

CURRICULUM VITAE

● Personal Details

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● Education and Research Profile

2011-present	Lecturer Faculty of Science, Chulalongkorn University, Bangkok, Thailand
2008-2011	Special Postdoctoral Researcher Cellular Biochemistry Laboratory, Advanced Science Institute, RIKEN, Japan
2006-2008	Research Scientist, Plant Science Center, RIKEN, Japan
2005-2006	Postdoctoral Fellow Research Institute of Meijo University, Nagoya, Japan
2004-2005	Lecturer Faculty of Science, Chulalongkorn University, Bangkok, Thailand
2002-2004	JSPS Postdoctoral Fellow Research Institute of Meijo University, Nagoya, Japan
2001	Ph.D. (Biochemistry), Chulalongkorn University, Bangkok, Thailand

● List of research achievements

A. Original papers

1. **Waditee-Sirisattha R**, Shibato J, Rakwal R, Sirisattha S, Hattori A, Nakano T, Takabe T, Tsujimoto M. The Arabidopsis aminopeptidase LAP2 regulates plant growth, leaf longevity and stress response. **New Phytol.** 2011 May 13. doi: 10.1111/j.1469-8137.2011.03758.x. [in press]
2. Yamada N, Sakakibara S, Tsutsumi K, **Waditee-Sirisattha R**, Tanaka Y, Takabe T. Expression and substrate specificity of betaine/proline transporters suggest a novel Choline transport mechanism in sugar beet. **J Plant Physiol.** 2011 Apr 19. [in press]
3. **Waditee R**, Bhuiyan HN, Hirata E, Hibino T, Tanaka Y, Shikata M, Takabe T. Metabolic engineering for betaine accumulation in microbes and plants. **J. Biol. Chem.** 282, 34185-93 (2007).

4. Radchenko MV, Tanaka K, **Waditee R**, Oshimi S, Matsuzaki Y, Fukuhara M, Kobayashi H, Takabe T, Nakamura T. Potassium/proton antiport system of *Escherichia coli*. **J. Biol. Chem.** **281**, 19822-9 (2006).
5. **Waditee R**, Buaboocha T, Kato M, Hibino T, Suzuki S, Nakamura T, Takabe T. Carboxyl-terminal hydrophilic tail of a NhaP type Na⁺/H⁺ antiporter from cyanobacteria is involved in the apparent affinity for Na⁺ and pH sensitivity. **Arch. Biochem. Biophys.** **450(1):113-21 (2006)**.
6. Radchenko MV, **Waditee R**, Oshimi S, Fukuhara M, Takabe T, Nakamura T. Cloning, Functional expression, and primary characterization of *Vibrio parahaemolyticus* K⁺/H⁺ antiporter gene is *Escherichia coli*. **Mol. Microbiol.** **59(2):651-63 (2006)**.
7. Yamamoto A, Bhuiyan MN, **Waditee R**, Tanaka Y, Esaka M, Oba K, Jagendorf AT, Takabe T. Suppressed expression of the apoplasmic ascorbate oxidase gene increases salt tolerance in tobacco and *Arabidopsis* plants. **J. Exp. Bot.** **56 (417): 1785-96(2005)**.
8. **Waditee R**, Bhuiyan HN, Rai V, Aoki K, Tanaka Y, Hibino T, Suzuki S, Takano J, Jagendorf A, Takabe T, Takabe T. Genetic manipulation of a novel betaine biosynthetic pathway by methylation of glycine improved abiotic-stress tolerance of *Synechococcus* sp. PCC 7942 and *Arabidopsis thaliana*. **Proc. Natl. Acad. Sci .USA** **102(5):1318-23. (2005)**.
9. **Waditee R**, Hossain GS, Tanaka Y, Nakamura T, Shikata M, Takano J, Takabe T, Takabe T. Isolation and functional characterization of Ca²⁺/H⁺ antiporters from cyanobacteria. **J. Biol. Chem.** **279, 4330-4338 (2004)**.
10. **Waditee R**, Tanaka Y, Aoki K, Hibino T, Jikuya H, Takano J, Takabe T, Takabe T. Isolation and Functional Characterization of N-Methyltransferases That Catalyze Betaine Synthesis from Glycine in a Halotolerant Photosynthetic Organism *Aphanothece halophytica*. **J. Biol. Chem.** **278, 4932-4942 (2003)**.
11. Hibino T, **Waditee R**, Araki E, Ishikawa H, Aoki K, Tanaka Y, Takabe T. Functional characterization of choline monooxygenase, an enzyme for betaine synthesis in plants. **J. Biol. Chem.** **277, 41352-41360 (2002)**.
12. **Waditee R**, Hibino T, Tanaka Y, Nakamura T, Incharoensakdi A, Hayakawa S, Suzuki S, Futsuhara Y, Kawamitsu Y, Takabe T, Takabe T. Functional characterization of betaine/proline transporters in betaine-accumulating mangrove. **J. Biol. Chem.** **277, 18373-18382 (2002)**.
13. **Waditee R**, Hibino T, Nakamura T, Incharoensakdi A, Takabe T. Overexpression of a Na⁺/H⁺ antiporter confers salt tolerance on a freshwater cyanobacterium, making it capable of growth in sea water. **Proc Natl Acad Sci U S A.** **99, 4109-4114 (2002)**.
14. **Waditee R**, Hibino T, Tanaka Y, Nakamura T, Incharoensakdi A, Takabe T. Halotolerant cyanobacterium *Aphanothece halophytica* contains an Na⁺/H⁺ antiporter, homologous to eukaryotic ones, with novel ion specificity affected by C-terminal tail. **J. Biol. Chem.** **276, 36931-36938 (2001)**.
15. **Waditee R**, Incharoensakdi A. Purification and kinetic properties of betaine-homocysteine methyltransferase from *Aphanothece halophytica*. **Curr Microbiol.** **43, 107-111 (2001)**.

B. Book

1. **Waditee R.**, Tanaka Y, and Takabe T. **Abiotic Stress Tolerance in Plants.** Na⁺/H⁺ antiporters in plants and cyanobacteria, pp. 163-175, Springer, The Netherlands (2006).

C. Other Academic Achievements:

Invited speech

1. **Waditee R.**, Hanada A, Magome H, Nomura T, Kamiya Y, Yamaguchi S. Production of sweetener using a hormone biosynthesis pathway: generation of sweet plants. In International Symposium, Annual Meeting of the Japanese Society of Plant Physiologist, March, 20-22, 2008, Sapporo, Japan.
2. **Waditee R.** and Teruhiro TAKABE. Ionic Stress Tolerance in Plants. In International Symposium on Green Biotechnology in Asia, December 15-16, 2006, Meijo University, Nagoya, Japan.
3. **Waditee R.** Characterization of Na⁺/H⁺ antiporters in a halotolerant cyanobacterium. In International Symposium on Abiotic Stress Tolerance in Plants, December 5-6, 2003, Meijo University, Nagoya, Japan.

Presentation

1. **Waditee R.**, Nakano T, Takabe T, Tsujimoto M. Functional and expression analyses of Arabidopsis aminopeptidase during plant development. In American Society of Plant Biologists and Phycological Society of America 2009, July 18-22, 2009 Honolulu, Hawaii, USA.
2. **Waditee R.**, Tanaka Y, Aoki K, Hibino T, Takano J, Takabe T. Functional characterization of N-methyltransferases that synthesize betaine from glycine in a halotolerant cyanobacterium *Aphanothece halophytica*. In Annual Meeting of the of the Japanese Society of Plant Physiologist, March, 27-29, 2004, Tokyo, Japan.
3. **Waditee R.**, Tanaka Y, Aoki K, Hibino T, Jikuya H, Takano J, Takabe T, Takabe T. Functional characterization of N-methyltransferases that synthesize betaine from glycine in a halotolerant cyanobacterium *Aphanothece halophytica*. In American Society of Plant Biologists, Plant Biology 2003, July 25-30, 2003 Honolulu, Hawaii, USA.
4. **Waditee R.**, Hibino T, Tanaka Y, Nakamura T, Takabe T. Characterization of Na⁺/H⁺ antiporters in a halotolerant cyanobacterium. In Gordon Research Conference on Salt and Water Stress in Plants, July 14-19, 2002, Queen's College Oxford, UK.
5. **Waditee R.**, Hibino T., Tanaka, T, Hamada, A, Nakamura T., Takabe T. Isolation of NhaP type Na⁺/H⁺ antiporter from a halotolerant cyanobacterium *Aphanothece halophytica*. In Annual Meeting of the of the Japanese Society of Plant Physiologist, March, 28-30, 2002, Ohkayama, Japan.
6. **Waditee R.**, Hibino T., Tanaka, T, Hamada, A, Nakamura T, Takabe T. Isolation of Na⁺/H⁺ antiporter from a halotolerant cyanobacterium *Aphanothece halophytica*. In Annual Meeting of the of the Japanese Society of Plant Physiologist, March, 23-26, 2001, Fukuoka, Japan.