



FICRS-F

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Sarah with CRC patients



Collecting blood samples



Clinic at Hondeklipbaai

Seeking cancer patients in South Africa

Sarah Owens (Fellow, 2008-09, South Africa)

As a Fogarty Fellow in the Division of Human Genetics at the University of Cape Town, South Africa, my project aims to identify modifier genes and environmental factors which influence the age of onset of colorectal cancer (CRC) in South Africans. My host mentor, Professor Raj Ramesar, and his research group have investigated the genetics of inherited CRC and related cancers for the past 15 years in South African individuals genetically predisposed to an 80% lifetime risk of developing CRC. However, the age of cancer onset varies greatly due to secondary gene mutations and environmental factors that have not yet been



On the road to Northern Cape, South Africa

explained.

In March, I had the privilege of meeting some of the patients behind the DNA on a trip to 12 rural communities in the Northern Cape. With the

help of Sister Ursula Algar, our genetic nurse, and Zandre Bruwer, a Ph.D. student in genetic counseling, I collected blood samples and gathered data for my study.

There were many events on this trip that left an impression. The kindness and hospitality shown to us was overwhelming, as was the participation from every patient. There were very long days of driving through extremely poor road conditions, often to reach just 2-3 people. As one woman invited us inside her mantjehuis (mat house), it seemed more like a reunion with old friends than a doctor/patient setting. I realized that my project would not be possible without the genetic nurses and counselors and their long-standing relationship with the CRC patients. I returned to the lab with a whole new appreciation for each DNA sample that is genotyped in my research.

FICRSF NEWS

Nominate a mentor!

Click [here](#) to learn about nominating your mentor for the first-ever Mentor Recognition award.

Scholar in FIC newsletter

Breanna Barger, Mali, and Haitian site GHESKIO are featured in FIC Global Health Matters Newsletter. Click [here](#) to view the newsletter.

For more photos,
go to
fogartyscholars.org

On multidisciplinary research

Nancy Liu
(Scholar, 2008-09, Argentina)



A multidisciplinary group of researchers from IECs

“Multidisciplinary’ is what everyone says but no one actually does.”

The first presentation of our mini-orientation at Tulane University began on this weary note and perhaps without realizing it, I was nodding – an unspoken “That’s the way it is,” to the reality I often saw but in no way felt qualified to change.

Several of the world’s most serious health problems are caused by a multiplicity of factors: poverty exacerbates health conditions like TB and limits access to appropriate care even though effective treatment exists. Mental health issues, like substance abuse, complicate the ugly web of risk behaviors, stigma, domestic violence, medication adherence, and (again) poverty associated with HIV/AIDS.

Yet we already know this.

The point is that few treatments adequately tackle this web in a multidisciplinary manner, often to the detriment of more innovative and effective strategies. Research and anecdotal evidence reveals, for example, that adherence to a medication regimen is delicately balanced on a steady source of income or status quo mental health functioning. A disruption to any of these can cause the precipitous cascade of an otherwise controllable illness. Still, most research continues to focus heavily on one dimension of a health problem that is acknowledged to be multi-dimensional.

But as a Fogarty Scholar at the Institute of Clinical Effectiveness and Health Policy

(IECS) in Buenos Aires, my foreign counterparts have provided me with a different model. This was evident from my first day, as we went around the room for introductions.

Hi, my name is Joaquín. I am an economist. The rest followed accordingly: Luz, a biostatistician. Nina, a sociologist. Agustina, an obstetrician. Ana María, a midwife. Tomás, an epidemiologist. Alejandro, a nurse. Not to mention the slew of adjunct legal experts, policy decision makers, microbiologists and anthropologists who flock through the doors for further research collaboration. Add in rich international collaboration, and what results is an environment fertile for the wellspring of new ideas.

Fighting a cholera epidemic in Bangladesh

Ana Weil (Scholar, 2008-09, Bangladesh)

In Bangladesh, cholera becomes epidemic at times of severe flooding during monsoon rains. People living in the slums of Dhaka city, where the water and sanitation advancements of the last century have yet to be fully realized, are most likely to become infected. Each spring, as cholera season begins, the International Center for Diarrheal Disease Research, Bangladesh (ICDDR,B) raises tents to accommodate hundreds of patients that arrive daily for rehydration and antibiotic treatment.

At the ICDDR,B, I participate in activities ranging from patient care to vaccine immunology projects, and therefore experience the full spectrum of clinical research. I spend



Flooded streets in Dhaka, Bangladesh

most of my time in the laboratory examining memory T cell responses to cholera infection using flow cytometry. I presented this work in a poster at an Emerging Infectious Diseases meeting in Calcutta, India in April. As a secondary project, I analyzed existing

data on diarrheal illness in household members of cholera patients. We found that half of household contacts experience diarrhea around the time of hospitalization of the primary cholera case, and we identified risk factors for severe disease in this population. Because of

this heavy disease burden, we propose that clinical guidelines advising against prophylactic treatment of household members. This research will hopefully meet with a broad audience at the American Society for Tropical Medicine and Public Health conference this fall.

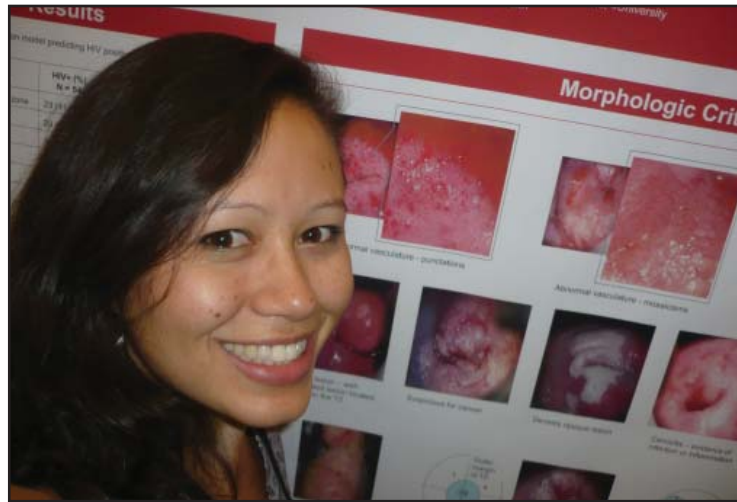
My Fogarty year has featured a combination of studying clinical outcomes, patient care in an underserved population, and exploring new frontiers in the laboratory. Experiencing these aspects of clinical research has informed my career trajectory in international health and infectious disease. In addition, the possibility that an effective cholera vaccine could someday transform Bangladesh gives me a new appreciation for the potential impact of clinical research.

Experiences with Cervical Cancer in Zambia

Jennifer Hallock (Scholar, 2008-09, Zambia)

Before being matched to Lusaka for my Fogarty year, I thought I knew what there was to know about cervical cancer. As a third-year medical student, I performed Pap smears and learned that they are doing a great job of making cervical cancer a rare cause of morbidity and mortality in countries like the US. And the new HPV vaccine is going to help reduce the incidence of cervical cancer even more, at least in countries that could access the vaccine. If needed, I could describe staging of cervical cancer, but I had never actually seen a patient with the disease during my 2.5 week gynecology rotation.

Within days of arriving in Lusaka, I realized how different my experience would have been if I had done my gynecology rotation in Zambia. I toured half of the 9 clinics that had been established since January 2006 within the Cervical Cancer Prevention Program in Zambia (CCPPZ), co-directed by Professor Groesbeck Parham and Dr. Mulindi Mwanahamuntu. These clinics are a joint venture by a variety of institutions in Zambia, including the Ministry of Health, University Teaching Hospital, and the Centre for Infectious Disease Research in Zambia (CIDRZ). I met the nurses who ran the clinics. They each screen between 10 and 20 new women each day for cervical cancer. I met the peer educators who not only act as clinic assistants, autoclaving equipment and cleaning the clinic, but also give 3 or 4 talks every morning to patients waiting in other clinics (out-patient, pediatrics, obstetrics, and HIV care) to "sensitize" a community to the impact of cervical cancer and the importance of routine screening. It is a community that knows personally



Jennifer Hallock with her poster at CROI in Montreal



Community sensitization in Zambia

the impact of cervical cancer, the number one cause of cancer mortality in Zambia. The peers give a name to a set of symptoms that many families have come to accept as part of life. These sensitization talks serve to educate the public and to entice women to come for screening. I was impressed by the dedication and passion that the nurses and peers demonstrated, and amazed that the program had screened almost 20,000 women since its inception. There was nothing else like it in Zambia, and it is a model for other developing nations.

Within a month of arriving, we held a conference with representatives from 5 other

African nations. The CCPPZ model truly was a model for cervical cancer screening in low-resource settings. Utilizing low-cost supplies such as vinegar and cotton wool, and increasingly affordable technology such as laptop computers and digital cameras, the CCPPZ nurses were doing visual inspection with acetic acid (VIA), taking digital photographs of the cervix (cervigrams), and providing patient care, treatment, and education.

The model is not without kinks, but with good communication, passionate team members, rapid responses, and weekly quality control meetings, the number of women screened in Zambia is

increasing day by day. Starting in November 2008, I helped contribute to those numbers. So far, I have screened 300 women in the 10th clinic to open in Lusaka. I work with two peer educators who sensitize patients within the gynecology wards of University Teaching Hospital or at the HIV care clinic. In addition to performing the exam, I have explained cervical cancer causes, prevention, and treatment. I have listened to the women's stories, and I have shared my own. I have discussed HIV prevention and care, offered advice about family planning, and explained the menstrual cycle and normal discharge patterns.

I have also worked with peer educators to create a video for patients to watch as they sit in the waiting room, helped create forms to integrate HIV care clinics and cervical cancer clinics, and presented an abstract at the Conference on Retroviruses and Opportunistic Infections (CROI) in Montreal regarding digital images and HIV status. I have glimpsed the global, academic, multi-million dollar, big-picture part of international research, both behind the scenes and in the media. And I have met the individual women who come to clinic with questions, worries, skepticism, trust, who walk out of the clinic with a smile of relief and a picture of their own cervix saved on their cell phone, or an appointment for further evaluation. For medical students attempting to find a niche in an ever-expanding global community, the experience as a FICRS is invaluable. As a future Ob-Gyn (I've decided!), I will be poised to guide and care for women who, inevitably, care for everyone around them, and I now have an idea of how international research can fit into my clinical future.

Fellows 2009-2010

Argentina

Lisandro Colantonio
Guillermina Melendi

Brazil

Juan Calcagno

China

Zhongwei Jia
Nicole Li

Honduras

Elizabeth Schlaudecker

India

Mark Huffman

Kenya

Gerald Bloomfield
Lisa Dillabaugh
Anne Gatuguta
AnaClaire Meyer
Alison Roxby
Francisca Ongecha-Owuor

Malawi

Elizabeth Bigger
Jonathan Samuel

Peru

Magaly Blas
Robert Comer
Peggy Martinez Esteban

South Africa

Shaheida Adams
Lucas Ntyintyane
Jonathan Peter
Richard van Zyl-Smit

Uganda

Mohamed Elrefaei

Vietnam

Thuy Le

Scholars 2009-2010

International Scholars will be announced at a later date.

Bangladesh

Alison Kuchta
Evelyn Ford

Botswana

Ihunanya Mbata

Brazil

Charles Schnorr

China

Kathleen Reilly
Jing Luo
Helena Chang
Margaret Lin
Vinay Gupta
Phillip Song

Haiti

Jolion McGreevy

India

Seema Shah
Scott Kendall
Timothy Poore

Kenya

Anthony Fojo
Kristin Beima
Anne Rositch

Malawi

Charles Vorkas

Mali

Anastasia Grivoyannis

Peru

Jennifer Zambriski
Leora Walter
Anthony Halperin

Christina Chao
Catherine Pastorius
Miranda Hillyard

South Africa

Brady Beecham

Tanzania

Maria Garcia
Malavika Prabhu

Thailand

Manik Chhabra

Uganda

Samar Mehta
Miriam Schwarz

Zambia

Benjamin Dorton