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Global Health Fellows

NORTHERN PACIFIC GLOBAL HEALTH RESEARCH
FELLOWS TRAINING CONSORTIUM

www.fogartyfellows.org

NPGH Fogarty Global Health Fellows Newsletter

Mentor Spotlight: Dominic Travis, DVM, MS

Dominic Travis, DVM, MS teaches ecosystem health and zoonotic diseases at the University of Minnesota. He is interested in the interaction between domestic animals, people and wildlife and how that applies to health, food security and conservation. This year he is mentoring NPGH Fellow Michael Mahero in in Uganda.



How many diseases originate in animals?

In the past 10 years or so, there have been a bunch of studies on the subject of zoonotic disease risk in terms of the proportion of human diseases – or emerging diseases – that come from animals. Woolhouse & Gowtage-Sequeria (2005)¹ give the numbers:

Of the 1,407 human pathogen species, 816 (58%) are known to be zoonotic. In comparison, of the 177 emerging or reemerging pathogens, 130 (73%) are known to be zoonotic. This corresponds to an RR of 2.0 and confirms the expectation that zoonotic pathogens are disproportionately likely to be associated with emerging and reemerging infectious diseases.

This includes some of the most important/infamous diseases such as ebola (bats and bushmeat), SARS (bats and bushmeat), TB (many domestic and wildlife hosts), HIV (monkeys and apes) and plague (fleas from rodents) to name a very few.

Where do some of the biggest risks in zoonotic transmission come from and how do you address them?

It boils down to increased/changing human – animal exposures, or interfaces. This has been ongoing since humans settled down and domesticated livestock, and increased throughout the industrial age. The ever-increasing rate of land conversion (eg. agricultural land conversion and natural resource extraction, like logging and mining), especially in the tropics, has resulted in unique new interfaces between humans, domestic animals and livestock, and hence new opportunities for disease transmission. Recently, the need for protein has driven new exposures between wildlife as bushmeat and humans, resulting in things like SARS and larger Ebola outbreaks.

What drew you to your field?

I wanted to first be a marine biologist or a wildlife biologist, but loved the health angle as well. Veterinary medicine provided an opportunity to combine those things. During vet school I spent six months in Southern Africa where I learned about this ‘interface’ issue, which is exacerbated in developing countries, and that led me to epidemiology and public health. The Ecosystem Health program at UMN allows me a place to combine all of the above in a holistic approach!

What keeps you awake at night?

The issues of food and water security and our [lack of] current solutions to them are colliding head on with the sustainability of natural resources. How we reconcile these demands in an overwhelmingly human-centric – or anthropocentric – world is the Gordian knot of our times. Emerging diseases are a by-product or symptom of this dilemma that we are forced to treat.

What are you working on right now?

I’m looking to be involved with issues that provide case studies for the above, where science can be useful to connect with policy. Tropical forests and disease emergence (including protein acquisition and bushmeat), honey bee health and sustainability, mining and the environment, and the health and welfare risks associated with wildlife trade are all on my plate at the moment.

What’s your favorite animal?

James Herriot (author of All Creatures Great and Small – required reading for pre vets) would tell me that I should say ‘all’ because they are all important. However, I’m particular to the snow leopard and the Okapi (‘forest giraffe’ found only in one part of the Congo forest).



¹Woolhouse, M.E.J., & Gowtage-Sequeria, S. (2005). Host range and emerging and reemerging pathogens. Emerging Infectious Diseases 11(12), accessed from http://wwwnc.cdc.gov/eid/article/11/12/05-0997_article

Consortium Calls

- April 2:** Q & A with the New Cohort
Call in to answer questions about your experience in the fellowship from new trainees
- April 9:** Implementation Science with Dr. Kenneth Sherr (*Associate Professor in the UW Department of Global Health*)
- April 16:** Health Economics and Cost Effectiveness with Dr. Rachel Nugent (*Clinical Associate Professor in the UW Department of Global Health*)
- May 7:** Research Presentations
- May 14:** Manuscript Preparation with Dr. Cheryl Moyer (*Assistant Professor of Learning Health Sciences at the U-M Medical School*)
- June 4:** Discussion: Research Outcomes and Accomplishments with Dr. Joe Kolars
- June 24:** How to Influence Public Policy Through Research

Upcoming Events

Implementation Science for Family Planning and Reproductive Health including HIV/STI Prevention and Control

August 3-14, 2015
(Monday-Friday, 8:30 a.m. – 5:30 p.m.)

University of Washington in Seattle, WA

UW Department of Global Health | The Evidence Project

Applications for the 2015 course are now available.



This course will be of interest to researchers, policy makers, funders, and practitioners working in the fields of family planning and reproductive health, including HIV/STI prevention and control in low and middle income settings.

Funding Opportunities



The Helen Hay Whitney Foundation

The Whitney Fellowship

Eligibility: Candidates who hold, or are in the final stages of obtaining a Ph.D., M.D., or equivalent degree and are seeking beginning postdoctoral training in basic biomedical research. **US citizens** planning to work in labs in the US, Canada, or abroad and also to **foreign citizens** for research in laboratories in the US only.

Due: July 1, 2015

<http://www.hhwf.org/HTMLSrc/ResearchFellowships.html>



The International Foundation for Science provides grants to early-career researchers working in a variety of LMICs, including all of our fellowship countries in Africa. Individual, Collaborative, and Contributing Research Grants. Application due dates throughout the year.

<http://ifs.se/ifs-programme/>



EMBO offers short and long-term fellowships up to three years to pursue post-doctoral research in laboratories in Europe and internationally. Open to US and international researchers. Application due dates throughout the year.

<http://www.embo.org/funding-awards>





Eric with his Family

TRAINEE SPOTLIGHT: ERIC MURIUKI, MBCHB

Eric Muriuki, MBChB, MSc is currently a Fogarty Fellow at the University of Nairobi in Kenya. An Infectious Disease specialist by training, he has been working in HIV research since 2012.

How did you get interested in reproductive health?

My interest in reproductive health developed after finishing my postgraduate degree in tropical and infectious diseases. This was steered by the motivation and mentorship of Professor J Kiarie, and Doctor Joshua Kimani both from the University of Nairobi, and Dr. Alison Roxby from the University of Washington. I do give all the credit to them for giving me guidance and also making me realize that there is a lot to be done in reproductive health in relation to infectious diseases, which is my clinical background.

Why did you want to work in research in addition to practicing medicine?

I believe that research is the backbone of a new healthy generation with answers or explanations for every occurrence. It gives knowledge to what is in question and reproductive health has to be addressed keenly in association to infectious diseases like HIV amongst others. Research also enlightens the clinical practice by providing better health solutions. I also wanted to work in research because it gives you a sense of belonging when you know that you have an opportunity to share your thoughts with other researchers who share a common interest in making a better tomorrow. Research is also the only way to address challenges in global health.

Tell us about your fellowship project:

My main area of research currently is reproductive health in HIV infected and HIV uninfected postpartum women. In this study, we are studying immune activation markers in postpartum women on contraceptives. Given the weak but consistent associations between HIV acquisition and use of depot medroxyprogesterone acetate (DMPA), some have hypothesized that the early high levels of MPA may represent a window of additional vulnerability that attenuates as DMPA levels fall over the 12 week administration period. This study was designed to get preliminary data to answer that specific question by measuring systemic immune activation markers between Day 9-15 after MPA injection, when the MPA levels are at their peak, in a group of 25 postpartum HIV-1-seronegative women and also measure local immune activation markers in genital fluids between Day 9-15 after

MPA injection, when MPA levels are at their peak.

What are some of the barriers to family planning?

- Cultural practices where some communities believe that having many children is a sign of power in the community.
- Poverty and lack of employment leads to poor family planning where these people engage in unprotected sexual activities as a way of comforting themselves, thus leading to unwanted pregnancies.
- Some religious organizations discourage the use of family planning.
- Myths and beliefs that some of the family planning methods are bad, uncomfortable or unsafe.
- Stigma related to the use of family planning where some communities shy away from using family planning.

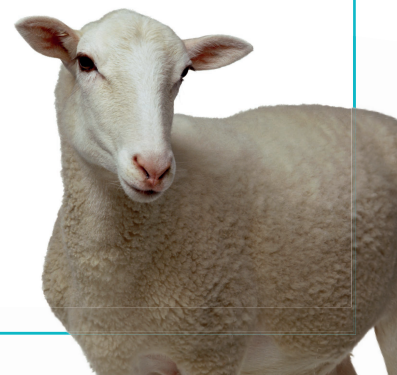
Describe some of the work you are most proud of:

My previous research on HIV Post exposure prophylaxis amongst sexual assault victims at an urban African hospital demonstrated that PEP services were actively sought out by men and women survivors from different parts of Kenya.

In my current study on post-partum family planning, I am proud that the participants' retainer and follow-up is very good.

What gets you through obstacles/frustration?

My family is my greatest support or pillar in my life whereby I always turn to them when I feel low or discouraged. I have also learned how to always talk about my obstacles either with my mentors, close friends or parents. At times I take a break from the frustration/obstacle and sit back to rethink on the way forward.



IN CASE YOU MISSED IT



The Center for Food Security and Public Health has a lot of information on zoonotic diseases. Their resources page includes nice infographics on methods of disease transmission, and you can look up information by disease or species.

Bet you didn't know mink farmers are at high risk for transmissible mink encephalopathy: <http://www.cfsph.iastate.edu/Zoonoses/index.php>

Have you ever struggled to explain your research to a lay audience? Maybe a zombie analogy could help. The rise in zombie movies has also led to a rise in opportunities to educate the public about disease transmission, disaster preparedness, and public health: http://wwwnc.cdc.gov/eid/article/19/5/AD-1905_article



Take a behind-the-tent-flaps look at life as an Ebola responder: <https://www.youtube.com/watch?v=4p7KQdmQQ1c>
Watch for alumnus Quy Ton at 1:49!

Interested in learning more about Ebola? Coursera is currently offering several on-line classes, including "Ebola: Essential Knowledge for Health Professionals." <https://www.coursera.org/courses?query=ebola>



<http://bit.ly/cughresources>

CUGH's Trainee Advisory Committee has compiled a list of approximately 200 websites and downloadable global health resources. The list is available in the Resources Section of the CUGH website. The categories include:

- Educational Programs and Courses
- Job and Field Placement Opportunities
- International - Multilateral Organizations
- Language Training Programs
- Governmental Organizations
- Information Resources
- Membership & Non-Governmental Organizations
- Planning Your GH Field Experience: A Checklist



LIFE AWAY FROM THE LAB BENCH

Argon Steel, MA, PhDc, spent time working in ecology before developing an interest in infectious diseases. He is studying mosquitoes and dengue virus for his Fogarty Fellowship in Thailand, as part of his work towards a PhD in virology from the University of Hawai'i.

"Have you eaten rice today? Yes or no?" It seemed like an odd question to receive from my new Thai friend. Was the question of what I was eating really that urgent? I started to wonder; had I committed some terrible cultural blunder? But if so, was it because I *had* eaten rice or because I *hadn't*?

As I came to learn, asking whether one has eaten rice yet is simply an everyday greeting. Thai people obviously like to eat; every spare meter of sidewalk in Thailand is taken up with food stalls, but when a country's version of "How's it going?" is "Have you eaten?" it tells you something; it tells you they really, really like to eat! And I guess that rice is a pretty indispensable part of eating at that.

And the imperative, "Yes or no?" I came to find was simply the literal translation of the common Thai phrase "Chai reu mai." Having lived for years in Hawai'i hearing pidgin, and listening to Singlish in Singapore-- both places so heavily multicultural, I've learned to enjoy the ways people borrow from one another's language. But not knowing Malay, Hawaiian, Tamil, or the various dialects of Chinese made me feel like I was missing out on part of the fun by just knowing English.

While the idiomatic use of English in non-native speaking countries is often a source of amusement to Americans, I think we gain a lot more by asking why such phrases arise in the first place. In order to really find out we have to make the effort to learn the language of our host countries.

Moving to Thailand for my Fogarty Fellowship has finally given me a chance to get the inside scoop. I've spent a pretty good amount of time in Thailand in the past, but now for the first time I'm actually living, not just visiting. I live in Salaya, a small provincial town and home of the largest campus of Mahidol University. It's definitely not rural, and it's not all that far a bus ride from Bangkok, but for me it is most definitely a big change.

The biggest difference has been realizing that once you move outside of Bangkok, just knowing a handful of Thai words doesn't hack it. Bangkok is a world-wide tourist destination. Salaya is decidedly not. Menus in English? Hah! I'm lucky if I can find menus with pictures since there really aren't any restaurants anyway. It's all little food stalls, each of which generally serves a particular specialty or maybe genre of foods. I guess if I wanted to live off of 7-11 wieners and Hot Pockets I could survive but what's the point of living in Thailand if you can't eat Thai food? So I quickly learned to point, to mime, and above all, to dive deep into what I call "Shop Thai".

The way I define it, "Shop Thai" is the limited vocabulary that lets me get around on taxis and buses, order meals, and show at least some thanks and appreciation for the amazing patience of the Thai people who have to put up with me. Now, I'm not saying that achieving a barely functional level of language should be all one should hope for. What I am saying is that it's the minimum we should at least aspire to.

Do the majority of Americans carrying out research in other countries learn the language of their host countries? I can see how it would be easy not to: we all have such limited time to get our research up and running, many of our home country colleagues are often fluent in English, and for that matter, there may be other native English speakers available for companionship.

Then there's the host country language itself; going from knowing English to learning Spanish seems easier (at least to me) because there are a fair number of shared words and the rules of grammar are somewhat similar. With Thai, forget it; it's really very different from English. The most infamous difference and the one that put me off for the longest time were the five Thai tones. The word "maa" can mean "mother", "dog", "horse", etc. just depending on the tone you give it. You really don't want to think about the situations where you could get that one wrong...

Though actually, the word that continues to drive me nuts is "glai". Said in a normal tone of voice it means "far" but said in a

“falling” tone it means “near”. Somebody with a sick sense of humor had to have come up with a single word with two completely different meanings! Actually, I really pity the poor taxi drivers who ask me how far I want to go.

Anyway, the reason I bring up tones and other mysteries of seemingly “exotic” languages is because I gradually realized an important truth. Maybe you’ve seen those scrambled word sentences:

Aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mttar in waht oredr the ltteers in a wrod are, the olny iprmoetnt tihng is taht the frist and lsat ltteer be at the rghit pclae.

The point is that the human mind has an amazing capability to create order out of chaos. As guests in other countries, our attempts at the local language are going to be absolute butchery. But people will still, usually, be able to get some idea of what we’re trying to say and often a lot more successfully than if we try to simply say it in English. Even when you get mixed up and use the absolutely wrong word; like the time I pointed to a bag of pineapple and asked the saleslady for a telephone—she gave me a strange look but I got my fruit!

The hardest part about learning a new language is that it’s “use it or lose it.” Sometimes native colleagues are not a lot of help; they’ve already put in the hard work of learning English so at this point it’s just easier for them to speak English with you. Which means that you’re going to have to get out there and meet the locals. The great thing is, it seems like there are always folks who really want to improve their English just as much as you want to learn their language. Putting yourself out there also means being willing to make mistakes. Like the time I slept through my stop on a late night bus ride from Bangkok and ended up in the middle of nowhere. Remembering the words for “train station” got me home that night (eventually) and led to all kinds of interesting encounters as I waited for a train home. Getting lost may not be the most efficient way of learning a new language but maybe it’s emblematic of an important way of learning; as we know from our own research, sometimes we learn the most from what initially seemed like mistakes.

In any case, however many mistakes you make, whether with learning a new language or in your research, as Thai people say, “Mai been rai” - no worries! It’ll all work out.

ASK GLOBIE

Q: Globie, where in the world have you been? Where are you headed in 2015?



I am currently in Seattle, catching up on emails after spending a few months in Ghana, learning about trauma from Drs. Andrew Gardner and Barclay Stewart.

I can’t wait to meet the new Fogarties at the NIH Orientation in July, and then I’m off to Thailand for Capacity Building Workshops.

I might even make it to Cameroon this year!

I have lots of airline miles, so let Nicole know if you want to take me along on your next trip!

Have something to share?

Email your submissions to Nikki Eller
ellern@uw.edu

