

CONTACT INFORMATION

Mohammad Golam Mostofa, PhD

Research Associate, Texas Tech University
Institute of Genomics for Crop Abiotic Stress Tolerance
Experimental Science Building II (Room 201)
Lubbock, TX 79409, USA

Cell : 1 (806)-500-7763

E-mail : mmostofa@ttu.edu

mostofa@bsmrau.edu.bd

@MGMostofa12



https://www.depts.ttu.edu/igcast/Staff/Tran_Lab

RESEARCH / EMPLOYMENT HISTORY

- (April 2021–Present)** Postdoctoral Research Associate, IGCAST, Texas Tech University, Lubbock, Texas, USA
- (Sep. 2016–Sep. 2018)** JSPS postdoctoral visiting fellow, Stress Adaptation Research Unit, RIKEN Center for Sustainable Resource Science, Yokohama, Japan
- (Nov. 2019–present)** Professor, Dept. of Biochemistry & Molecular Biology, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh
- (Nov. 2015–Nov.2019)** Associate Professor, Dept. of Biochemistry & Molecular Biology, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh
- (July 2010–Nov. 2015)** Assistant Professor, Dept. of Biochemistry & Molecular Biology, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh
- (Nov. 2007–June 2010)** Lecturer, Dept. of Biochemistry & Molecular Biology, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh
- (June 2006–Oct. 2007)** Quality Control Officer, Eskayef Bangladesh Limited, Gazipur, Bangladesh
- (April 2004–May 2006)** Senior Research Assistant, Immunology lab, International Centre for Diarrheal Disease Research, Bangladesh (ICDDR,B), Dhaka, Bangladesh.

ADDITIONAL RESPONSIBILITY

- (Aug. 2019–April 2021)** Associate Director (Research), Research Management Wing (RMW), Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh.
- (Oct. 2019–April 2021)** Head, Dept. of Biochemistry & Molecular Biology, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh.

EDUCATION

- (Oct. 2012–Sep. 2015)** Doctor of Philosophy (PhD) in Agriculture (Plant and Environmental sciences), The United Graduate School of Agricultural Sciences, Ehime University, Ehime, Japan.
- (Oct. 2010–Sep. 2012)** Master of Science (MS) in Applied Biological Sciences, Kagawa University, Kagawa, Japan.
- (June 2002–May 2003)** Master of Science (MS) in Biochemistry and Molecular Biology (Major Immunology) University of Dhaka, Dhaka, Bangladesh.
- (April 1998–May 2002)** Bachelor of Science (B.Sc.) in Biochemistry and Molecular Biology University of Dhaka, Dhaka, Bangladesh.

PUBLICATIONS

Articles in Peer-reviewed Journals

Total number: 51 (Research articles: 45; Reviews: 4, Book Chapter: 2); First- and/or corresponding author papers:

29; **Total Citations: 2087**, h-index: 26, i10-index: 35 (as of April, 2021, Google Scholar). For current citation metrics please visit: <https://scholar.google.co.jp/citations?user=65jAD7gAAAAJ&hl=en>

* denotes co-first authorship; Corresponding authorship underlined

2021

1. Younes NA, Rahman MM, Wardany AA, Dawood MFA, **Mostofa MG**, Keya SS, Abdel Latef AAH, Tran LS (2021) Antioxidants and bioactive compounds in licorice Root extract potentially contribute to improving growth, bulb quality and yield of onion (*Allium cepa*). **Molecules** **26(9)**: 2633.
2. Mohi-Ud-Din M, Hossain MA, Rohman MM, Uddin MN, Haque MS, Ahmed JU, Hossain A, Hassan MM, **Mostofa MG** (2021). Multivariate analysis of morpho-physiological traits reveals differential drought tolerance potential of bread wheat genotypes at the seedling stage. **Plants** **10(5)**: 879.
3. **Mostofa MG**, Rahman MM, Nguyen KH, Li W, Watanabe Y, Tran CD, Zhang M, Itouga M, Fujita M, Tran LS (2021). Strigolactones regulate arsenate uptake, vacuolar-sequestration and antioxidant defense responses to resist arsenic toxicity in rice roots. **Journal of Hazardous Materials** **415**: 125589.
4. **Mostofa MG**, Rahman MM, Ansary MMU, Keya SS, Abdelrahman M, Miah MG, Phan Tran LS (2021). Silicon in mitigation of abiotic stress-induced oxidative damage in plants. **Critical Reviews in Biotechnology** **1-17**. 10.1080/07388551.2021.1892582.
5. Hosseini MS, Samsampour D, Zahedi SM, Zamanian K, Rahman MM, **Mostofa MG**, Tran LS (2021). Melatonin alleviates drought impact on growth and essential oil yield of lemon verbena by enhancing antioxidant responses, mineral balance, and abscisic acid content. **Physiologia Plantarum** **1– 13**, <https://doi.org/10.1111/ppl.13335>.
6. Siddiqui MN, **Mostofa MG**, Rahman MM, Tahjib-Ul-Arif M, Das AK, Mohi-Ud-Din M, Rohman MM, Hafiz HR, Ansary MMU, Tran LS (2021). Glutathione improves rice tolerance to submergence: insights into its physiological and biochemical mechanisms. **Journal of Biotechnology** **325**: 109-118.

Book Chapter

7. Hossain MA, Hoque TS, Zaid A, Wani SH, **Mostofa MG** and Robert Henry (2020). Targeting the ascorbate-glutathione pathway and the glyoxalase pathway for genetic engineering of abiotic stress-tolerance in rice. *Molecular Breeding for Rice Abiotic Stress Tolerance and Nutritional Quality*. pp. **398-427**. Published by Wiley, 2021.

2020

8. **Mostofa MG**, Rahman MM, Siddiqui MN, Fujita M, and Tran L.-SP (2020). Salicylic acid antagonizes selenium phytotoxicity in rice: selenium homeostasis, oxidative stress metabolism and methylglyoxal detoxification. **Journal of Hazardous Materials** **394**, 122572.
9. Rahman M, **Mostofa MG**, Keya SS, Rahman A, Das AK, Islam R, Abdelrahman M, Bhuiyan SU, Naznin T, Ansary MU, and Tran L.-SP (2020). Acetic acid improves drought acclimation in soybean: an integrative response of photosynthesis, osmoregulation, mineral uptake and antioxidant defense. **Physiologia Plantarum**, doi.org/10.1111/ppl.13124.
10. Roy R, **Mostofa MG**, Wang J, Sikdar A and Sarker T (2020). Improvement of growth performance of *Amorpha fruticosa* under contrasting regime of water and fertilizer in coalcontaminated spoils using response surface methodology. **BMC Plant Biology** **20**:181.
11. Roy R, Wang J, **Mostofa MG**, and Fornara D. (2020). Optimal water and fertilizer applications improve growth of *Tamarix chinensis* in a coal mine degraded area under arid conditions. **Physiologia Plantarum**, [doi:10.1111/ppl.13147](https://doi.org/10.1111/ppl.13147).
12. Roy R, Wang J, **Mostofa MG**, Fornara D, Sikdar A, Sarker T, Wang X, and Jahan MS (2020). Fine-tuning of soil water and nutrient fertilizer levels for the ecological restoration of coal-mined spoils using *Elaeagnus angustifolia*. **Journal of Environmental Management** **270**, 110855.
13. Roy R, **Mostofa MG**, Wang J, Fornara D, Sarker T, Zhang R (2021). Revegetation intervention of drought-prone coal-mined spoils using *Caragana korshinskii* under variable water and nitrogen-phosphorus resources. **Agricultural Water Management** **246**, 106712.

14. Ha CV, Nguyen KH, **Mostofa MG**, Tran CD, Watanabe Y, Li W, Osakabe Y, Sato M. The histidine phosphotransfer AHP4 plays a negative role in Arabidopsis plant response to drought, **bioRxiv** doi.org/10.1101/2020.07.30.229971.
15. Tahjib-Ul-Arif M, Sohag AAM, **Mostofa MG**, Polash MAS, Mahamud AGMSU, Afrin S, Hossain MA, Murata Y, Tran LS (2020). Comparative effects of ascobin and glutathione on copper homeostasis and oxidative stress metabolism in mitigation of copper toxicity in rice. **Plant Biology** doi.org/10.1111/plb.13222.

2019

16. **Mostofa MG**, Rahman MM, Ansary MMU, Fujita M, Tran L-SP (2019). Interactive effects of salicylic acid and nitric oxide in enhancing rice tolerance to cadmium stress. **International Journal of Molecular Science**, 2019, 20(22), 5798.
17. Rahman MM, **Mostofa MG**, Rahman MA, Islam MR, Keya SS, Das AK, Miah MG, Kawser AQMR, Sowrav A, Tran L-SP (2019). Acetic acid: a cost-effective agent for mitigation of seawater-induced salinity in mung bean. **Scientific Reports** 9, 15186.
18. Rizwan M, **Mostofa MG**, Ahmad MZ, Zhou Y, Adeel M, Mehmood S, Ahmad MA, Javed R, Imtiaz M, Aziz O, Ikram M, Tu S, Liu Y (2019). Hydrogen sulfide enhances rice tolerance to nickel through the prevention of chloroplast damage and the improvement of nitrogen metabolism under excessive nickel. **Plant Physiology and Biochemistry** 138, 100-111.
19. Nguyen KH, **Mostofa MG***, Watanabe Y, Tran L-SP (2019) Overexpression of *GmNAC085* enhances drought tolerance in *Arabidopsis* by regulating glutathione biosynthesis, redox balance and glutathione-dependent detoxification of reactive oxygen species and methylglyoxal. **Environmental and Experimental Botany** 161, 242-254
20. Abdel Latef AAH, **Mostofa MG***, Rahman MM, Abdel-Farid IB, Tran L-SP (2019) Extracts from yeast and carrot roots enhance maize performance under seawater-induced salt stress. **Journal of Plant Growth Regulation** 38: 966–979.
21. Rahman MM, **Mostofa MG**, Rahman MA, Miah MG, Saha SR, Karim MA, Akter M, Keya SS, Islam M, Tran LSP (2019). Insight into salt tolerance mechanisms of the halophyte *Achras sapota*: an important fruit tree for agriculture in coastal areas. **Protoplasma** 256(1):181-191.

2018

22. Tahjib-Ul-Arif M, Siddiqui MN, Sohag AAM, Sakil MA, Rahman MZ, Polash MAS, **Mostofa MG**, Tran L-SP (2018) Salicylic acid-mediated enhancement of photosynthesis attributes and antioxidant capacity contributes to yield improvement of maize plants under salt stress. **Journal of Plant Growth Regulation** 37: 1318-1330.
23. **Mostofa MG**, Li W, Nguyen KH, Fujita M, Tran L-SP (2018). Strigolactones in plant adaptation to abiotic stresses: an emerging avenue of plant research. **Plant, Cell & Environment** 2018;1–17.
24. Nguyen KH, **Mostofa MG**, Li W, Ha CV, Watanabe Y, Le DT, Thao NP, Tran L-SP (2018). The soybean transcription factor *GmNAC085* enhances drought tolerance in *Arabidopsis*. **Environmental and Experimental Botany** 151, 12-20
25. **Mostofa MG**, Ghosh A, Li ZG, Siddiqui MN, Fujita M, Tran L-SP (2018). Methylglyoxal—a signaling molecule in plant abiotic stress responses. **Free Radical Biology and Medicine** 122, 96-109
26. Rizwan M, **Mostofa MG**, Ahmad MZ, Imtiaz M, Mehmood S, Adeel M, Dai Z, Li Z, Aziz O, Zhang Y, Tu S (2018). Nitric oxide induces rice tolerance to excessive nickel by regulating nickel uptake, reactive oxygen species detoxification and defense-related gene expression. **Chemosphere** 191, 23-35

2017

27. Li W, Nguyen KH, Chu HD, Ha CV, Watanabe Y, Osakabe Y, Leyva-González MA, Sato M, Toyooka K, Voges L, Tanaka M, **Mostofa MG**, Seki M, Seo M, Yamaguchi S, Nelson DC, Tian C, Herrera-Estrella L, Tran L-SP (2017). The karrikin receptor KAI2 promotes drought resistance in *Arabidopsis thaliana*. **PLoS Genetics** 13(11), e1007076

28. Siddiqui MN, **Mostofa MG**, Akter MM, Srivastava AK, Sayed MA, Hasan MS, Tran L-SP (2017). Impact of salt-induced toxicity on growth and yield-potential of local wheat cultivars: oxidative stress and ion toxicity are among the major determinants of salt-tolerant capacity. *Chemosphere* 187,385-394
29. Hossain MD, Inafuku M, Iwasaki H, Taira N, **Mostofa MG**, Oku H (2017). Differential enzymatic defense mechanisms in leaves and roots of two true mangrove species under long- term salt stress. *Aquatic Botany* 142, 32-40
30. Nguyen HM, Sako K, Matsui A, Suzuki Y, **Mostofa MG**, Ha CV, Tanaka M, Tran L-SP, Habu Y, Seki M (2017). Ethanol enhances high-salinity stress tolerance by detoxifying reactive oxygen species in *Arabidopsis thaliana* and rice. *Frontiers in Plant Science* 8(1001)
31. Akram S, Siddiqui MN, Hussain BMN, Al Bari MA, **Mostofa MG**, Hossain MA, Tran L-SP (2017). Exogenous glutathione modulates salinity tolerance of soybean [*Glycine max* (L.) Merrill] at reproductive stage. *Journal of Plant growth Regulation* 36(4), 877-888
32. **Mostofa MG**, Hossain MA, Siddiqui MN, Fujita M, Tran L-SP (2017). Phenotypical, physiological and biochemical analyses provide insight into selenium-induced phytotoxicity in rice plants. *Chemosphere* 178, 212-223.
33. Rahman MM, Rahman MA, Miah MG, Saha SR, Karim MA, **Mostofa MG** (2017). Mechanistic insight into salt tolerance of *Acacia auriculiformis*: the importance of ion selectivity, osmoprotection, tissue tolerance, and Na⁺ exclusion. *Frontiers in Plant Science* 8,155.

2016

34. Hoque TS, Hossain MA, **Mostofa MG**, Burritt DJ, Fujita M, Tran L-SP (2016). Methylglyoxal: An emerging signaling molecule in plant abiotic stress responses and tolerance. *Frontiers in Plant Science* 7,1341

Book Chapter

35. Hoque TS, Hossain MA, **Mostofa MG**, Burritt DJ and Fujita M (2016). Signaling roles of methylglyoxal and the involvement of the glyoxalase system in plant abiotic stress responses and tolerance. Plant-Environment Interaction: Responses and Approaches to Mitigate Stress, First Edition. Edited by Mohamed Mahgoub Azooz and Parvaiz Ahmad. Published 2016 by John Wiley & Sons, Ltd.

2015

36. **Mostofa MG**, Saegusa D, Fujita M, Tran L-SP (2015). Hydrogen sulfide regulates salt tolerance in rice by maintaining Na⁺/K⁺ balance, mineral homeostasis and oxidative metabolism under excessive salt stress. *Frontiers in Plant Science* 6, 1055
37. Rahman A, **Mostofa MG**, Nahar K, Hasanuzzaman M, Fujita M (2015). Exogenous calcium alleviates cadmium-induced oxidative stress in rice (*Oryza sativa* L.) seedlings by regulating the antioxidant defense and glyoxalase systems. *Brazilian Journal of Botany* 39(2),393–407
38. Rahman A, **Mostofa MG**, Alam MM, Nahar K, Hasanuzzaman M, Fujita M (2015). Calcium mitigates arsenic toxicity in rice seedlings by reducing arsenic uptake and modulating the antioxidant defense and glyoxalase systems and stress markers. *BioMed Research International* 2015,340812
39. **Mostofa MG**, Rahman A, Ansary MMU, Watanabe A, Fujita M, Tran L-SP (2015). Hydrogen sulfide modulates cadmium-induced physiological and biochemical responses to alleviate cadmium toxicity in rice. *Scientific Reports* 5, 14078, 1-17
40. **Mostofa MG**, Hossain MA, Fujita M, Tran L-SP (2015). Physiological and biochemical mechanisms associated with trehalose-induced copper-stress tolerance in rice. *Scientific Reports* 5, 11433, 1-16
41. **Mostofa MG**, Fujita M, Tran L-SP (2015). Nitric oxide mediates hydrogen peroxide- and salicylic acid-induced salt tolerance in rice (*Oryza sativa* L.) seedlings. *Plant Growth Regulation* 77(3), 265-277
42. **Mostofa MG**, Seraj ZI, Fujita M (2015). Interactive effects of nitric oxide and glutathione in mitigating copper toxicity of rice (*Oryza sativa* L.) seedlings. *Plant Signaling & Behavior* 10 (3), e9915701-4

43. **Mostofa MG**, Hossain MA, Fujita M (2015). Trehalose pretreatment induces salt tolerance in rice (*Oryza sativa* L.) seedlings: oxidative damage and co-induction of antioxidant defense and glyoxalase systems. *Protoplasma*, 252(2), 461-475

2014

44. **Mostofa MG**, Seraj ZI, Fujita M (2014). Exogenous sodium nitroprusside and glutathione alleviate copper toxicity by reducing copper uptake and oxidative damage in rice (*Oryza sativa* L.) seedlings. *Protoplasma* 251(6),1373–86.
45. **Mostofa MG**, Yoshida N, Fujita M (2014). Spermidine pretreatment enhances heat tolerance in rice seedlings through modulating antioxidative and glyoxalase systems. *Plant Growth Regulation* 73(1), 31–44
46. Hossain MA, **Mostofa MG**, Burritt DJ, Fujita M (2014). Modulation of reactive oxygen species and methylglyoxal detoxification systems by exogenous glycinebetaine and proline improves drought tolerance in mustard (*Brassica juncea* L.). *International Journal of Plant Biology & Research* 2(2),1014

2013

47. **Mostofa MG**, Fujita M (2013). Salicylic acid alleviates copper toxicity in rice (*Oryza sativa* L.) seedlings by up-regulating antioxidative and glyoxalase systems. *Ecotoxicology*, 22(6), 959–973
48. Hossain MA, **Mostofa MG**, Fujita M (2013). Heat-shock positively modulates oxidative protection of salt and drought-stressed mustard (*Brassica campestris* L.) seedlings. *Journal of Plant Science and Molecular Breeding*, 2(2), 1–14
49. Hossain MA, **Mostofa MG**, Fujita M (2013). Cross protection by cold-shock to salinity and drought stress-induced oxidative stress in mustard (*Brassica campestris* L.) seedlings. *Molecular Plant Breeding*, 4(7), 50–70

2012 and Earlier

50. Haque MS, Hasan MK, Haque MA, **Mostofa MG**, Islam SMN (2009). Purification of urea transporter in paddy (*Oryza sativa* L.) induced by applied urea in the soil during growing stage, *Bangladesh Research Publication Journal*, 2(3); 597-604
51. Qadri F, Ahmed T, Ahmed F, Bhuiyan MS, **Mostofa MG**, Cassels FJ, Helander A, Svennerholm AM. (2007) Mucosal and systemic immune responses in patients with diarrhea due to CS6-expressing enterotoxigenic *Escherichia coli*, *Infection and Immunity* 75(5); 2269–2274.

CONFERENCE CONTRIBUTIONS

A. Oral Presentations

1. **Mostofa MG**, Md. Mezanur Rahman. Metabolite, hormone and lipid profilings reveal positive regulatory roles of strigolactones in protection of rice plants from arsenic stress. **4th IPFS-ICBHA 2019-GNOBB Conference**, November 11 - 13, 2019, Dhaka, Bangladesh.
2. **Mostofa MG**, Md. Mezanur Rahman, Sanjida Sultana Keya, Ashim Kumar Das, Md. Abiar Rahman, Shah Mohammad Naimul Islam, Md. Motaher Hossain. Strigolactones positively regulate defense mechanisms to enhance resistance against sheath blight of rice (*Oryza sativa*). Lightning round for early career researchers, **7th Annual South Asia Biosafety Conference (SABC2019)**, September 14–16, 2019. The Westin, Dhaka, Bangladesh.
3. **Mostofa MG**. Combating salt tolerance in rice using hydrogen sulfide. **2nd International South Asian Biotechnology Conference**. February 5-6, 2016, Senate Bhavan, University of Dhaka, Dhaka-1000, Bangladesh
4. **Mostofa MG**, Saegusa D, Fujita M, Tran L-SP, Hydrogen sulfide regulates salt tolerance in rice by maintaining Na⁺/K⁺ balance, mineral homeostasis and oxidative metabolism under excessive salt stress. **23rd Bangladesh Science Conference**, October 17-18, 2015, BAAS, BSMRAU, Bangladesh
5. **Mostofa MG**, Hossain MA, Hossain MS, Fujita M. Trehalose application reduces copper uptake and mitigates copper-induced oxidative damage in hydroponically grown rice (*Oryza sativa* L.) seedlings.

International Conference of Biotechnology in Health and Agriculture (ICBHA), 9-10 January, 2015, University of Dhaka, Dhaka, Bangladesh.

B. Poster Presentations

1. Rahman MM, Keya SS, Das AK, Rahman MA, Islam SMN, Hossain MM, **Mostofa MG**. Strigolactones positively regulate defense mechanisms to enhance resistance against sheath blight of rice (*Oryza sativa*). 7th Annual South Asia Biosafety Conference (SABC2019), September 14, 2019 – September 16, 2019, The Westin, Dhaka, Bangladesh.
2. **Mostofa MG**, Nguyen KH, Watanabe Y, Deemano N, Tran L-SP. Strigolactone-deficient rice mutants are more susceptible to arsenic stress: oxidative stress and defense mechanisms. **4th CSRS-ITbm joint meeting with Kihara**. January 15, 2018, RIKEN Yokohama campus, Yokohama, **Japan**.
3. **Mostofa MG**, Nguyen KH, Watanabe Y, Deemano N, Tran L-SP. Strigolactones regulate plant adaptation to arsenic stress. **FY2017 CSRS Interim Progress Report**, November 2, 2017, Wako, Saitama, **Japan**.
4. Ha CV, Watanabe Y, **Mostofa MG**, Li W, Nguyen KH, Tanaka M, Seki M, Sato M, Toyooka K, Tran L-SP (2017). The Arabidopsis histidine phosphotransfer protein 4 (AHP4) plays negatively role in response to drought in Arabidopsis. **The 58th Annual Meeting of the Japanese Society of Plant Physiologists**, March 15-18, Kagoshima, **Japan**.
5. **Mostofa MG**, Rahman A, Watanabe A, Fujita M. Hydrogen sulfide modulates cadmium- induced physiological and biochemical responses to alleviate cadmium toxicity in rice. **The 42nd annual meeting of Plant Growth Regulatory Society of America (PGRSA)**, 19-23 July, 2015, Big Island of Hawaii, **USA**.
6. Rahman A, **Mostofa MG**, Hassanuzaman M, Fujita M. Exogenous calcium alleviates cadmium induced oxidative stress in rice (*Oryza Sativa L.*) seedling by improving antioxidant defense and glyoxalase system. **Plant Biology 2015**, American Society of Plant Biologists (ASPB), 26-30 July, 2015, Minneapolis, Minnesota, **USA**.
7. **Mostofa MG**, Fujita M. Trehalose application reduces copper uptake and mitigates copper induced oxidative damage in hydroponically grown rice (*Oryza sativa L.*) seedlings. **Phytogene conference VII**, 30th September, 2014, Takamatsu, Kagawa, **Japan**.
8. **Mostofa MG**, Sinho D, Fujita M. Salicylic acid treatment antagonizes selenium phytotoxicity by minimizing oxidative stress and improving growth in rice (*Oryza sativa L.*) seedlings. **Plant Biology 2014**, American Society of Plant Biologists (ASPB), 12-16 July, 2014, Oregon, Portland, **USA**.
9. **Mostofa MG**, Fujita M. Nitric oxide mediates hydrogen peroxide and salicylic acid-induced salt tolerance in rice seedlings. **Phytogene conference VI**, October 28, 2013, Kagawa, **Japan**.
10. **Mostofa MG**, Yoshida N, Fujita M. Spermidine pretreatment enhances heat tolerance in rice seedlings through modulating antioxidative and glyoxalase systems. **International Plant Growth Substance Association (IPGSA)**, 18-22 June, 2013, Shanghai, **China**.

C. Symposiums attended

1. **“Environmental Stress Adaptation and Memory in Plants”** February 27-28, 2017, organized by RIKEN CSRS, JST, CREST at RIKEN Yokohama Campus, **Japan**.
2. **“56th Annual Meeting of the Japanese Society of Plant Physiologists (JSPP)”** March 16-18, 2015, Tokyo University of Agriculture, Tokyo, **Japan**.
3. **“Seeds and Needs Creation Workshop** by Tokyo University of Agriculture and Technology”, Focus on agricultural technology innovation and discuss technological innovation and business models for plant factories with experts in your field, January 24, 2014, Tokyo, **Japan**.

PROJECT MANAGEMENT EXPERIENCES

1. Evaluation of grain quality in terms of amylose content, gelatinization temperature and gel consistency in different varieties of aromatic rice available in Bangladesh. **Principal Investigator**, Research Management Committee (RMC), Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh. July 2009 to Sep. 2010.
2. Physiological and biochemical mechanisms associated with trehalose-and hydrogen sulfide-induced abiotic stress tolerance in rice (*Oryza sativa L.*). **MS and PhD fellow**, Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan. Oct. 2010 to March 2015.
3. Roles of strigolactones in rice responses to salinity and arsenic toxicity. **Foreign Postdoctoral Researcher**,

CURRICULUM VITAE OF DR. MOHAMMAD GOLAM MOSTOFA

- Japan Society for the Promotion of Science (JSPS), Japan. Sep. 2016 to Sep.2018.
4. Alcohol treatment: a possible cost effective technology for enhancing salinity tolerance in soybean. **Principal Investigator**, Ministry of Science and Technology, Government of the Peoples' Republic of Bangladesh. July 1, 2019 to June 30, 2020.
 5. Genetic manipulation of strigolactone biosynthesis pathway using CRISPR/CAS9 technology for the production of non-transgenic high-yielding rice variety. **Principal Investigator**, Bangladesh Academy of Science-United State Department of Agriculture (**BAS-USDA**). Oct. 1, 2020 to Sep. 30, 2023.
 6. Insights into Socio-Economic Features to Reveal the Controversy on Eucalyptus Based Agroforestry System in Northern Region of Bangladesh. **Co-Principal Investigator**. Grant for Advanced Research in Education (GARE), Ministry of Education, Government of the Peoples' Republic of Bangladesh, Bangladesh. July 1, 2019 to June 30, 2021
 7. Fungal endophyte *Metarhizium* for the improvement of rice performance under salt stress: possible strategies to challenge global salinity. **Co-Principal Investigator**, Grant for Advanced Research in Education (GARE), Ministry of Education, Government of the Peoples' Republic of Bangladesh, Bangladesh. July 1, 2019 to June 30, 2022.

SKILLS ON RESEARCH TECHNIQUES

Plant growth and hydroponic culture: Seed germination, optimization of plant nutrients, testing effectiveness of plant growth regulators, measurement of plant growth-related parameters and phenotyping of plants under normal and stress conditions.

Molecular: Isolation of DNA, RNA and Protein, Polymerase Chain Reaction (PCR), Agarose Gel Electrophoresis, cDNA preparation, qRT-PCR, Transcriptome analysis.

Omics: Metabolomics, Lipidomics, Hormonomics

Microbiological Techniques: Bacterial Culture, Bacteriocidal tests, Common test with microorganisms such as antibiotic susceptibility test.

Analytical: Spectrophotometry, High Performance Liquid Chromatography (HPLC), Gas Chromatography (GC), Atomic Absorption spectrophotometry (AAS), Ultra Violet (UV) and Infra Red (IR) spectrophotometry, Inductively Coupled Plasma-Mass Spectrophotometry (ICP-MS), Portable Photosynthetic System.

Biochemical: Quantification of photosynthetic pigments, protein isolation and quantification, isozyme analysis, isolation and quantification of the non-enzymatic and enzymatic antioxidants and other metabolites, measurement of oxidative stress markers (lipid peroxidation product, hydrogen peroxide, protein oxidation), quantification of amino acids and polyamines, analysis of metal uptake and accumulation.

Immunological: Enzyme Linked Immunosorbent Assay (ELISA), ELISPOT, BLOOD FICOLL, IMMUNO DOT BLOT, Immunostaining, Antibody in Lymphocyte Secretion (ALS), Flowcytometry (FACS).

Microscopic: Staining of ROS and NOS in plant organs, and analysis under Fluorescence Microscopes

ADDITIONAL SKILLS

Language: Bengali (Native), English (Fluent), Japanese (Basic)

Hobby: Scientific Editing and Reviewing for Academic and Peer-Reviewed Journals

Professional and Organizational: Excellent skills on organizing meetings and seminars at professional and organizational levels as Departmental Head and Associate Director of Research. Strong interpersonal and communication skills, routine use of Microsoft office and power point, data analysis using appropriate software package (e.g. Microsoft excel, ANOVA, Sigmaplot, SPSS).

FELLOWSHIPS / AWARDS

- **Stanford University's lists of 2% scientists** ("citation impact during the single calendar year 2019") (PLoS Biology 18:e300098; <https://doi.org/10.1371/journal.pbio.3000918>)
- **Best poster presentation award** at 7th Annual South Asia Biosafety Conference (SABC2019), The Westin, Dhaka, Bangladesh, September 14, 2019 – September 16, 2019.
- **JSPS postdoctoral fellowship** (Sep. 2016–Sep. 2018), RIKEN Center for Sustainable Resource Science,

CURRICULUM VITAE OF DR. MOHAMMAD GOLAM MOSTOFA

Yokohama, Japan

- **CSRS incentive award-2017**, RIKEN Center for Sustainable Resource Science (April, 2018), for being co-author of the article “The karrikin receptor KAI2 promotes drought resistance in *Arabidopsis thaliana*” published in *PLoS Genetics*
- **Best student poster presentation award** at The 42nd annual meeting of Plant Growth Regulatory Society of America (PGRSA), 19-23 July, 2015, Big Island of Hawaii, USA. Sponsored by Valent Biosciences Corporation, USA
- **Travel awards** for attending international conferences in three consecutive years (2013, 2014, and 2015) from The United Graduate School of Agricultural Sciences, Ehime University, Ehime, Japan
- **Monbukagakusho Scholarship** (MEXT) from Japanese Government for pursuing PhD (2012–2015)
- **Monbukagakusho Scholarship** (MEXT) from Japanese Government for pursuing MS (2010–2012)
- **University scholarship** at Undergraduate level, University of Dhaka, Bangladesh (1999–2004)
- **Certificate of Honor** (Provost Award) from the provost of my dormitory for securing first class in B. Sc. (Hons) University of Dhaka, Bangladesh (2005)

PROFESSIONAL MEMBERSHIPS

- Member of Plant Growth Regulatory Society of America (PGRSA), USA
- Member of Japanese Society of Plant Physiologists (JSPP), Japan
- Member of American Society of Plant Biologists (ASPB), USA
- Life Member of Graduate Biochemist association (GBA), Bangladesh
- Member of the Bangladesh Biochemical Society (BBS), Bangladesh
- Life Member of Bangladesh Association for the Advancement of Science (BAAS), Bangladesh.
- Life member of Global Network of Bangladeshi Biotechnologists (GNOBB)
- Member of International Society for Biosafety Research (ISfBR)

EDITORIAL EXPERIENCE / JOURNAL REFEREE

- Editorial Board Member, **BMC Plant Biology**, Biomed Central Ltd, Springer Nature, Switzerland
- Academic Editor, **PLOSE ONE**, Section: Plant Abiotic Stress, PLOS, CA, USA
- Associate Editor, **Plant Molecular Biology Reporter**, Springer, Springer Nature, Switzerland
- Editorial Board Member, **Phyton: International Journal of Experimental Botany**, Tech Science Press, Nevada, USA
- Associate Editor, **Annals of Bangladesh Agriculture**, <https://bsmrau.edu.bd/aba/>
- Topic Editor, **International Journal of Molecular Science (IJMS)**, MDPI, Switzerland
- Guest-Editor, **International Journal of Molecular Science (IJMS)**, MDPI;
(http://www.mdpi.com/journal/ijms/special_issues/phytohormones_plant_growth)
- Guest-Editor, **‘Plants’**, MDPI, Switzerland;
(https://www.mdpi.com/journal/plants/special_issues/physiological_biochemical_molecular_responses)
- Guest-Editor, **‘Crops’**, MDPI, Switzerland, https://www.mdpi.com/journal/crops/special_issues/stress_crops
- Guest-Editor, Special Issue for **Biomed Research International (BMRI)**, Hindawi
(<https://www.hindawi.com/journals/bmri/si/858140/cfp/>)
- Co-Editor of book for Springer; Book title: Glutathione in Plant Growth, Development, and Stress Tolerance,
- Reviewing Editor of **Frontiers in Plant Science**
- **Manuscripts reviewed for**; Physiologia Plantarum, Plant Molecular Biology Reporter, Frontiers in Plant Science, Plant & Cell Physiology, Scientific Reports, PLoS One, Plant Physiology and Biochemistry,

CURRICULUM VITAE OF DR. MOHAMMAD GOLAM MOSTOFA

Ecotoxicology and Environmental Safety, The Science of Nature, Acta Physiologiae Plantarum, Biochemical Systematics and Ecology, Chemosphere, International Journal of Phytoremediation, Critical Reviews in Biotechnology, Plant Biology etc.

TEACHING AND MENTORING

- Courses taught at undergraduate level: Chemistry of Biomolecules, Metabolisms of Biomolecules, Biophysics and Chemistry of Biomolecules
- Courses taught at graduate level: Plant physiology, Plant Biochemistry, and Biological Chemistry
- Supervised 5 students during their Master courses and thesis works

REFERENCES

1. Professor Dr. Masayuki Fujita (MS and PhD supervisor)

Laboratory of Plant Stress Responses, Faculty of Agriculture, Kagawa University, Miki, Kagawa 761-0795, Japan. E-mail: fujita.masayuki@kagawa-u.ac.jp

2. Professor Dr. Zeba Islam Seraj (Academic advisor)

Dept. of Biochemistry and Molecular Biology, University of Dhaka, Dhaka-1000, Bangladesh, E-mail: zebai@du.ac.bd.

3. Professor Dr. Mohammad Anwar Hossain (Collaborator)

Dept. of Genetics and Plant Breeding, Bangladesh Agricultural University, Mymensingh 2202, Bangladesh. E-mail: anwargpb@bau.edu.bd

4. Professor Dr. Lam-son Phan Tran (Postdoctoral Supervisor)

Dept. of Plant and Soil Science
Institute of Genomics for Crop Abiotic Stress Tolerance,
Texas Tech University, Lubbock, TX 79409, USA
E-mail: son.tran@ttu.edu