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EDUCATION

- 2008/02 – 2013/06 Ph.D. Taiwan International Graduate-Molecular and Biological Agricultural Sciences (TIGP-MBAS) Program, Academia Sinica, Taiwan
- 2003/09 – 2005/03 M.S. Depart. of Chemistry, National University of Mongolia, Mongolia
- 1999/09 – 2003/06 B.A. Depart. of Chemistry, National University of Mongolia, Mongolia

EMPLOYMENT

- 2024/10-present Postdoctoral Research Fellow RCEC, Academia Sinica, Taiwan
- 2022/09-2024/10 Project R&D Scientist Agricultural Biotechnology Research Center (ABRC), Academia Sinica, Taiwan
- 2020/11-2022/09 Principal Investigator Institute of Chemistry and Chemical Technology (ICCT), Mongolian Academy of Sciences, Mongolia
- 2020/04-2020/11 Associate Researcher Botanic Garden Research Institute, Mongolian Academy of Sciences, Mongolia
- 2019/04-2020/04 Senior Specialist International Cooperation Depart., Presidium Office, Mongolian Academy of Sciences, Mongolia
- 2017/04-2019/04 Postdoctoral Fellow Depart. of Applied Biological Chemistry, University of Tokyo, Japan
- 2015/09-2019/01 Postdoctoral Researcher Depart. of Chemistry & Biochemistry, University of California-Los Angeles, USA
- 2013/08-2015/09 Postdoctoral Fellow ABRC, Academia Sinica, Taiwan
- 2002/07-2007/07 Research Assistant ICCT, Mongolian Academy of Sciences, Mongolia

HONORS & AWARDS

- 2023 Outstanding poster award, ABRC, Academia Sinica
- 2021 Top Scientist of the Year, ICCT, Mongolian Academy of Sciences
- 2017 JSPS Postdoctoral fellowship, Japan Society for the Promotion of Sciences
- 2014 Best poster award, Taiwan Society of Plant Biologists; Conference travel grant, ABRC, Academia Sinica; The best poster award, ABRC, Academia Sinica,
- 2013 Postdoctoral fellowship, Academia Sinica; Student academic publication award, National Chung Hsing University; The best poster award, ABRC, Academia Sinica

- 2012 Top Mongolian student in Taiwan, Mongolian Representative Office in Taiwan; The outstanding poster award, The Botanical Society of Republic of China; Academy award, TIGP-MBAS Program; Conference travel grant, TIGP, Academia Sinica
- 2011 The best poster award, ABRC, Academia Sinica; Conference travel grant, ABRC, Academia Sinica
- 2004 The best oral presentation award, National University of Mongolia
- 2003 The best oral presentation award, National University of Mongolia
- 2002 Top research student of Faculty of Chemistry, National University of Mongolia; Top research student fellowship, Mongolian Agricultural Bank

PROFESSIONAL SERVICE

- Journal editors: Assistant Features Editor, *Plant Physiology*, American Society of Plant Biologists, USA (2024/01-present); Editor in Chief, *Mongolian Journal of Chemistry*, Institute of Chemistry and Chemical Technology, Mongolian Academy of Sciences (2023/06-present)
- Steering Committee Member, United Nations Environment Program-Special Programme (UNEP-SP) Project in Mongolia (2022/03-present)
- National Committee Member, PhD Graduation Defense Committee in “Chemical Sciences”, Mongolia (2021-2023)
- The World Academy of Sciences (TWAS) Young Affiliates (2019-2023)

RESEARCH INTEREST

Marine Bioinorganic Chemistry, Trace Metal Metabolism, and Homeostasis in *Symbiodiniaceae*

My research focuses on understanding the importance of bioactive trace metals, such as iron, zinc, and manganese, in the growth and physiology of endosymbiotic dinoflagellates, Symbiodiniaceae. Particular interest lies in the iron (Fe) requirement in Symbiodiniaceae for its roles in acclimation responses to environmental stresses, including heat and high-light stress. Based on my previous experiences in mineral nutrition and trace metal homeostasis in plants and algae, using different model species of Symbiodiniaceae, I am interested in investigating the Fe-regulatory mechanisms in endosymbiotic dinoflagellates against coral bleaching process under global warming.

REPRESENTATIVE PUBLICATIONS (*: corresponding author)

1. **Tsednee M.*** (2024) Linking timing to nitrogen use efficiency: rice OsEC-Ghd7- ARE1 module works on it. *Plant Physiology*, Volume 196, Issue 3, November 2024, Pages 1720–1721 (editorial publication)
2. **Tsednee M.*** (2024) The unwanted cadmium: uncovering the genetic factors for cadmium accumulation in wheat. *Plant Physiology*, Volume 196, Issue 2, October 2024, Pages 684–685 (editorial publication)

3. **Tsednee M.*** (2024) Identifying a new “nitrate master”: ZmEREB97 regulates nitrate uptake in maize. *Plant Physiology*, Volume 196, Issue 1, September 2024, Pages 25–26 (editorial publication)
4. **Tsednee M**, Tanaka M, Giehl RF, von Wiren N, Fujiwara T. (2022) Involvement of NGAL1 transcription factor in boron transport under low and high boron. *Plant and Cell Physiology* 63(9):1242-1252
5. **Tsednee M**, Tanaka M, Kasai K, Fujiwara T. (2020) Boron-dependent regulation of translation through AUGUAA sequence in yeast. *Yeast* 37 (12), 368-646
6. **Tsednee M**, Castruita M, Salomé PA, Sharma A, Lewis BE, Schomollinger SR, Strenkert D, Holbrook K, Otegui MS, Khatua K, Das S, Datta A, Chen S, Ramon C, Ralle M, Weber PK, Stemmler TL, Pett-Ridge J, Hoffman BM, Merchant SS. (2019) Hyper-accumulated Mn, co-localized in *Chlamydomonas reinhardtii* acidocalcisomes with Ca and P, can be mobilized in Mn-deficient situations and protects against oxidative stress. *Journal of Biological Chemistry* 294 (46), 17626-17641
7. **Tsednee M**, Huang YC, Chen YR, Yeh KC. (2016) Identification of metal species by ESI-MS/MS through release of free metals from the corresponding metal-ligand complexes. *Scientific Reports* 6: 26785; doi: 10.1038/srep26785
8. Lo JC, **Tsednee M**, Lo YC, Yang SC, Hu JM, Ishizaki K, Kohchi T, Lee DC, Yeh KC. (2016) Evolutional analysis of Fe acquisition system in *Marchantia polymorpha*. *New Phytologist* 211: 569–583
9. Shanmugam V, Wang YW, **Tsednee M**, Karunakaran K, Yeh KC. (2015) Glutathione plays an essential role in nitric oxide-mediated iron-deficiency signaling and iron-deficiency tolerance in *Arabidopsis*. *Plant Journal* 84: 464-477
10. **Tsednee M**, Yang SC, Lee DC, Yeh KC. (2014) Root-secreted nicotianamine from *Arabidopsis halleri* functions in zinc hypertolerance by regulating the zinc bioavailability. *Plant Physiology* 166: 839-852 (Commentary on the same issue, *Plant Physiology* 166: 751-752)
11. Chen YY, Wang Y, Shin LJ, Wu JF, Shanmugam V, **Tsednee M**, Lo JC, Wu SH, Yeh KC. (2013) Iron is essential to maintain the circadian period length of the central oscillator in *Arabidopsis*. *Plant Physiology* 161: 1409-1420 (Commentary in *EMBO J.* 2013 Feb 20;32(4):490- 2)
12. Shanmugam V, **Tsednee M**, Yeh KC. (2012) ZINC TOLERANCE INDUCED BY IRON 1 reveals the importance of glutathione in the cross homeostasis between zinc and iron in *Arabidopsis thaliana*. *Plant Journal* 69 (6): 1006-1017
13. **Tsednee M**, Mak YM, Chen YR, Yeh KC. (2012) Novel phytosiderophores in barley. *Pharmaceutical Biology* 50: 538-538

14. **Tsednee M**, Mak YM, Chen YR, Yeh KC. (2012) A sensitive LC-ESI-Q-TOF-MS method reveals novel phytosiderophores and phytosiderophore–iron complexes in barley. *New Phytologist* 195: 951- 961