



Monday, June 5 through Sunday, June 11, 2017  
Newsletter #3

### ***THEY ARE BEGINNING TO GET INTO A ROUTINE, KINDA?***

MHIRT students have begun to get into a routine, but as Sasha says “With work Monday-Friday and so many things to see on the weekends, it is difficult to find any downtime.” So far everyone seems to be very happy. Although there have been a few cases of illness due to local germs, everyone is healthy now and working hard.

In **Chiang Mai**, Lean .... “felt really happy when Dr. Suwit mentioned that I was making good progress in using the brain imaging software. I personally felt that I was stumped when I was reading and watching tutorials, but what I found to be most effective (well for me, at least) was playing around with the software and clicking different buttons to see what it does.... Dr. Suwit also has a grad student who ...even told me that I was a fast learner.” Mark’s comments, “So this week I found out that some days are going to be dreadfully longer than others. I started my experiment to compare the cytokine response by adding my monocytic cell line THP-1 to a 24-well plate followed by inoculating the plate with both *Penicillium marneffeii* and *Penicillium citrinum*. I then let the fungi incubate for different time periods, and collected the supernatant for my ELISA. One of the time periods was an 8-hour incubation, which meant I had to stay in lab till about 7 PM, to say I was exhausted that day is an understatement.” On the weekend, they “got a chance to visit the largest market in Chiang Mai. Saw so many local artists doing a live painting and also cultural dances and performances. For Mark, “The best part was seeing the Thai songs sung live, followed by the dance with lanna drums or Klong Sabadchai. The drum routine reminded me a lot of Taiko drums back home (Japanese culture). After all that walking, Lean “...went to a very much needed fish spa where the fishes eat your dead skin because I had some serious callused feet! My feet are now as smooth as a baby’s butt.” Hope you all recognized Lean’s feet in the photo.



In **Bangkok**, over the weekend, group members “... were able to relax in the pool and embrace Thailand’s roots of utilizing boats for transportation. We sailed along the Chao Phraya River to some of Bangkok’s most visited attractions, such as the Flower Market, the River City of Bangkok, and even a few markets where we were able to purchase great souvenirs.” During the prior week, Dwayne “was given the chance to visit the many facilities and the doctors in Thailand Red Cross, [including] South East Asian Research Collaboration in HIV (SEARCH), Human Immunodeficiency Virus- Netherlands, Australia and Thailand (HIV-NAT), and at King Chulalongkorn Memorial Hospital.” He observed a simple surgery, learned how charting works in Thailand, and was given an orientation at the data managing department.” Sasha has been purifying monoclonal antibodies to develop a rapid diagnostic test. She “had the chance to visit the Chulabhorn Research Institute to discuss how to create an immunochromatography test (ICT) for melioidosis. I was shown how to assemble the different parts of the ICT and which variables of the test need to be optimized for the best results. It will be my responsibility to optimize each aspect of the test for melioidosis while I am here.” For Cindy, “This week has been a productive one! Out of the 52 colonies I screened last week, 21 of them came out positive. After plasmid DNA extraction and re-screening via PCR, we ended up with 18 pRSET B and pGEM plasmids combined carrying our insert of interest for domain 3 of the Zika virus envelope protein in different strains of *E. coli* cells. Yay!” Hope everyone understood that. We’ll highlight each project in future newsletters.

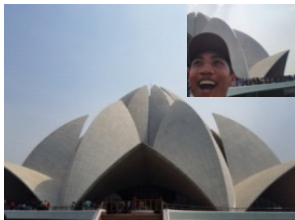




*Chironex fleckeri*

This week Brithney "... extracted DNA from the tentacle of the jellyfish: *Chironex fleckeri* species B utilizing a homogenizer." There are 4 methods for breaking up jellyfish, "... the first method includes using a glider..., the second method includes using a Biomasher..., and the third method includes using a mortar to smash the sample." The fourth and most recent method uses a homogenizer. "I was able to test this method out and I am hoping for good results."

**In Rangsit**, on June 9<sup>th</sup> Askley received a warm official welcome. "Today, I attended a ceremony with the faculty of Pharmacy at Rangsit. I met Dr. Pathom, Secretary of Faculty, whom I will be cooking with on June 17. I also met the Dean of the Department, Dr. Thanapat. He was very kind and offered a Rangsit pin to us to commemorate our time at the university as researchers." During the week she has been culturing different cancer cell lines to use in anti-cancer drug testing.



**In India**, Michael reports that "... this week wasn't very eventful..." "...but hopefully we will be receiving our samples from the hospital this week. Dr. Tandon discussed a side project on the bioinformatics side by generating in silico of HLA-restricted CHIKV specific peptide(s). So if the actual project does not start for the next couple days, I will at least have something to do." On the weekend, he visited the Lotus Temple.

**In Palau**, this week Brianna reports "I presented my project overview to the new high school Step Up students. It was very surprising that the students didn't really understand diabetes, even though there is such a high prevalence and know many people with diabetes." "The students asked lots of questions, and it felt great being able to teach." For Jessica, "This week, consisted of long days revising the Food Habit Survey with the team to ... get the most nutritional information and easiest format for survey participants. After long days taking ideas back and forth spent with the graphic designer and at the printing shop, we have finally all agreed on the best design... Finally!" This weekend, Jessica "...actually, participated in the first ever KONQER event held in Koror, the capital of Palau. It was just like America Ninja Warrior, but in Palau! I got to kayak through the beautiful islands, open water ocean swim, run, and attempt the warp wall and obstacle course, I met amazing people. Such a great experience." Brianna wrote "Over the weekend, we went to an island for a beach barbeque. There were lots of fruit bats." "I've also been talking with the students about Palau legends, to help me get my cultural project started."



Jessica crossing the finish line



**In Cameroon**, Brad and Jovikka "... ran DNA isolated from saliva samples through three different PCR reactions and analyzed the products through gel electrophoresis this week. We also isolated DNA from saliva samples and measured the DNA content of a bunch of samples using a Nanodrop. We had a few long days, but it's fun being in the lab with Jovikka because she's always happy." Jovikka confirms "It was a busy week in the lab. We mostly finished at night. We ran multiple PCR and gels. At home, we analyzed our data. Data analysis was harder than I thought. Frequent power outages pose a challenge in storing our DNA samples." She further informed us that, "In Cameroon, football [soccer] unites the people. We had the chance to watch a live football match between Cameroon and Morocco. The energy in the stadium was incredible. Cameroon won! Yey! It was definitely an unforgettable experience and a good break from the lab work."

