The NIBB Internship program

The NIBB Internship program, started in 2009, is a hands-on learning course for overseas students designed to give high-quality experience in real world research and focused education of biology. At the same time, this program aims to internationalize the graduate students of SOKENDAI (Graduate University for Advanced Studies), giving them the opportunity to get to know students and interns with various 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 2017 there were 57 applicants, out of which seven interns were selected. These interns were from universities located in six countries (Colombia, Germany, Indonesia, Malaysia, Republic of Serbia, and Japan) and spent periods ranging from two to twelve weeks experiencing life as a member of a research team. Moreover, two interns from China stayed at NIBB for twelve weeks and one intern from France stayed one week by their own travel grants.

Report from a participant
Olivera Valentirović
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My name is Olivera Valentirović and I am an undergraduate student at Faculty of Biology at the University of Belgrade, Serbia. Thanks to prof. Dr Nakayama, who suggested the NIBB internship program to me, I was able to experience working at his laboratory for one month. It was a great adventure and opportunity for me, since I had a chance to work in the field of epigenetics and to travel to a breath-taking far away country, that was something I only dreamt about before.

The research I performed during my internship at NIBB was on the ciliate *Tetrahymena thermophila*. This was my first time working in a laboratory as well as with *Tetrahymena*. I found its life cycle and the extreme processes happening on its genome during its sexual reproduction process called conjugation extremely fascinating. Those peculiarities make it a really favorable and attractive model organism.

My project was to characterize the proteins involved in the formation of heterochromatin and DNA elimination during genome rearrangement within the macronucleus. In one experiment I characterized several cell lines that express proteins tagged with green fluorescent protein to analyze localizations of heterochromatin protein candidates. It was a great experience seeing gene gun transformation for the first time. I also learned a lot about culturing, storing and transferring *Tetrahymena* and how to perform a selection of the transformed cells and phenotype assortments using different concentrations of selective substances in the medium. In a parallel experiment, I aimed to reveal the sufficiency of few proteins for DNA elimination by a tethering assay. I faced some difficulties during this experiment, but I found it a good experience for my future work, that I may face and need to solve on a daily basis. Every day I was presented with interesting challenges and new chances to find a way to untangle some problem. In the end, I managed to go through all the intended steps and successfully finish the experiments with some of the samples. I wish I could have had a longer period of time to do more experiments with different conditions, and finish all of the initially planned experiments.

Accommodation at Myodaiji Lodge was extremely comfortable which made my stay very pleasant. I didn't lack anything and everything was professionally organized, thanks to the International Corporation Office.

All of the lab members of the Division of Chromatin Regulation were always willing to help me with my work, as well as with my stay. They gave me a lot of precious advices for which I am immensely grateful. It is a great honor for me to have worked with such polite, kind and hard-working people. I would especially like to thank prof. Dr Nakayama who gave me this opportunity to join his lab and offered me an unforgettable experience of Japanese culture, its delicious cuisine and its people. I am eternally thankful to Dr Kataoka from whom I've learned many valuable things, who patiently and carefully watched and guided me through every step and who showed me how wonderful and incredibly fun working in the laboratory can be. I really appreciate friendly and welcoming atmosphere during my stay.

This was a life-changing adventure for me. In addition to the exciting bench work in the actual lab, I've gained many unforgettable memories, visited amazing places, felt one unique culture, met remarkable people and made lasting friendships. The whole experience inspired me to pursue my career in science even more than before.