

Nguyen Phuoc Hien

Japanese National University Corporation – Tokyo University of Agriculture and Technology - Japan

Nguyen Phuoc Hien is an alumnus of Biotechnology class, course 36 (2010-2014). In November 2013, he completed his thesis at Can Tho University (CTU) about study and evaluation of probiotic potential of bacteria isolated from human milk. In December 2013, Phuoc Hien finished summary report of research topic named *“Isolation, selection and classification of acid lactic bacteria from human milk and application in production of probiotics”* with excellent result.

In February 2014, Hien accomplished his study program in 3.5 years with excellent achievement and he was also the first in one’s course of Biotechnology (2010–2014). In May 2014, he and his group of study gained the first prize named *“Research in the young staffs and students prize”* at CTU Research Workshop 2014” organized at CTU Learning Resource Centre. In August 2014, Phuoc Hien obtained honorably the full scholarship which is financed by Japanese Government (MEXT Scholarship) to continue studying Master Course in Tokyo University of Agriculture and Technology.



Figure 1. The Main Gate of Tokyo University of Agriculture and Technology



Figure 2. Nguyen Phuoc Hien (with the blue striped T-shirt) with professors and international students at welcome party

As for Japanese National University Corporation - Tokyo University of Agriculture and Technology – Japan

Currently, Phuoc Hien is studying in Master Course at Department of International Environmental and Agricultural Science, Graduate School of Agriculture, Tokyo University of Agriculture and Technology - Japan. The main research programs and targets which he is studying include:

1. Microbiology - phytology (molecular interactions between microorganisms and plants)

- Studying the process of nodulation and biological nitrogen fixation among groups of the beneficial microorganism in soil such as nodulation bacteria (*Rhizobium*, *Bradyrhizobium*...) on legumes (*Glycine max*, *Vigna radiata*, *Lotus japonicus*...), the bio-potentials of endophytic fungi and bacteria (Endophytes)...

- Analyzing the infection processes into plants by DsRed-Express Fluorescent Protein Technique.

- Surveying the genotype effect of the plant to the biological nitrogen fixation process of *Bradyrhizobium elkanii* by transposon mutant technique on the bacterial genome (Tn5 mutants).

2. Molecular Biology

- Analyzing the biological potential, genome, metabolic processes; examining the interactions between microorganisms and plants using the biochemical molecular techniques as well as plant genetics.

- Studying the effect of genes regulating proteins which inhibit the process of nodulation among leguminous plants (*Glycine max*, *Vigna radiata*, *Lotus japonicus* ...).

- Constructing the library of rhizobial genes including transposon gene mutants on *Bradyrhizobium*.

Objective: Applying the researched results in order to produce bio-fertilizers, bio-inoculants derived from microorganisms and soil pathogenic testing kits to promote development of the sustainable agricultural production.