

## 2017 Tokyo NODAI Long – Term Program

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### 1. Reason for participating in the study abroad program.

The first reason is related to my professional career, when I was studying at university I always wanted to carry out a project about fermentation science since fermentation is the topic that I like the most in my career. When I had the opportunity I wanted to take advantage of it. And I chose Japan because it is a very developed country in area of industrial fermentation.

The second reason is because during my studies at CHAPINGO I took Japanese courses. While taking Japanese course I met NODAI students and other Japanese people, who visited the university as members of academic and cultural exchanges programs. In our meetings we had the opportunity to share how our universities, countries, languages and culture are. Then I found out that I was increasingly interested in Japan and that I would like to visit it someday, and the only way I could do it is through the international exchange programs we have in CHAPINGO and the support we also have.

### 2. Activities you did during the program (both, educational and cultural).

Within the academic activities, I carried out a project together with my partner about Japanese fermented products. In this project our main subjects were kurozu (black vinegar) and shio koji (Japanese condiment). However, we also worked with miso and sake, although we only saw the elaboration process.

In our second week in NODAI we met our host professor and our laboratory colleagues, and also our laboratory area. We started working with kurozu first, our main objective was carry put several kurozu treatments to be able to analyze the microflora present in it. In fact, two treatments were already in place when we arrived, so we only took care of taking pH and measuring concentrations of ethanol, acetic acid and acetic lactic. We analyze and compare the information through graphic representation. At the same time, our host professor taught us how to elaborate miso. We investigate a little about it is elaboration process and it is characteristics.

In October we started to work with shio koji, first we looked for some information and then we decided with our professor help that we will elaborate shio koji with fresh and culinary herbs that we though it is consume in Japan and in Mexico. The herbs we worked with were rosemary, lemon balm, drill, coriander, and oregano. After the fermentation process of shio koji, we took out samples and we measured concentration of some compounds such as glutamic acid, glucose and carboxipeptidase acid. We also analyze enzyme activity and we did sensory tests. The sensory tests were carrying out in two modules, one was to evaluate the final characteristics of beef that were marinated with each shio koji, and the second was the same sensory test but instead beef, we used chicken. In these tests the preferences in terms of texture, smell, taste and color were evaluated.

About kurozu, we keep working with the first ones, preparing dilutions to measure ethanol, acetic acid and lactic acid. Apart from the first treatments (A and B) we elaborated two more treatments (C and D).

In November we visited a traditional sake factory, the factory belongs to the family of one of our laboratory mate. In this visit we were able to see the total process of produce sake, from the first step that is to wash the rice grains until the last step that it is consist in bottling. It was pretty amazing because at the beginning I always wanted to focus my project in sake, but since it was not possible, we change the subject in black vinegar (kurozu), and I realized that the process was very similar; it's about saccharification of the starches to convert it into glucose, production of ethanol from glucose, and production of acetic acid from the oxidation of ethanol. The owner of this factory gave us a tour, she explained us, and answered all the questions we had about the process of sake production. After the tour, she kindly took us to the sake's shop and offered us several types of sake to try. Before we leaving she thank us for visiting and she gave us sake plum as a gift, a really nice gift.

In November we also did another four treatments of kurozu (E, F, G and H), during a whole week we took out samples every day to take the pH and make dilutions for the measurements of acetic acid and ethanol concentration, and in the second week of fermentation, samples were taken every third day to make dilutions for the tests. At the

beginning of December we had almost completed all the work, we already have finished the treatments, so we had all the data and just analyzed and report the results.

In the other hand, we attended a Japanese course, and we took lectures with the rest of the students from the same international program. In our Japanese course we had classes Wednesday and Friday with foreigner students from Thailand, Vietnam, Cambodia, Myanmar, Sri Lanka, Tanzania and Brazil. We studied about Japanese grammar and a little bit about kanjis. I learned many thing about Japanese, new vocabulary and grammar tips. We had two teachers in the course; they were really professionals, very good teachers. I really liked how they teach me Japanese although it was only 3 months.

The lectures we attended were food and health 2, and molecular biology. Both were very interesting because these subjects are related a bit to our major, however sometimes it was difficult for me to understand what teachers were talking about due to some topics that I did not have seen before. In this case I started to investigate a little by myself to be able to understand the class, in this way it became more interesting. There were many professor, so some of them took us to their laboratories, they showed us their experiments, projects and previous works they carried out with their students.

Regarding the coexistence with students of NODAI, despite the differences in culture and language, it was quite good. I met students from various departments of NODAI, from the Latin coffee American, our laboratory, and from the classes we had at NODAI. In my laboratory since receiving foreigner students is not common, they always tried to talk with us even their English was not good, and well, our Japanese was not good enough we did everything possible to be able to communicate. Unlike other students, with them our conversation were more fluid since they were guys who have studied abroad, some way they had learned English to communicate, so it was easier to talk to them. In other cases in which the students did not speak English at all, we tried to use a little bit what we knew in Japanese. For me it was one of the biggest challenges to communicate with students from different countries, as well as with Japanese students, however, if we could communicate in a common language (English) and share our experiences as international students.

Within the cultural activities in the school, we went to the harvest festival, I was very impressed by how well organized it was. All the activities that the students and teachers did were incredible, we liked it a lot and we enjoyed it to the fullest. We met our Japanese friends and we tried food, we went to see the boys how they played musical instruments, etc.

After this festival all the madness of Halloween came, we celebrated Halloween at NODAI in one of the laboratories with some students and the teacher, so we went and

all of us dress costumes. We also celebrate with our Latin American boys in Shibuya; they showed us how is a Halloween party in one of the most frequented areas of Tokyo.

We visited almost all the historical and famous places in Tokyo and around the city. We wanted to visit all these places to learn more and better about Japan. Tokyo is a very big city, very nice, clean, quiet but at the same time noisy. In December the Christmas lights shows began, the whole city lights up, it was so crazy but wonderful.

We were invited by our friends from NODAI to Kamakura; it was a very nice and fun visit. We were able to see the Fuji Mountain and the sea from the top of one of the places we visited, the view was breathtaking and unforgettable.

### **3. Explain what you accomplished and learned through this program**

I learned a lot through this program, being an international student and studying abroad is really difficult, in my case I consider that Japan is very far from Mexico, and it is totally different world ; language, culture, lifestyle, food, even the education system. Compared to CHAPINGO, in NODAI they have everything that a student could need for a good research project (laboratories, materials, teachers for support), so it is pretty good, it was easy for me to carry out my project. Through this program I learned many about fermentation science, fermented foods from Japan, fermentation tests and many from my host professor also. This was not exactly an exchange program for me, because it was about my professional stay, as my last subject that I had to finish in order to graduate, so I successfully completed it thanks to a great adviser and very good teacher, very attentive and kindly laboratory colleagues, and of course to the exchange program that gave me the chance to do it in this way.

And well, although it was not foreseen that we took the lectures, it was the best, we attended the classes together with the exchange students and we learn a lot. In these classes i learned much about experiments to the solution of real problems in agriculture as well for the Japanese population health and of course I learned more about agriculture in Japan.

And from my Japanese course I finally understood that studying another language is amazing, but studying Japanese is really difficult and if you want to speak it perfectly, you may have to dedicate time and study a lot.

### **4. How did this program shape your career and how will you apply what you learned in the future.**

This program and the project I carried out about Japanese fermented foods reinforced my interest about fermentation science, so I would like to do a master´s degree in fermentation science. I want to work with fermented food and focus on everything related to it. I have always said that the most important basic need for the human is

food; through the fermentation process you can obtain different products with very nutritious characteristics and good for the health.

**5. Any advice for the future study abroad students.**

- Make good use of the scholarship
- Make the most of the classes, since it is information first hand, if you have question do not hesitate to ask. The teachers are very patient and surely will know how to respond as soon as possible, and in the simplest way so as not to confuse you.
- Meet and interact more with the Japanese students and teachers. At the beginning they can be very shy but if you show them confidence, they will be more open with you.
- Go the library and read many books as you can, because you will find a lot of information available in English so you don't have to worry if you don't speak Japanese.
- Visit many laboratories as you can and if possible find out what is are they doing
- Know Japanese culture, visit the most historical and famous places such as museums, temples, fairs, parks, etc. Try all new food because it will be a short time.

**6. Any suggestion to improve the program.**

I do not have any suggestions for the program since I consider it a good and very well structured program. Maybe only perform some cultural exchange activities (just like the Latin American coffee but more often.) between international students and students of NODAI or even between international students to get to know each other better.