

CURRICULUM VITAE

NOPPAWAN NOUNJAN, Ph.D.



EDUCATION

Ph.D. in Biology 2016 | Khon Kaen University, Thailand

M.Sc. in Biology 2011 | Khon Kaen University, Thailand

B.Sc. in Microbiology 2007 | Khon Kaen University, Thailand



AREAS OF EXPERTISE

Bio-agricultural Science, Environmental Plant Physiology, Plant Molecular Biology



AWARDS & SCHOLARSHIPS

- Fellowship in Post-doctoral Training program, Research Affairs and Graduate School, Khon Kaen University (2016-2019)
- Ph.D. scholarship recipient from the Royal Golden Jubilee (RGJ) Ph.D. Program, Thailand Research Fund (2013 – 2016)
- Young Scientist Travel Grant award from 14th International Symposium on Rice Functional Genomics (ISRFG2016) for oral presentation at Le Corum, Montpellier, France
- Best M.Sc. thesis award 2013 from Graduate School, Khon Kaen University
- Recipient of KCU Graduate School Scholarship for Research Overseas (2010)
- Recipient of TRF Master Research Grant from Thailand Research Fund (TRF)
- Partial Scholarship from Genomics and Proteomics Research Group for Improvement of Salt-tolerant Rice, Khon Kaen University for M.Sc. study



WORK AND RESEARCH EXPERIENCE

- 2021 –Present Lecturer
International College, Khon Kaen University, Thailand
- 2016 – 2020 Post-doctoral researcher
Salt-tolerant Rice Research Group, Faculty of Science,
Khon Kaen University, Thailand
- 2014 – 2015 Visiting graduate student
Faculty of Veterinary & Agricultural Science,
The University of Melbourne, Australia
- 2012 Visiting graduate student
Rice Gene Discovery Laboratory, National center for Genetic Engineering
and Biotechnology (BIOTEC), NSTDA, Kasetsart University,
Kamphaeng Saen Campus, Thailand

- 2010 Visiting graduate student
Key Laboratory of Enzyme and Protein Technology,
Faculty of Biology, Hanoi University of Science, Hanoi, Vietnam
- 2007 - 2008 Research Associate
Genomics and Proteomics Research Group for Improvement of Salt-tolerant Rice,
Faculty of Science, Khon Kaen University, Thailand
- 2005 Internship
Microbial Engineering Laboratory, National center for Genetic Engineering and
Biotechnology (BIOTEC), Thailand



RESEARCH PROJECTS CARRIED OUT DURING THE PAST 3 YEARS

Exploring salt tolerance mechanisms in plants at molecular levels:

- Investigation on biochemical and molecular pathways involved in enhancing rice seed metabolism during germination under salt stress
- Study on salt tolerance mechanisms between commercial and landrace rice genotypes
- Identification of specific biological process(es) for salt tolerance in CSSL rice population
- Exploring molecular markers for identifying KDML105 rice from PT1 rice

Application of natural products and chemical compounds to enhance stress tolerance:

- Study on mechanisms of plant growth regulator (polyamine) and wood vinegar in promoting seed germination under salt stress
- Identification of chemical compounds in wood vinegar using GC/MS technique



PUBLICATIONS

296 Citations by 274 documents *h*-index: 5

Publications:

- **Nounjan N**, Kam-onsa N, Theerakulpisut P. 2021. Spermidine priming promotes germination of deteriorated seeds and reduced salt stressed damage in rice seedlings. *Not. Bot. Horti Agrobo.* 49: 12130.
- Theerakulpisut P, Madee P, PamutaD, **Nounjan N**, 2021. Exogenous application of spermidine and wood vinegar improves salt tolerance in salt-sensitive rice (*Oryza sativa* L.). *Pak. J. Bot.* 53(1): DOI: [http://dx.doi.org/10.30848/PJB2021-1\(42\)](http://dx.doi.org/10.30848/PJB2021-1(42))
- **Nounjan N**, Mahakham W, Siangliw J L., Toojinda T, Theerakulpisut P. 2020. Chlorophyll retention and high photosynthetic performance contribute to salinity tolerance in rice carrying drought tolerance QTL. *Agriculture* 10: 620. <https://doi.org/10.3390/agriculture10120620>
- **Nounjan N**, Chansongkrow P, Charoensawan V, Siangliw J L, Toojinda T, Chadchawan S, Theerakulpisut P. 2018. High performance of photosynthesis and osmotic adjustment are associated with salt tolerance ability in rice carrying drought tolerance QTL: physiological and co-expression network analysis. *Front. Plant Sci.* 9: 1135.
- Larkunthod P, **Nounjan N**, Siangliw J L, Toojinda T, Sanitchon J, Jongdee B, Theerakulpisut P. 2018. Physiological responses under drought stress of improved drought-tolerant rice lines and their parents. *Not. Bot. Horti Agrobo.* 46: 679–687.

● **Nounjan N**, Siangliw J L, Toojinda T, Chadchawan S, Theerakulpisut P. 2016. Salt-responsive mechanisms in chromosome segment substitution lines of rice (*Oryza sativa* L. cv. *KDML105*). *Plant Physiol. Biochem.* 103: 96–105.

● **Nounjan N**, Nghia P T, Theerakulpisut P. 2012. Exogenous proline and trehalose promote recovery of rice seedlings from salt-stress and differentially modulate antioxidant enzymes and expression of related genes. *J. Plant Physiol.* 169: 596–604.*

This research was a top cited article during the period of 2012-2016 published in Journal of Plant Physiology

● **Nounjan N**, Theerakulpisut P. 2012. Effects of exogenous proline and trehalose on physiological responses in rice seedlings during salt-stress and after recovery. *Plant, Soil Environ.* 58: 309–315.

Selected presentations:

● Mahakham W, Sukseeta N, Jenjan W, Haputon K, **Nounjan N**, Nozaki H. Establishment of culture collection of volvocean algae from Northeast Thailand for biodiversity research, with note on their DNA barcode sequences. In: Proceeding of 5th International *Volvox* Conference, 26-29 July, 2019. The University of Tokyo, Tokyo, Japan

● **Nounjan N**, Siangliw J L, Toojinda T, Chadchawan S, Theerakulpisut P. Regulation of cyclic electron flow, water use efficiency and sugar accumulation are associated with salt tolerance ability in CSSL of rice cv. *KDML105*. In: Proceeding of the 14th International Symposium on Rice Functional Genomics (ISRFG2016), 26 –29 September, 2016. Montpellier, France.

● **Nounjan N**, Siangliw J L, Toojinda T, Chadchawan S, Theerakulpisut P. Screening of *KDML105* chromosome segment substitution lines harboring drought tolerance QTL8 (CSSL *KDML105* DT-QTL8) for salt tolerance. In: Proceeding of the 4th International Rice Congress (IRC 2014), 27 October–1 November, 2014. Bangkok, Thailand.

● **Nounjan N**, Theerakulpisut P. Effects of exogenous proline and trehalose on growth and proline accumulation in salt stressed rice seedlings. In: Proceeding of International Rice Congress on “International Rice Research Conference (IRRC28)”, 8–12 November 2010. p. 64. Hanoi, Vietnam.