

CV of Dr. Md Arif Hussain

Contact

E-mail: ahussain@plantnutrition.uni-kiel.de

ORCID: <https://orcid.org/0000-0001-5238-5940>

Academic Degrees and Qualification

1) 2018- 2023: PhD

Dissertation title:

“Sulfur Fertilization and Waterlogging Stress Resistance: Elucidation of the underlying mechanisms in Wheat and Rapeseed”

Institute of plant nutrition and soil science, Kiel University, Germany

Supervisor: Prof. Dr. Karl.H. Mühling

Grade: **Very good**

2) 2014: Master of Science (MS) in Genetics and Plant Breeding

Master thesis project: “Genetic variability and character association of advanced lines in *Brassica rapa* L.”

Advisor: Professor Dr. Md. Sarwoar Hossain

Sher-e- Bangla Agricultural University, Dhaka, Bangladesh

Grade: 3.92 out of 4.00 (**Converted German grade 1.12; Very good**)

3) 2012: Bachelor of Science in Agriculture (Honors)

Sher-e- Bangla Agricultural University, Dhaka, Bangladesh

Grade: 3.82 out of 4.00 (**Converted German grade 1.27; Very good**)

Professional Experiences

Teaching experience

Associate Professor: 2023 – Present

Assistant Professor: 14 October, 2016 - 13 October, 2023

Lecturer: 14 October 2014 - 13 October 2016

Department of Biochemistry and Molecular Biology, Sher-e-Bangla Agricultural University (SAU), Dhaka-1207, Bangladesh

Skill and Experiences

- ✓ AAS, ICP-MS, ICP-OES, CNS elemental analyzer, Microwave digestion of ions
- ✓ Antioxidant metabolites and enzyme activity
- ✓ Plant physiological-stress assays
- ✓ SDS-PAGE (1D and 2 D), Microbiome culture
- ✓ Gas-exchange Parameter (Licor 6400)
- ✓ Molecular Techniques: PCR, RT-PCR, **CRISPR-Cas 9**

Statistical/ Simulation experience: R, DSSAT, protein structure simulation techniques

Area of Interest

- 1) Nutrient cycling and assimilation 2) Food quality 3) Molecular biology 4) Soil microbiology

Award and Scholarship

2023, DAAD funding, German Academic exchange service

2018, Fellow, Bangabandhu Science and technology fellowship trust, Government of the People's Republic of Bangladesh

2014, Dean's Award;

Research Grants

Year	Project title	PI/Co-PI	Funding Agency
2023-24	Unravelling the mechanisms and impacts of waterlogging stress in rapeseed (<i>Brassica napus</i> L.)	PI	Sher-e-Bangla Agricultural University Research system, Bangladesh
2018-2019	Genetic evolution of erucic acid and its regulatory fatty acid elongase gene in <i>Brassica rapa</i> for developing low EA containing mustard variety in Bangladesh	Co-PI	Ministry of Science and technology, Bangladesh
2017-2018	Evaluation and comparison of physicochemical properties of some advanced lines of <i>Brassica rapa</i> L.	PI	Ministry of Science and technology, Bangladesh
2017-2018	Effect of Different Sawdust Substrate on Yield and Proximate Composition of Reishi Mushroom (<i>Ganoderma lucidum</i> L.)	PI	Sher-e-Bangla Agricultural University Research system, Bangladesh

Scientific output and recognition

- 1) Bari, S., Reza, N., Marma, M., Ahmed, S., **Hussain, M. A.**, Javed, M., Hossain, M., Manzoor, M., Alam, M. 2024. Computational analysis of Allium sativum compounds to identify thermolabile hemolysin inhibitors against Vibrio alginolyticus in shrimp. **Journal of Advanced Biotechnology and Experimental Therapeutics**, 8(1), 1. <https://doi.org/10.5455/jabet.2025.01> (IF: 1.9)
- 2) **Hussain, M.A.**, Naeem, A., Pitann, B. Mühling, K.H. 2024. Foliar-applied sulfur (S) supplements soil-applied S to alleviate waterlogging stress through mitigation of oxidative stress and ion homeostasis in rapeseed. **Plant stress**. <https://doi.org/10.1016/j.stress.2024.100529> (IF:6.8)
- 3) Amoako F.K, Sagervanshi A, **Hussain M.A.**, Pitann B. and Mühling K.H. 2024 'Transcriptional and physiological analyses uncover the mineralization and uptake mechanisms of phytic acid in symbiotically grown *Vicia faba* plants. **Plant physiology and Biochemistry**. <https://doi.org/10.1016/j.plaphy.2024.108723> (Cite score: 10.3; IF: 6.5)
- 4) Manzoor, M.; Abdalla, M.A.; **Hussain, M.A.**; Mühling, K.H. 2024. Silicon-Selenium Interplay Imparts Cadmium Resistance in Wheat through an Up-Regulating Antioxidant System. **Int. J. Mol. Sci.**, 25, 387. <https://doi.org/10.3390/ijms25010387>(Cite score: 7.8; IF: 5.6)
- 5) **Hussain, M.A.**, Naeem, A., Pitann, B. et al. 2023. High Sulfur (S) Supplementation Imparts Waterlogging Tolerance to Oilseed rape (*Brassica napus* L.) Through Upregulating S Metabolism and Antioxidant Pathways. **Journal of Plant Growth Regulation**. <https://doi.org/10.1007/s00344-023-11034-8> (Cite score: 7; IF:4.8)
- 6) Zannat, A. **Hussain, M.A.**, Abdullah, A.H.M., Hossain, M. I., et al. 2023. Exploring genotypic variability and interrelationships among growth, yield, and quality characteristics in diverse tomato genotypes. **Heliyon**, 9 (8), e18958. <https://doi.org/10.1016/j.heliyon.2023.e18958>. (Cite score:5.6; IF: 4.0)

- 7) **Hussain, M. A.**, Naeem, A., Sulieman, S., Pitann, B., & Mühling, K. **2022**. Sulfur uptake and distribution, grain yield, and quality of hybrid and inbred winter wheat (*Triticum aestivum* L.) varieties under early and late waterlogging. **Journal of Plant Nutrition and Soil Science**. <https://doi.org/10.1002/jpln.202200149>. (Cite score: 4.4; IF: 2.5)
- 8) Jannat, S., **Hussain, M.A.**, Abdullah, A.H.M., Shompa, B.N., Hossain, M.S., Mohsin, S.M. **2022**. Yield Potentiality and Grain Physio-Chemical Properties of Some Advanced Lines and High Yielding Varieties of Rice in Bangladesh. **Journal of Plant Sciences**, 17: 134-143. <https://doi.org/10.3923/jps.2022.134.143>
- 9) Sumon, M.M., Ahmed, K.U., Nuruddin, M. M. Hossain, A, **Hussain, M. A.**, **2021**. Comparative Study on Physicochemical Composition of Different Genotypes of Sunflower Seed and Mineral Profile of Oil Cake. *The Agriculturists* 18(2):83-93
- 10) Afsana, N., Mahbub Islam, M., Elias Hossain, M., Nizam, R., Monalesa, N., **Hussain, M.A.**, & Parvin, S. 2017. Response of Tomato (*Solanum lycopersicum* L.) to Salicylic Acid and Calcium. *Journal of Applied Life Sciences International*, 15(2), 1–7. <https://doi.org/10.9734/JALSI/2017/37408>
- 11) **Hussain, M.A.**, Hossain, M.S., Bhuiyan, M.S.R., Zeba, N. and Mohsin, S.M. 2016. Field performance and genetic analysis in some advanced lines of mustard (*Brassica rapa* L.). *The Agriculturists*, 14(1), pp.112-121. <https://doi.org/10.3329/agric.v14i1.29109>

(Submitted/Under review papers)

- 1) **Hussain, M. A.**, Pitann, B., & Mühling, K.H. ‘Combined effect of melatonin and sulfur on alleviating waterlogging stress in rapeseed (*Brassica napus* L.)’ **Plant-environment interactions** (Under review)

Conference Abstracts: 10

Events Participation:

- a) International conference: **8**, b) National conference: **20**, c) Workshop and training: **30**, d) Webinar: **35**

Societal Memberships

1. Member of German Society of Plant Nutrition (DGP)
2. Member of German Society for Plant Sciences (DBG)
3. Member of the Bangladesh Society for Biochemistry and Molecular Biology (BSBM)
4. Life Member of the Bangladesh Society of Microbiologists (BSM)

Language Proficiency

Bangla (native speaker), English (advanced) and German (conversational)

Referee 1:

Prof. Dr. Karl H. Mühling (PhD advisor)
Executive Director, Institute for Plant
Nutrition and Soil Science Christian
Albrechts University in Kiel,
Hermann-Rodewald-Strasse 2 24118 Kiel,
Germany
Tel: 0431 880 3189
E-Mail: khmuehling@plantnutrition.uni-kiel.de

Referee 2:

Dr. Britta Pitann
Research Associate,
Christian Albrechts University in Kiel,
Kiel, Germany
Tel: 0431/880-1424
E-Mail: bpitann@plantnutrition.uni-kiel.de