PARLEZ-VOUS?: Dr. Brian Remillard, a nephrologist at DHMC and one of the clinicians who traveled to Haiti last year to help with post-earthquake relief, launched the first web-based lectures in French on renal disease for Haitian medical students.

FACTS & FIGURES

For the record

9.1%
Percentage of U.S. hospitals that, as of 2009, had implemented an electronic medical record (EMR) system of any sort

1985
Year the current Dartmouth-Hitchcock (DH) EMR was implemented

2.5 million
Number of patients now in the DH EMR system

1
Number of EMRs per patient, regardless of how many DH physicians and locations the patient visits

59,000
Number of new EMRs created in 2009, just at DH's Lebanon campus

80,000
Requests received each year by DH to release EMRs for legal, employment, medical, or other purposes (DH maintains the record and ensures its integrity, but the patient owns it)

30 million
Lines of dictation transcribed and entered into DH EMRs each year

40
Staff members in the DH Health Information Services department

4/2/11
Date when a new, improved DH EMR system goes live

SOURCES: NEW ENGLAND JOURNAL OF MEDICINE, DARTMOUTH-HITCHCOCK

A research pipeline from Tanzania to DMS

Tanzania may be a resource-poor country. Yet the East African nation boasts spectacular scenery, mighty Mt. Kilimanjaro, vast game-animal migrations, and—since 2000, thanks largely to Ford von Reyn, M.D., DHMC's chief of infectious disease and international health—an extensive program of research in HIV-AIDS.

DMS doesn't "just say good-bye and send them back to Tanzania."

Trial: It all began with a clinical trial of a tuberculosis vaccine in HIV-infected patients, the positive results of which were recently published. The contacts von Reyn made while working on that trial encouraged him to pursue funding from the National Institutes of Health's Fogarty International Center to support doctoral training at DMS for Tanzanians.

Two Fogarty Fellows have since completed their Ph.D.'s at Dartmouth and returned to Tanzania and opened labs there. They occupy the only life sciences research labs at Tanzania's Muhimbili University of Health and Allied Sciences (MUHAS).

One of the DMS Fogarty graduates, Magdalena Lyimo, Ph.D., did her thesis research with DMS's Ruth Connor, Ph.D., and Alexandra Howell, Ph.D., studying factors that influence HIV transmission via breast milk. The virus can be transmitted by that means, but the infection rate is not 100%. Connor and Lyimo suspect that there may be factors in breast milk that both facilitate and inhibit transmission.

The other Dartmouth Fogarty graduate, Ted Mselle, Ph.D., did his doctoral work in the lab of DMS's Charles Sentman, Ph.D. He studied the function of human uterine natural killer cells, showing that they could inhibit HIV uterine infection through the production of natural cytokines.

Cells: A third Tanzanian Ph.D. student, Emmanuel Balandya, is still at DMS, working with Tim-

DMS faculty member Tim Lahey, far right, helped a number of Tanzanian colleagues celebrate the opening of labs there.

othy Lahey, M.D. While acclimating to New Hampshire winters, he's studying how semen impacts HIV infection of target cells during the initial transmission of the virus.

All three students had already earned M.D.'s in Tanzania.

And the Fogarty-supported training is not limited to those pursuing doctoral degrees. Seven Tanzanians have earned M.P.H.'s at Dartmouth, and a number have visited DMS for a month or two of specialized training.

The list of possible future research collaborations is both long and varied. Von Reyn already has a study in progress on a protein-calorie dietary supplement for pregnant women who are HIV-positive. Charles Wira, Ph.D., who has been active in the program from the start, is poised to further his investigations into mucosal immunity in HIV-positive patients. And Jay Buckey, M.D., is conducting an NIH-funded study of possible hearing loss in HIV-positive patients—an effect that may be due to HIV, its complications, or the drugs used to treat the virus or related conditions.

Enduring: The Dartmouth-Tanzania connection has every indication of being an enduring one. As Kisali Pallangyo, M.D., vice chancellor of MUHAS, puts it: "When [DMS trains] our colleagues, they don't just say goodbye and send them back to Tanzania, they come here with them, they stay involved, and keep the collaboration growing, and the infrastructure development stays here."

Roger P. Smith, Ph.D.

INVESTIGATOR INSIGHT

In this section, we highlight the human side of biomedical investigation, putting a few questions to a researcher at DMS-DHMC.

Alix Ashare, M.D., Ph.D.
Assistant Professor of Medicine and of Anesthesiology
Ashare studies the immune response to the bacteria Pseudomonas *in humans with cystic fibrosis (CF). She joined the DMS faculty in 2009.*

What got you interested in science?
I come from a family of lawyers, so going into medicine was probably a bit of an act of rebellion. In my immunology class as a first-year medical student, I became fascinated with the host immune response to illness and actually took a leave of absence from school the following year to pursue a research project in an immunology laboratory. After that year, I was hooked.

Can you describe your research?
It focuses on the host immune response of tissue macrophages (a type of white blood cell) to bacteria such as *Pseudomonas* in cystic fibrosis patients. One project I am working on involves looking at alveolar macrophages (tissue macrophages localized to the lung) that have been isolated from patients with cystic fibrosis. We are trying to determine why these macrophages do not function as well as alveolar macrophages from healthy patients.

If you weren't a scientist, what would you be doing?
Trying to write the next great American novel.

What's your favorite nonwork activity?
I enjoy exploring the Upper Valley with my husband and our three-year-old son. We like to spend as much time outdoors as possible. We love to cross-country ski, hike, and spend time on the beach. And I enjoy reading—both fiction and historical fiction. I just finished *The Double Bind* by Chris Bohjalian and thought it was awesome. I also really enjoy cooking. In a former life, I was an avid tennis player and hope to find time for that again some day.

What is stressful for you?
Clutter. I can't work if my desk is cluttered.

What do you admire most in other people?
Passion. I think it is amazing what people can accomplish if they are truly passionate about what they are doing.

What's one thing that you would change about yourself?
I would like to be more patient.

Do you use Twitter, Facebook, or other social media?
I am pretty much addicted to Facebook (but I'm really trying to cut back).

What three people would you like to have over for dinner?
John Irving because he is one of the most prolific writers of our time. Vince Vaughn because he is hilarious. And Emeril Lagasse because I can't think of anything cooler than cooking dinner with Emeril.

When you were very young, what did you want to be when you grew up?
As a child, I wanted to be a veterinarian. I have always loved animals, and I volunteered at the local animal shelter for a number of years.

What's hot in your field right now?
CF affects about 30,000 Americans and leads to a shortened life span. Most patients ultimately die from respiratory failure as a result of chronic infections. If we can figure out ways to decrease chronic infections in these patients, the hope is that this would prolong their lives.

What do you like most about your job?
The people I work with. There's a huge community of people working on clinical and scientific aspects of CF. They're all wonderful, and I feel inspired and challenged pretty much every day.