

## Joint Supervision Programme

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### Third month in University of Tsukuba (Minh Nhat, Huynh, Sept – Nov. 2015)

November 2015 – this is my last month of 3-months exchange program in University of Tsukuba. As a reminder, two key tasks of my exchange study in University of Tsukuba are to continue my algal identification using microscope and to do molecular experiments for taxonomic identification from environmental samples. This experiment included four main steps: DNA extraction from environmental samples, PCR amplification of 18s rDNA sequence, DNA cloning into *E. coli* and DNA sequencing. After sequencing step, the results are compared with the reference library of algal genome.

Until the very last day of my stay in University of Tsukuba, I have completed my experiments. There was only one DNA sample of *Phaeodactylum tricornutum* among different samples that was chosen to proceed the next step due to poor quality of the other samples. After ligation step, plasmids containing the 18s rDNA sequence of diatom have been cloned into *E. coli* by heat shock transformation, and then were extracted and purified prior to be used for DNA sequencing. The extracted 18s rDNA gene from the transformed *E. coli* was expected to match the same sequence of *P. tricornutum* in the genome library. Then I tried to run DNA sequencing for that DNA sequence two times but they were all failed. From this experiment, my priority is to learn and practice the molecular technique of identifying algal species using DNA sequencing. In the future, I will apply this technique for my environmental samples and expect to identify some algal species in addition to the microscopic technique.



#### PHOTOS

LEFT: Suzuki sensei, Fujihara-san and me on my leaving day. Photo taken at the Tsukuba Center Bus Station.

RIGHT: The beauty of the autumn in a botanical garden near University of Tsukuba, one of the most interesting places I visited.