

RELEVANT SKILL SET

- Transgenic plant generation
- Agrobacterium*-mediated transformation
- CRISPR/cas9
- Tissue culture
- Cloning: Gateway system and Golden Gate system
- Data Analysis – microarray, RNA-seq, statistic
- Molecular techniques: qRT-PCR, western blotting, photosynthesis parameters measurement
- Time-management
- Problem solving
- Work independently
- Detail orientation
- Tenacious
- Good listener
- Excellent Presentation skills
- Word, Excel, Powerpoint
- R program, ImageJ, SPSS

EDUCATION

Yokohama City University, Japan | *PhD, Life and Environmental Science* | High Distinction 2015 - 2018
Yokohama City University, Japan | *MS, Life and Environmental Science* | Distinction 2012 - 2015
Hanoi University of Science, Vietnam | *BE, Genetics* | Distinction 2007 - 2011

RELEVANT EXPERIENCES

Postdoctoral Research Associate

IGCAST, PSS Texas Tech University

09/2021 – current

- Elucidating the roles of Strigolactones, Cytokinines and their interaction in plant heat stress responses
- Regulator network and crosstalk among signaling molecules in plant responses to environmental stress

Postdoctoral Associate

Donald Danforth Plant Science Center - Saint Louis, Missouri

11/2019 – 08/2021

- Developed the CRISPR/cas9 protocol to generate targeted insertional mutagenesis in *Chlamydomonas reinhardtii* and confirmed the loss-of-function by qRT-PCR and Western blotting.
- Phenotype the obtained mutation under heat stress condition.
- Collaborated with other members, at Donald Danforth Plant Science Center and National Renewable Energy Laboratory (NREL) institute to identify the unannotated candidate proteins in Arabidopsis, Setaria and Chlamydomonas.

Lab technician

Donald Danforth Plant Science Center - Saint Louis, Missouri

09/2018 – 03/2019

- Analyzed the physiology and RNA-seq data using G-protein mutants in Arabidopsis and *Physcomitrella patens*.
- Coordinated with other postdocs to support them with their experiments.

Student Trainee

Plant Genomic Network Research Team, RIKEN - Yokohama, Japan

11/2012 – 03/2018

- Discovered that plants were rescued from high-salinity stress by addition of various chemical compounds. The finding of ethanol enhancing high-salinity stress tolerance were highlighted in daily news in Japan as well as brought new insight to the salinization regions such as southern delta of Vietnam. The results were also the groundwork, which contributed to a new funding to Plant Genomic Network Research Team.
- Cooperated with other lab members to investigate the molecular function as well as the physiological and biochemical modifications of these chemical compounds, which regulated high-salinity tolerance in Arabidopsis, rice and cassava.
- Generated the mutant- and overexpressing- lines by both genetic engineering and Crispr/cas9 systems in Arabidopsis and screened them under various abiotic stresses such as high salinity, drought and high temperature.

Research associate

Agricultural Genetics Institute - Hanoi, Vietnam

07/2011 – 10/2012

- Involved in cloning team to create new constructs for soybean and maize transformation.
- Optimized the transformation protocol to generate the transgenic soybean, maize and cassava via *Agrobacterium tumefaciens*.

SCIENTIFIC MENTORING

- Transferred techniques to graduate students from Thailand, Vietnam and Japan at Plant Genomic Network Research Team, Center for Sustainable Resource Science, RIKEN, Japan (Nov., 2012 – Mar., 2018).
- Mentored a Bachelor of Science students with soybean transformation procedure (Nguyen Thi Hoa), Applied DNA Technology Laboratory, Institute of Biotechnology, Hanoi, Hanoi, Vietnam (July, 2011 – Oct., 2012).

- Mentored two students about DNA barcoding from Cambodia and Sweden at Applied DNA Technology Laboratory, Institute of Biotechnology, Hanoi (Sep., 2010 – Mar., 2011).

SELECTED PUBLICATIONS

1. Knoshaug E.P., Nag A., Sun P., **Nguyen H. M.**, Zhang R. and Umen J. “Curation of the Deep Greenlist of functionally unannotated green lineage proteins to enable structural and functional characterization” (in preparation, targeted The Plant Journal)
2. Nguyen D. V., **Nguyen H. M.**, Le N. T., Nguyen K. H., Le H. M., Nguyen A. T., Dinh N. T. T., Hoang S. A., Ha C. V. (2021) “Copper nanoparticle application enhances plant growth and grain yield in maize under drought stress conditions”. *Journal of Plant Growth Regulation* (accepted on Jan. 4th, 2021).
3. Sako K., **Nguyen H. M.**, Seki M. (2020) “Advances in Chemical Priming to Enhance Abiotic Stress Tolerance in Plants”. *Plant and Cell Physiology* pcaa119.
4. **Nguyen H. M.**, Sako K., Matsui A., Ueda M., Tanaka M., Ito A., Nishino N., Yoshida M., Seki M. (2018) “Transcriptomic analysis of Arabidopsis thaliana plants treated with the Ky-9 and Ky-72 histone deacetylase inhibitors”. *Plant Signaling & Behavior* 8:e1448333.
5. **Nguyen H.M.**, Sako K., Matsui A., Suzuki Y., Mostofa M. G., Ha C. V., Tanaka M., Tran L.S.P, Habu Y., Seki M. (2017) “Ethanol Enhance High-Salinity Stress Tolerance by Detoxifying Reactive Oxygen Species in Arabidopsis thaliana and Rice”. *Frontiers in Plant Science* 8:1001.
6. Nguyen D.V., **Nguyen H.M.**, Nguyen K.H. (2012) “Investigation of transformation process into soybean cultivar DT22 using *Agrobacterium tumefaciens*”. *Journal of Vietnam Agricultural Science and Technology* 9(39): 119-124. (ISSN 1859-4581)

SELECTED CONFERENCE PRESENTATIONS

1. **Nguyen H.M.**, Sako K., Matsui A., Suzuki Y., Mostofa M.G., Ha C.V., Tanaka M., Tran L.S.P., Habu Y., Seki M. (2017). “Ethanol Enhances High-salinity Stress Tolerance by Detoxifying Reactive Oxygen Species in Arabidopsis thaliana and Rice”. *The 35th Annual Meeting of Japanese Society for Plant Cell and Molecular Biology*, Saitama, Japan. (Oral)
2. **Nguyen H.M.**, Sako K., Matsui A., Suzuki Y., Mostofa M.G., Ha C.V., Tanaka M., Tran L.S.P., Habu Y., Seki M. (2017). “Ethanol Enhances High-salinity Stress Tolerance by Detoxifying Reactive Oxygen Species in Arabidopsis thaliana and Rice”. *The 58th Annual Meeting of Japanese Society of Plant Physiologists*, Kagoshima, Japan. (Oral)
3. **Nguyen H.M.**, Sako K., Ueda M., Matsui A., Tanaka M., Nishino N., Yoshida M., Seki M. (2016). “Functional analysis of an HDAC inhibitor in plant salinity stress tolerance”. *The 57th Annual Meeting of Japanese Society of Plant Physiologists*, Morioka, Japan. (Oral)
4. **Nguyen H.M.**, Ueda M., Sako K., Matsui A., Tanaka M., Yoshida M., Seki M. (2015). “Functional Analysis of Histone Acetylation in Plant Abiotic Stress Responses”. *The 56th Annual Meeting of Japanese Society of Plant Physiologists*, Tokyo, Japan. (Poster)
5. Kaori Sako, **Nguyen H.M.**, Ueda M., Matsui A., Tanaka M., Nishino N., Yoshida M., Seki M. (2017). “An HDAC inhibitor enhances salinity stress tolerance through promoted root barrier in *Arabidopsis thaliana*”. *The symposium of Environmental Stress Adaptation & Memory in Plants*, Yokohama, Japan. (Oral)

FELLOWSHIPS, HONORS AND AWARDS

1. **Fellowship for M. S. course**, Japanese Government Monbukagakusho Scholarship, Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan (2012 - 2015)
2. **Fellowship for PhD course**, Japanese Government Monbukagakusho Scholarship, Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan (2015 - 2018)
3. **CSRS Incentive Award**, RIKEN CSRS, Japan, Outstanding research achievement, 2018
4. To be a **representative of PhD students** of Department of Life and Environmental System Science, Yokohama City University, Yokohama, Japan, 2018.
5. **Scholarship for outstanding student**, Hanoi University of Science, Vietnam, 2008 – 2009

LANGUAGES

Vietnamese: Native | **English:** Professionally fluent | **Japanese:** Basic

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

- Member of the Japanese Society Plant Physiologists (JSPP), 2014-2018
- Member of Japanese Society for Plant Cell and Molecular Biology, 2017-2018
- Reviewer of Journals – PeerJ, Plant Growth Regulation