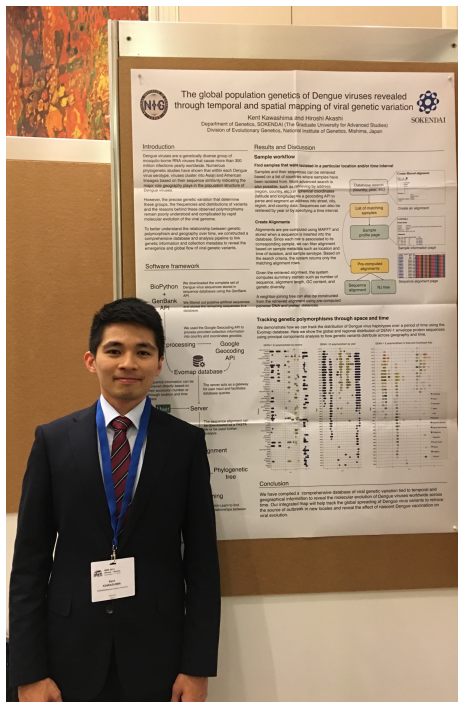KAWASHIMA Kent Diel
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2016 International Meeting on Emerging Diseases and Surveillance
November 4-7, 2016
Vienna, Austria

The International Meeting on Emerging Diseases and Surveillance is a biennial gathering of scientists, researchers, medical doctors and veterinarians to discuss the latest efforts to track and mitigate the spread of infectious diseases as well as to learn about the latest research on the pathology, mechanism, and available treatment for communicable diseases in humans and animals. This year, the conference boasted more than 600 participants from all over the world coming from different scientific and medical backgrounds consistent with the conference's emphasis of the "One Health" approach. One Health is the concept that people's health is intrinsically tied to the health of animals and the shape of the environment. Given that 6 out 10 infectious diseases in humans come from animals, the One Health approach advocates collaboration across disciplines in order to achieve the best health for people, animals and the environment.

I think the best parts of the conference were the poster sessions. Here, I could sample from a wide range of topics, discuss with presenters, and network with other participants. Indeed, I found a lot of interesting posters and I had the opportunity to discuss with some of the presenters. My favorite poster was about an HIV drug resistance phenotype prediction engine using machine learning and real data. Here they demonstrated how machine learning algorithms such as Bayesian convolutional neural networks can be trained using real genetic sequences together with high-throughput drug screen results in order to predict the drug resistance profile of a newly-evolved HIV strain. Of course, I also presented my own poster and got the opportunity to discuss my ideas with other participants. I even met two Japanese doctors attending the conference that mistook me as Japanese and started asking question in Japanese.

My favorite session of the entire conference came at the last day when Dennis Carroll, the director of Global Health Security at USAID presented a global and multidisciplinary initiative called the "Global Virome Project" that aims to identify and characterize every zoonotic viral infections in animals that pose a threat to public health through a collaborative effort of veterinarians, molecular biologists, epidemiologists and statisticians. Since most human pathogens come from animals, studying and recording each zoonotic virus circulating in animals will enable us to prepare for and maybe even forecast the next big outbreak. Such a

project would help me get real data from animals to help my research to understand pathogen evolution in cross-species transmission and spreading.

On the last night of the conference, the mayor of Vienna hosted conference participants for dinner cocktails at the *Wiener Rathaus*, which is the city hall of Vienna. Surrounded by intricately carved columns and golden fixtures, dining at the main festivities hall was an amazing experience that I am sure I and everyone else in that hall would remember. Having dinner at the Rathaus also saved me from a problem I didn't realize until it was too late – that all restaurants were closed on Sundays.

The day after the conference ended, I had just enough time to go sightseeing around Vienna. I was surprised how small *Innere stadt*, or the city center was. From the eastern part where my hotel was located to western part of Innere stadt would take less than an hour to walk. Within this area lies most of the tourist spots in Vienna like the Vienna State Opera House, the Austrian National Library, the Hofburg Palace complex of museums, and St. Stephen's Cathedral.

Just outside of *Innere stadt* is the Schonbrunn Palace, the former imperial summer residence of the Viennese Habsburg monarchs, most famous of which was Maria Theresa. Aside from the palace building, the complex is also famous for its numerous expansive and sculpted gardens. Although the trees and the foliage in the gardens were beginning to fade as winter was approaching, it was still an impressive sight.