## A Unique Partnership (continued from page 1)

Dr. Klotman continues, “Conversations about our respective interests led us both to the realization that cat conservation and human health are not only related, but that one is not possible without the other.” Conversations evolved into active participation, and now Dr. Klotman is actively engaged in Panthera activities and was recently honored for his contributions to cat conservation at a Panthera reception.

In a recent *National Geographic News* article about the Mount Sinai/Panthera relationship Dr. Rabinowitz said, “If the animals are forced to stay instead of travel, that can lead to a loss of fitness and create a cascade down the health ladder. Once that cascade has been set off, it has been shown through data to directly link to increases in disease among neighboring human populations.”

The partnership between Mount Sinai and Panthera continues to grow and now includes a new initiative pairing Panthera with Mount Sinai’s Global Health and Emerging Pathogens Institute and the Global Health Center. They are collaborating on a program focused on Brazil’s Pantanal region, where Panthera now manages over 700 square kilometers of critical habitat used by the world’s largest jaguars. This area is also home to one of the largest cattle ranching regions on the planet. The goal is to protect the animals while improving the health and well-being of the cattle ranchers and their environments.

“It is now clear to the medical community that major infectious diseases like Ebola and avian flu are the result of a bi-directional threat of human and wildlife

pathogens,” said Mary E. Klotman, MD, Co-Director of Mount Sinai’s Global Health and Emerging Pathogens Institute. “A major goal of the new program is to obtain a deeper understanding about the links between animal and human diseases so that we may recognize the early signs of trouble.”

Adolfo García-Sastre, PhD, Co-Director of the Institute and Principal Investigator of the Center for Research on Influenza Pathogenesis at Mount Sinai, added, “The highly pathogenic H5N1 avian influenza virus kills not only poultry, but also wild birds, big cats, and humans. This partnership represents an emerging dogma of one world, one health.”

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— MARY E. KLOTMAN, MD



**Luke Hunter, PhD, Executive Director of Panthera, inspects a leopard.**

# Combating Heart Disease Millennium Villages Project

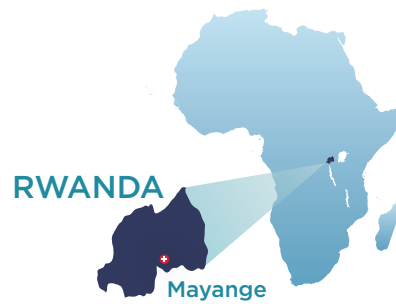
Cardiovascular disease is increasing in Africa, presenting physicians with a unique opportunity: Can we take what we have learned about heart disease and apply interventions to the developing world that will curb the impact of the global cardiovascular disease epidemic?

Mount Sinai is seeking to answer that question by implementing cardiovascular disease treatment and prevention strategies in Mayange, Rwanda, where preliminary research has shown that high rates of hypertension and smoking are risk factors for heart disease and stroke.

Mayange is one of several sites in the Millennium Villages Project—an ongoing project being conducted at various sites throughout Africa under the leadership of the United Nations Development Programme, The Earth Institute at Columbia University, and Millennium Promise. Mount Sinai will be working with these groups and also the government of Rwanda.

recently appointed to lead an Institute of Medicine committee of The National Academies and of the National Heart, Lung, and Blood Institute that will address preventing and managing cardiovascular disease, taking into account the different economies (high, middle, low) around the world.

The goal of the project in Mayange, explains Dr. Fuster, is to demonstrate the practical and financial feasibility of developing a cardiovascular disease program in a resource-poor setting. “You have to first show in a focused way that you can do this before you generalize the program to similar socioeconomic environments,” says Dr. Fuster. “You need a down-to-earth approach for it to work.”



disease and its risk factors? Ultimately, we hope to demonstrate that the knowledge and behavior changes correlate with risk factor control.”

“There are several important and unique aspects to this project,” says Rajesh Vedanthan, MD,

MPH, a third-year Cardiology Fellow at Mount Sinai and a co-investigator on this project. “First, we are increasing the community’s access to basic cardiovascular diagnostic and treatment services. Currently, there is no cardiovascular care provided at the local health center level; individuals are referred to the District Hospital, and the costs and time associated with receiving care there can be prohibitive. We hope to bring cardiovascular care to the local health center level, in order to increase access, improve adherence, and maximize cardiovascular disease risk factor control.”

“Second, we are attempting to demonstrate that chronic, non-communicable diseases can be managed in a cost-effective manner, by building upon existing health infrastructure and resources, including community health workers,” adds Dr. Vedanthan. “Central to this goal will be capacity-building: we will train primary health care workers and community health workers in cardiovascular disease risk factor management, adherence support, and clinical follow-up. Finally, if this demonstration project is successful, we are well positioned to scale up this type of work both within Rwanda and across the continent of Africa.”

## Can we modify the risk factors for cardiovascular disease by implementing basic clinical interventions and educating people about cardiovascular disease?

— VALENTIN FUSTER, MD, PHD

The project is being led by Valentin Fuster, MD, PhD, Director of Mount Sinai Heart, Director of the Zena and Michael A. Wiener Cardiovascular Institute and the Marie-Josée and Henry R. Kravis Center for Cardiovascular Health, and the Richard Gorlin, MD/Heart Research Foundation Professor. Dr. Fuster was also

“We are looking at three primary endpoints,” said Dr. Fuster. “Can we modify the risk factors for cardiovascular disease by implementing basic clinical interventions and educating people about cardiovascular disease? Can we have an impact on behavior change? Can we increase the knowledge of cardiovascular

## Mending Hearts (continued from page 1)



Dr. Adams meets with a young patient.

Accompanying Dr. Nguyen on the trip was David H. Adams, MD, the Marie-Josée and Henry R. Kravis Professor and Chairman of the Department of Cardiothoracic Surgery. After obtaining a list of patients from local hospitals near Hue, Drs. Nguyen and Adams rolled up their sleeves and went to work with a clinical team that included anesthesiologists, echocardiographers,

intensivists, perfusionists, and nurses from Mount Sinai and other hospitals around the United States. “It was particularly meaningful to be there working with Dr. Nguyen, who has already brought so much back to the very hospital where he was born,” notes Dr. Adams.

One of the most common conditions that they treated was Tetralogy of Fallot, a congenital defect in which there is a hole between the pumping chambers of the heart. Several young patients also underwent complex

valve repair procedures. In total, 15 operations were performed over a five-day period.

The other goal was to train local surgeons how to perform these procedures. Dr. Nguyen has worked before with The Hue Central Hospital to help develop its pediatric cardiothoracic surgery program. The Hospital opened a Cardiovascular Center in 2007, a year after Dr. Nguyen’s last trip to Vietnam.

“There is a shortage of specialized cardiac surgeons in Vietnam and especially of congenital cardiac surgeons who perform surgery on newborns or small infants,” says Dr. Nguyen. “There is also a lack of experience in performing highly complex operations. We’re not going to go there, do a few surgeries, and leave. We go there to help them grow. My goal is to work with them until they become a full-fledged congenital heart center.”

Dr. Nguyen envisions the Cardiovascular Center becoming a resource throughout central Vietnam and eventually Laos and Cambodia. He says the partnership will only continue to grow. “Perhaps we can help them organize a heart transplantation program,” says Dr. Nguyen. “They are very enthusiastic about becoming a full-service heart center.”

# Snapshots of Stewardship

Across time zones and oceans, Mount Sinai reaches out to those in need.

Mount Sinai is dedicated to promoting health and preventing disease in every corner of the globe. Thanks to initiatives supported by the institution's many departments, centers, and programs—physicians, nurses, staff, and students have been able to make a difference for patients living in underserved regions. Here are some of the places where Mount Sinai is lending a helping hand:



*Peru*



*Uganda*



*Srenada*



*Vietnam*



*Ethiopia*

- ARGENTINA
- BELIZE
- BRAZIL
- BOLIVIA
- CAMBODIA
- CHINA
- DOMINICAN REPUBLIC
- ECUADOR
- ETHIOPIA
- HONDURAS
- INDIA
- INDONESIA
- IRAQ
- JAMAICA
- KENYA
- LAOS
- LIBERIA
- MALI
- MEXICO
- NICARAGUA
- NIGERIA
- NEW ZEALAND
- PERU
- PHILIPPINES
- ROMANIA
- RWANDA
- SRI LANKA
- SUDAN
- TANZANIA
- THAILAND
- UGANDA
- VIETNAM
- VENEZUELA

