

Completion of the short-stay study abroad program

School: Life Science

Department: Genetics

Name of the Student: Babarinde Isaac Adeyemi

Destination Country: United States of America

Receiving University: University of Michigan

Receiving Department: Department of Ecology and Evolutionary Biology

Host Professor: Dr Jianzhi George Zhang

Period of Study: 21st of July to 20th of September, 2014

University of Michigan, Ann Arbor

The University of Michigan, Ann Arbor is one of the world leading public research Universities. According to the Times Higher Education World University Ranking 2013-2014, University of Michigan is in the top twenty Universities in the world. The University of Michigan (U of M) was established in 1817 in Detroit and moved to Ann Arbor in 1837. U of M has three campuses (Central, North and South) and a combined area of more than 20,000 acres (including arboretum).

There are 19 schools and colleges in U of M with a very high research activity and comprehensive graduate programs. About 100 U of M graduate programs are in the top 10 in the United States. The high level of research activity is attested by the high number of high quality publications emanating from the University yearly. The University has over 6,600 academic staff members, 73 of whom are in National Academy. There are over 43,000 students in U of M, 35% of whom are graduate students enrolled for Masters, doctoral and other professional degrees.

Ann Arbor, being a college town, has little side attractions outside of U of M. However, the city council makes life so comfortable for the students. One important way is via free transport system for student with Mcard, the identity card for U of M students. The University also provides free shuttle buses operating between the campuses and different residential areas. In addition, the student union government organizes some activities to enhance the social interactions among the students. This is important for having a smooth and comfortable research experience in the University. In sports, the U of M teams are called Wolverines and 27 teams participate in college sport competitions. The U of M football program ranks first with a high winning percentage. In fact, the football stadium is the largest in the USA, with capacity of over 100,000 spectators.

Preparation and the trip to Ann Arbor

The short-stay study abroad program of SOKENDAI supports students to visit a foreign University or research institute for a particular time period. The aim is to enhance international collaborative research activities and promote international research ability. Understanding the benefits that such program will afford my doctoral training and my future as a scientist, I was enthusiastic to apply for the support. Since one of the requirements for the application is to find a host lab, I began the search for a lab which is ready to host me for the period of my stay. Therefore, I decided to contact Dr Jianzhi Zhang. Interestingly, Dr Zhang shared the same PhD academic advisor with Dr Saitou, my PhD advisor. So, after contacting with him, he was willing to host me for two months. Fortunately, my application got accepted by SOKENDAI and the preparations started in full gear.

Dr Zhang linked me to one of his students, Chuan Li, who assisted with getting the accommodations for my stay in Ann Arbor. Also, a former student in National Institute of Genetics, who is now a post-doctoral fellow in the U of M, Joji (George) Watase, assisted in many ways. I established contacts with the two people and they made my stay such a comfortable one in Ann Arbor. After the approval of my application, the flight tickets were booked. July 21st was the day for the flight. Although there was a two hour delay, the flight was smooth. George came to meet me in Detroit Metropolitan Wayne County Airport, and gave me a ride to the apartment where Chuan was waiting to receive me.

Life at Ann Arbor

Ann Arbor is a college town, and so, U of M is the center of social activities in Ann Arbor. The University has free shuttle buses for commuting between the campuses and residential areas. In addition, free city buses are offered to U of M students with Mcard (the University identity card). Interestingly, in the first week, I was able to get the Mcard and the key to the lab. In addition to its use as identity card and for free bus service, Mcard is also a card key. Like many USA towns and cities, good road transport system is important. Therefore, the free bus system makes life so comfortable in Ann Arbor.

For my first month, I stayed in Gamma Alpha, a cooperative house with all residents being U of M graduate students. This gave me the opportunity to interact with students from several countries and various disciplines. The house is run by students and many of the facilities are shared. Sometimes, group cooking is organized such that the whole house members eat together. Although, I could not stay for more than a month

in the house because of the start of a new school calendar, my stay in the house was a memorable one. For the second month, with the help of Chuan, I was able to rent an apartment from another student till the end of my stay. The second apartment was also fun because in most evenings I was invited for tea drinking with several graduate students. Over tea, we get time to know each other and discuss general life issues.

Study and research in Zhang lab

Dr Zhang is one of the leading scientists in the field of evolutionary biology. In fact, he is the president elect of the Society for Molecular Biology and Evolution. In his lab are students of Ecology and Evolutionary Biology as well as Bioinformatics Department. Although his primary model organism is yeast, his lab has worked on interesting biological phenomena in many organisms. Not less than nine papers have been published from his lab this year, and several others are under review. In the first week of my visit, I had the opportunity of interacting with members of the lab to get more familiar with the ongoing research topics in the lab.

For my stay in Zhang lab, after consulting with my host professor, I decided to study the evolution of long noncoding RNA (lncRNA). My PhD study is about conserved noncoding sequences, which might function as gene regulatory elements. With the transcription of many noncoding parts of the genome, the question is whether the transcription of the regions is generally functionally important or just transcription noise with little or no functional importance. That is exactly what I studied during my stay in Zhang lab. Although the study is still ongoing, my PhD study is going to benefit greatly.

Apart from my specific study, I enjoyed the journal clubs and lab meetings in the lab. The journal clubs are usually very deep and intense. Sometimes, it is broad. I benefited from the journal clubs in an enormous way. Specifically, I have a much better understanding of transcription regulation, which will be useful for my PhD study. I not only was able to attend the meetings, I was asked to introduce a paper during one of the journal clubs. I also, presented my lab report on the 19th of September, during which I received constructive and generally positive comments for my study during the visit.

Although I would have loved to attend some classes, because of the timing and the duration of my visit, I could not attend any. However, I was able to attend two talks by invited speakers. One of the two talks was a lecture, presented by Andrew Fire, a Nobel Prize winner from the Stanford University School of Medicine. Within the lab, Dr Zhang is always available for discussion and the discussion with him is generally productive. Also, the lab members are so kind and ready to help with any issues and to

contribute positively to the scientific progress of other lab members.

Other activities

One of other important experience outside science is the ability to see a match between European soccer giants, Manchester United and Real Madrid. The match took a place in U of M stadium, which is the largest American football stadium in the USA. Also, the match broke the record for the largest spectators of the soccer match in the USA with more than 100,000 people in attendance. As a soccer player/fan, this is an experience that will remain in my memory for a long time. In addition to the opportunity to see the famous match, I was introduced to some soccer players with whom I was able to play and enjoy my leisure.

Although I was mostly busy with my study, I was able to visit National Museum of the United States Air Force, Dayton, Ohio State. The museum is the official museum of the United States Air Force. In the museum are displayed some of the past presidential aircraft. I was able to see some of the aircraft used by the US Air Force during various wars including World Wars I and II, Cold War, Korean War, Southeast Asian war and so on. Also displayed are the uniforms and clothings, as well as missiles. Also, I was able to understand some of the histories of wars engaged by US Air Force. Apart from Dayton, I also visited Detroit, which is the commercial center of Michigan State. Detroit has an interesting history that would significantly increase the volume of this report if included.

Some of other activities that made my stay in Ann Arbor include the ability to interact with other foreign students. The first opportunity was that of attending a lake party, organized by some Americans for the foreign students. That afforded me the opportunity to meet many students from different parts of the world and from various disciplines. I was able to interact with some of the students and postdoctoral fellows over dinner. To have an out-of-the-lab interaction with some lab members and members of Gamma Alpha house, I prepared some Nigerian dinner. In attendance were twelve people, including my host Professor, Dr Zhang. It was such a nice moment.

Expenses

The trip was supported mostly by SOKEDAI short-stay study abroad program. The SOKENDAI support includes the support for flight, other transportations, accommodation, visa expenses, tuition expenses and other related expenses. Free shuttle transportation system around Ann Arbor was of a significant financial relief. However, the meal in Ann Arbor is somehow expensive and almost exhausted my pocket money.

Advice for future applicants

Short-stay study abroad program is a program I would recommend for any SOKENDAI students that would like to have international exposure which would be important for the doctoral training and future as scientists. The program affords the opportunity to get up-to-date information about latest techniques. In addition, it is important to interact with larger science community. Outside science, interaction with people from different cultural background and firsthand experience of another culture are also important.

The selection of the lab to visit is an important decision for the short-stay study abroad. Quality and number of publications, the personality of the host professor, the lab members, and the relevance of the lab research theme to the PhD study, as well as the quality of the host University or research institute and the language of instruction are some of the factors to be carefully considered in deciding which lab to visit. In addition, it is important to have the duration well planned out with considerations for the season. For students who may want to attend some classes, host University calendar should also be considered. Also, the intention to attend some classes should be communicated to the host professor in advance such that adequate preparations could be made.

Although there is a budgetary limitation to the number of students and the amount of grant, short-stay study abroad is a program with enormous benefits. I would recommend the program for as many SOKENDAI students as the budget could admit.

Selected pictures



U of M



Kraus Natural Science Building housing Zhang lab



In front of the lab



The ride, Ann Arbor City Bus



U of M shuttle bus



Bioinformatics room of Zhang lab



Zhang wet lab



Visit to US Air Force Museum



Air Force Museum



During an evening tea chat



On the soccer pitch



A cake for international students



Largest soccer spectator at the largest football stadium in USA



Watching Manchester United vs Real Madrid



Gamma Alpha house



At Detroit



Detroit at night



With Chuan and George at a Japanese restaurant



With a lab member, Jinrui at a Chinese restaurant