

Two Students of Animal Biosciences Study Program Participated an Internship Program in NAIST, Japan



We were very fortunate given the opportunity to participate an internship program at [the Developmental Biomedical Science Laboratory](#), Nara Institute of Science and Technology (NAIST), Japan. This internship has been held for 9 days (29th January- 6th February 2018), fully supported by the Graduate School of Biological Sciences, NAIST. The purpose of this internship program is to provide us an opportunity to deepen the knowledge in neurosciences and advanced scientific research to continue our study and to undertake further research on the samples that we brought from Indonesia. We did some activities at the NAIST Biomedical Laboratory. These activities include sample staining by using immunohistochemical methods, observations using fluorescence microscope, and make a section of the samples by using a frozen microtome. In addition, we were also given the opportunity by Sasai Sensei to make observations in the laboratory. These observations are the isolation of transgenic *E.coli* bacteria, the process of a sacrifice of pregnant mice, and isolation the mice embryo.

We brought some research samples from our thesis. The sample is a young mouse brain incision consisting of negative control and treatment of herbal plant extracts (*kemenyan* resin, grape seeds, bacopa, and green beans). The samples have been prepared by using paraffin-embedded tissue method for immunohistochemistry. The procedures for immunohistochemistry staining used primary and secondary antibodies. The antibodies that we use are *SOX2* (rabbit) and *TuJ* (mice). The *SOX2* antibody will color the neural progenitor cell (NPC) with positive cells that look red while *TuJ* will color adult neuron cells with positive cells that look green.

We were also given two samples of chicken and mice brain embryo incisions that have been prepared by using cryosections method. Both samples were used as a comparison of immunohistochemical staining with the samples that we brought.

In our lab time, we have discussed the research and laboratory activities with the student in the lab. The student's research observes mainly on the development and genes expression of the neural tube of the chicken embryo.

In the weekend, in addition to conducting part of our research there, we, and [students of Plant Biology](#), were having a good time for sightseeing. We visited Kyoto city, Fushimi Inari Taisha, and Arashimaya Bamboo Groove, furthermore, observed Kyoto city in Kyoto Tower and ate halal ramen.

The internship program was closed by teatime ceremony together with Sasai *Sensei*, Nishi *Sensei*, and another lab members.

(Titi Prihatini & Kamila Alawiyah)

The students have been supervised by [Dr. Berry Juliandi M.Si.](#), Dr. Noriaki Sasai, and Prof drh. Arief Boediono