

The NIBB Internship Program

The NIBB Internship program, which started in 2009, is a hands-on learning course for overseas students designed to give high-quality experience in real world research and a focused education in biology. At the same time, this program aims to internationalize graduate students from The Graduate University for Advanced Studies SOKENDAI, giving them the opportunity to get to know students and interns with differing cultural customs. Another goal of the program is to build connections through providing education to the people who will form the core of international research networks in the future.

To participate in this program, applicants who would like to experience research at NIBB must supply the name of the lab they would like to visit as well as their reasons for choosing it, and a letter of recommendation. Based on this information, applicants are chosen to spend set periods of time participating in specific research activities in the lab they applied for. Round trip airfare and housing expenses are provided by the NIBB Internship Program.

In FY 2019 there were 29 applicants, out of which 11 interns were selected. These interns were from universities located in six countries (Vietnam, Thailand, Germany, Hungary, USA, and Japan) and spent periods ranging from two to twelve weeks experiencing life as a member of a research team. Moreover, two interns from the UK and Germany, who were funded by travel grants they had applied for, were also posted to NIBB.

Report from a participant Neen Phan-udom Mahidol University, Thailand

My name is Neen Phan-udom. I am a third-year undergraduate student from Mahidol University Thailand, majoring in Bioresources and Environmental Biology (International Program). I had the opportunity to do a 2-week internship at Professor Ueda's lab- the Division of Cellular Dynamics- which works on plant membrane trafficking proteins in *Arabidopsis thaliana* and *Marchantia polymorpha*.

I was under the supervision of Asst. Prof. Ebine during my internship. My work mainly consisted of performing transient assays for *Arabidopsis thaliana* leaves and visualizing the localization of the targeted proteins via confocal microscopy. I learned to find and take pictures of the cells expressing GFP/RFP-tagged proteins to later measure their activities and possible interactions. I also got to attend a 2-day summer practical course on oil bodies in liverwort which included mini fieldwork to collect liverwort samples and visualize their oil bodies under the microscope.

In addition to gaining more knowledge and laboratory skills, this internship was one of the most wonderful experiences I've ever had. I received a very warm welcome from all the lab members as well as other staff at NIBB. I was pleasantly surprised when the lab organized a welcoming

party for me and my lab partner on our first day (which has gotten me really into soumen). Everyone was so nice and friendly which made me feel very welcomed and look forward to my tasks every day. I was on the verge of crying on my last day here when I had to say goodbye. I also had many wonderful moments learning about Japanese culture both inside and outside of the lab, not to mention having the privilege to live in Okazaki city and do some traveling on the weekends. Japan really is a beautiful country.

I will never forget my two weeks here. If anything, I wish I could have stayed longer and learned more about membrane trafficking in plants. The internship has shown me the beauty of basic research of exploring the unknowns and left me wanting for more. Really, I can't thank everyone enough for this amazing experience. I am forever grateful for this internship opportunity.

