

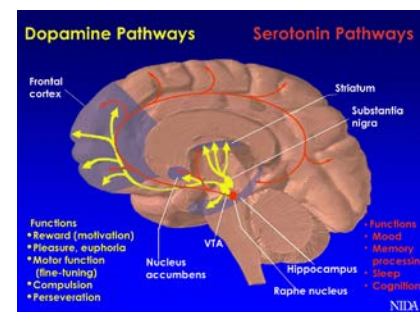


A weekly newsletter for students, family, faculty, mentors, and friends
 June 25 through July 1, 2015
 Newsletter 5

HIGHLIGHTING THREE PROJECTS AND VERY DIFFERENT CULTURAL EVENTS

Research being conducted by MHIRT 2015 students

Raphael Raman, at Chiang Mai University, provided the following description of his study: "Methamphetamine (MA) abuse is a growing epidemic worldwide. In Thailand, MA is mixed with caffeine and called "ya ba." Ya ba comes in tablet form and is easily accessible. Ya ba is an addictive CNS stimulant that floods the brain with dopamine, and repeated use of MA causes long-term damage to dopaminergic and serotonergic fiber pathways in the brain," ... "that have roles in: the reward-stimulant system, motor function, motivation, perseveration, mood, sleep, memory and cognition. The

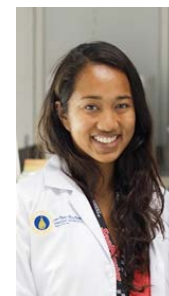


purpose of the study is to analyze and check for any significant differences in brain metabolite concentrations using MRI. MRI is used to analyze the brain for any significant damage to areas of the brain where dopamine and serotonin are released. Three patient groups are used in this study: Group 1: HIV-positive; Group 2: Meth abuse; and Group 3: Healthy control". His Thai mentor is Dr. Suwit Saekho and his US mentor is Dr. Napapon Sailasuta. Raphael was recently accepted into the 'Imi Ho'ōla Post-baccalaureate program. Congratulations, Raphael!

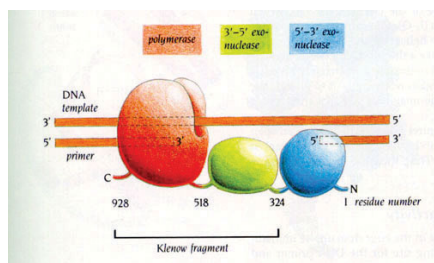
Samantha Esperanza, is conducting research at Mahidol University. "The purpose of my research project is to look at the prevalence rates of human polyomaviruses JC and BK in chronic kidney disease (CKD) patients here in Bangkok, Thailand. From my understanding, there are no previous prevalence rates reported for this population. On a weekly basis, I get about 3-7 urine samples from CKD patients at Ramathibodi Hospital (some of whom are awaiting kidney transplants). I extract the DNA from the urine sample then run a PCR or nested PCR to amplify the NCCR region of these viruses." "My ultimate goal/significance of my project is to provide prevalence rates for this population and compare them to other studies that have



looked at these viruses in other populations around the world." The data will help determine if there is a "correlation between patient demographics and the prevalence of these viruses" and possibly provide insight on diseases associated with Human Polyomaviruses (nephropathy, PML, etc.). Samantha is working with Dr. Nuankanya Sathira. Her UH mentors are Dr. Ric Yanigahara and Nelson Lazaga.



Robinson Bucaneg, recently graduated from UH with a degree in Mechanical Engineering, and is working this summer with Prof. Tim Liedl at Ludwig Maximilian University in Munich. "Simply put, we are trying to visualize a protein [← orange and green pieces] as it is polymerizing DNA, building DNA. We visualize it by attaching a fluorescence label while it is anchored to a DNA brick, a small structure made of DNA. In this project we are only looking at one particular protein, but if successful, we would be able to view multiple types of proteins on a larger scale by having multiple bricks attached to each other, sort of like Legos." So, Robinson is putting his degree to good use. His UH mentors are Dr. Kelvin Palmer and Iain MacPherson.



Update of other ongoing research projects will be provided in the next Newsletter.

Special Events

The VCT (Voluntary Counseling and Testing) event held at Hualumpong Metro Station. Sai and Chris, both of whom are working on HIV, attended the VCT event. Sai says, "This was a really interesting event because I got to see how community-based events such as this help with raising the awareness of treatment and prevention. The



event consisted of different booths that provided information on different services that were available to those with HIV or those who are at high risk of HIV. It also provided on-site counseling and testing for HIV. It also had a fashion show and singing show which involved many transgender women. It was really fun and lively." Chris' commented that "It was interesting too because of how accepting and open the LGBT community in Bangkok is, as all the participants laid it out there and weren't ashamed or afraid of who they were. You see a very different mentality here than in the US." Ah, MHIRT is achieving one of its goals - to expose students to differences among cultures.



The Karen people of Northern Thailand

Kellyan talked about her afternoon in Chiang Mai together with Taneesha, Raphael, Sairael, Mc Millan. "We stopped by a Long neck tribe called Karen (Tibeto-Burman ethnic minority of



Myanmar) within the mountains. In the late 1980s and early 1990s due to conflict with the military regime in Burma, many Karen tribes fled to the Thai border area. Women of this tribe are well known for wearing neck rings, brass coils that are placed around the neck, appearing to lengthen it. The weight of the brass pushes the collarbone down and compresses the rib cage. The neck itself is not lengthened; the appearance of a stretched neck is created by the deformation of the clavicle. When asked, it is often said that their purpose for wearing the rings is cultural identity. (Left is a picture of a woman who is the oldest member of the tribe



and has 30 rings wrapped around her neck! Unbelievable!)"

Playing with Kitty Cats

"Next stop was Tiger Kingdom where we were able to see the smallest AND largest tigers! Not only were they adorable, they were very friendly and allowed us to take many photos with them." (Talk about having a tiger by the tail! Wow, Taneesha!)

Bouldering in Munich

Robinson, tried his skills at bouldering. Drs. Nerurkar and Taylor were really relieved to receive the photo. When Rob told us he went bouldering, we were afraid he might be trying to climb a rock-face in the Bavarian Alps. Looks challenging, but fun!



In the next Newsletter, we will highlight Maya's impressions after attending an alternative medicine clinic and Sai and colleagues report on their experiences in Phuket!

Wishing everyone a very Happy

