



June 22 through 28, 2016 - Newsletter 5

THE HALF-WAY POINT OF THE SUMMER RESEARCH EXPERIENCE

Most of the students are finding that the summer is zipping by too quickly. They say that there is so much more to do in the lab and things to see outside the lab. Here's a brief overview of what they did last week:

Data analysis: John (India) and Jeff (Thailand) spent the week trying to learn computer programs, resolve data inconsistencies, and get the data in the proper format for analysis. John's project involved bioinformatics. He relates, *"Bioinformatics unfortunately isn't something you can pick up on your own very quickly. I, of course, am taking extremely small baby steps to even figure out what are the appropriate steps for the data I got. As for the wet lab work, we are attempting to optimize the conditions for our experiments, time dependent and multiplicity of infection of H. pylori infection."* Jeff is working on data from interviews and says that *"Being that the data is fairly new, a lot of modifications needed to be done before I ran my analyses. Mostly translating the data, because it was in Thai, then after that, I started to run my analyses. It did take a lot of time because I kept on getting errors and values that didn't seem right so I had to look through all the variables and figure out what was causing my data to present itself incorrectly."* Jeff hopes to visit the sites where the interviews were conducted so he can have a complete picture of the process.

Journal Club: Students in Bangkok are participating in Journal Club organized by Dr. James Kelley. With the help of their mentors, each student selects an original research article and sends it to the other students to read. Then, the student gives a ~15 minute presentation to the group and the group discusses the article (photo on the right - Tiffany and her mentor, Dr. Som). Dr. Kelly and the mentors report that all four MHIRT students have given excellent presentations.



Meanwhile, in Cameroon Ernest and Michael are participating in Journal Club at CPC. They have both presented, which can be a little stressful since the discussion is in both English and French!

Lab-based research: Gabby, Tiffany and Meno in Thailand had productive weeks in the lab and preparing their Journal Club presentations. Meno was able to finally finish western blots of the samples he received from Japan and *"I also had fun presenting at the journal club with the rest of the MHIRT students, Dr. James Kelley, and Dr. Pornsawan. It's a great experience to practice presenting and answering questions. It's also interesting to learn about what the rest of the students are doing research on."* Tiffany reported that *"During the work week I am screening urine samples using PCR and hopefully by next week I will be able to use LAMP. I have been preparing my presentation this week for journal club on LAMP assay for BKV which I went over with Dr. Som before presenting. My presentation was today (Monday, 27)."* *"Last week, I [Gabby] extracted DNA from 74 samples of blood from melioidosis patients. Afterwards, I measured their DNA concentration using a Nanodrop. Throughout the week, I also prepared my journal club presentation."*

In Cameroon, Jessie *"finished proximate nutrient analysis (lipids, protein, ash, moisture, crude fiber) of the Hawaii and Cameroon-grown avocados. We will begin HPLC and IR-Spec the week of the 27th for carotenoid analysis."* Ernest: *"I am continuing PCR and hybridization with the remaining suspected non-tuberculosis mycobacterium isolates. I continue to look forward to the cultural exchange both inside and outside the lab."* And Michael: *"On Thursday and Friday I ...continued with my own project. I was able to work with Robert the technician on nested PCR and electrophoresis. I was able to identify 5 positive HCV patients. Next week I will continue to work with PCR and electrophoresis on another region of HCV."*

Unfortunately, Tiana informed us- *"past week has been a bit rough for me. I've been having constant stomachaches, and now have come down with a fever. Dr. Tandon set up a hospital visit this past Saturday and was prescribed some medication. I am now taking a few days off to rest and recover to return back to the lab soon."* We wish Tiana a speedy recovery and know that Dr. Tandon is taking good care of her.

Attending a workshop: On June 20-22, a workshop entitled “Malaria Diagnosis and Dissertation Writing,” was held at the Biotechnology Center, Cameroon. The workshop was designed to help new Masters of Science students understand basic research concepts and some laboratory techniques. The workshop covered some of the topics discussed during the Wednesday evening MHIRT sessions the University of Hawai’i (UH). Michael: *“I was able to participate in a rapid diagnostic test demonstration. The PhD student leading the demonstration*



pricked my finger with a lancet and dropped the blood on to the device. He then added 4 drops of buffer and we waited for the test to run.” “The diagnostic test finally finished and I came out Malaria negative.” THANK GOODNESS! Ernest: *“ For most of these students, it was their first time using a pipette and doing PCR so I felt very fortunate to obtain lab experience at an early stage of my academic career. The students were very polite and eager to learn, and really enjoyed taking pictures with us from Hawaii.”* Yukie Lloyd, a PhD candidate at UH who is working in Cameroon helped organize the workshop.

Weekend adventure in Thailand: *“On Saturday, we spent the entire day visiting temples in a historic city*



called Ayutthaya with Meno's mentor Aek and his friends. According to Aek, Ayutthaya once used to be the capital of Thailand until they were attacked by the Burmese in the 18th century. This resulted in them moving to Bangkok, which is the current capital of Thailand. There we entered its archeological wonders and visited temples such as Wat Mahatthat (where lies the head of the Buddha within a tree), Wat Phra Si Sanphet, Wat Yai Chai Mongkol, and other temples which I cannot recall.” “Aek, took us around and was our Thai translator. Aek also brought a few friends to join us and we had a lot of fun.

Having Aek there was a luxury since we could get into the different temples using the "Thai price" which was 10 baht versus the "foreigner price" of 50 baht. We visited the elephant nursery first where we got to interact with the elephants, feed them, and took pictures with them.”



Friday night in Cameroon: *“This weekend we had the amazing opportunity to unwind Cameroon style.*



Abanda and Louise picked us up Friday night around 10 pm and we headed out to the cabaret. Abanda came prepared with freshly grilled meat (photo on the left) from a famous part town called Brick. When we arrived to the place we were immediately surrounded by the sound of music. The night was filled with lots of good food, music and dancing. It was a perfect way to end a productive week at work.” FYI: Abanda is a PhD candidate at the UH conducting research on TB & Louis is the Coordinator for our UH-University of Yaoundé

research project.

Visiting the sites in New Delhi: *“My cultural experience (Tiana) was to practice Yoga. We (Tiana & John) visited the National museum and there was an entire exhibit dedicated to the art and history of Yoga. Being that Yoga is such a popular exercise back home, it's amazing to learn about the history especially in the country where it was first created. Here is a picture of one of the statues from the museum.”* John wrote: *“We got to visit Old Delhi once again by foot this time. I forgot crowds can get insanely hot. I can definitely visit there 10 more times before I even get tired of it. It's so lively there. I also was lucky enough to find time to visit the National Museum of Natural History. I'm always enamored but pottery and tools from the past. The sheer amount of craftsmanship with the lack of tools available leaves me in awe.”*



It's summer everywhere:

	Afternoon Temperature	Feels like
New Delhi, India	102°F	112°F
Bangkok, Thailand	90°F	98°F
Yaoundé, Cameroon	88°F	92°F
Honolulu, HI	86°F	91°F