

## 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 2016 there were 23 applicants, out of which five interns were selected. These interns were from universities located in 5 countries (India, Germany, Turkey, USA, and Vietnam) and spent periods ranging from four to twelve weeks experiencing life as a member of a research team.

### Report from a participant Tran Thi Hong Nguyen VNU University of Science, Vietnam

I am Tran T.H. Nguyen, from Hanoi, Vietnam. I have just completed my Bachelor's in Microbiology from Vietnam National University, University of Science. I was so glad to be an NIBB internship student under the guidance of Professor Takada from 10th Oct to 28th Dec, 2016. During my internship in the molecular and developmental laboratory, I focused on the expression of EGFP fluorescently tagged Wnt3a protein during the embryogenesis of *Xenopus* embryos.

In my research, I planned to visualize Wnt proteins by the addition of fluorescent tags because it is known to be quite difficult to generate anti-Wnt antibodies available for immunohistochemistry. Prior to visualization of tagged-Wnt proteins in embryos, in the beginning, I focused on the optimization of linker length to minimize the effect of tags on the activities of Wnt proteins. According to some recent research, it was shown that activities of Wnt proteins are frequently damaged by the addition of fluorescent tags. Therefore, I tried to optimize the design of tagged proteins by changing the length of the linker peptide connecting Wnt to EGFP tag. Specifically, I generated 5 constructs in which the lengths varied from 9 to 55 amino acids. These constructs were expressed in culture cells and in *Xenopus* embryos and examined to what extent Wnt3a activity and EGFP fluorescence were retained.

During my three months of stay in Okazaki, I had lots of unforgettable memories with labmates and other friends here. I was able to learn some interesting research topics in my internship under the valuable guidance and inspiration of Prof. Takada, my mentors – Ritsuko san, Mii san, and the warm hearts of Nobata-san, Utsumi-san, Takashiro-san and other labmates who encouraged me to successfully complete my internship here. During my first visit in Japan, my flight was delayed by 2 hours and I arrived in Nagoya at midnight. It was so touching that Prof. Takada and his wife came to receive me from the airport so late at night.

The NIBB internship program is really meaningful for international students who want an experience with one of the highest reputations in education as well as the Japanese culture. Thanks all, for everything I experienced here!

