

TANUSHREE HALDER

E-mail: tanushree.halder@uwa.edu.au or tanushree.halder01@gmail.com

LinkedIn: <https://www.linkedin.com/in/tanushree-halder-49965848/>

Mobile number: +8801794706606

Education

Doctor of Philosophy,

Jul 2023

The University of Western Australia (UWA), Perth, WA 6009.

Thesis title: Phenotypic and molecular studies on root traits in wheat (*Triticum aestivum* L.)

Master of Science in Applied Biotechnology,

Sep 2016–Oct 2017

University of Westminster, London W1W 6UW.

Dissertation title: Production of novel antibacterial Polyhydroxyalkanoates (PHA) incorporating medicinal plant extracts.

Grade: Distinction

Master of Science in Genetics and Plant Breeding,

Jun 2012–May 2015

Sher-e-Bangla Agricultural University (SAU), Dhaka-1207, Bangladesh.

Thesis title: Variability in advanced lines of *Brassica rapa* obtained through inter-varietal crosses.

CGPA: 3.98 (out of 4.00)

Bachelor of Science in Agriculture (B.Sc.Ag.(Hons.)),

Feb 2007–May 2012

Faculty of Agriculture, SAU, Dhaka-1207, Bangladesh.

CGPA: 3.96 (out of 4.00)

Employment

Faculty Member (currently an Associate Professor),

26 May 2013–

Department of Genetics and Plant Breeding, SAU, Dhaka-1207, Bangladesh.

present

Research Assistant

DNA Laboratory, UWA School of Agriculture and Environment, UWA

Mar 2023–Aug 2023

Casual Teaching of Principles of inheritance (GENE2250, and BIOL1130),

Mar 2019–May 2023

School of Molecular Sciences, and School of Plant Biology, UWA, Perth, WA 6009.

Principal Investigator:

Oct 2017–Jan 2018

- “Selection of some hot chili (*Capsicum frutescens*) genotypes grown in various conditions: Bangladesh”, **funded by SAU Research System** (1,567 AUD).

- “Tolerance of some weeds associated with winter crops in response to saline environment”, **funded by the Ministry of Science and Technology**, Bangladesh (1,097 AUD).

Jan–Sep 2016

Research Assistant, “Production of double haploid plant through pollen embryogenesis of *Brassica rapa*”, Department of Biotechnology, SAU, Dhaka-1207, Bangladesh.

Nov 2012–Apr 2013

Key publications

- **Halder, T.**, Liu, H., Chen, Y., Yan, G., Siddique, K. H. M. (2023). Chromosome groups 5, 6 and 7 harbor major quantitative trait loci controlling root traits in bread wheat (*Triticum aestivum* L.). *Frontiers in Plant Science*. doi: 10.3389/fpls.2023.1092992.
- **Halder, T.**, Choudhary, M., Liu, H., Chen, Y., Yan, G. and Siddique, K. H. M. (2022). Wheat proteomics for abiotic stress tolerance and root system architecture: current status and future prospects. *Proteomes*, 10(2), 17. DOI: 10.3390/proteomes10020017.
- Kumar, P., Choudhary, M.; **Halder, T.**, Prakash, N.R., Singh, V., Sheoran, S., Longmei, N., Rakshit, S., Siddique, K.H.M (2022). Salinity stress tolerance and omics approaches: Revisiting the progress and achievements in major cereal crops. *Heredity*, 1–22. DOI: 10.1038/s41437-022-00516-2.
- **Halder, T.**, Liu, H., Chen, Y., Yan, G. and Siddique, K. H. M. (2021). Identification of candidate genes for root traits using genotype–phenotype association analysis of near-isogenic lines in hexaploid wheat (*Triticum aestivum* L.). *International Journal of Molecular Sciences*, 22(7), 3579. DOI: 10.3390/ijms22073579.
- **Halder, T.**, Bhuiyan, M. S. R., Islam, M. S. and Hossain, J. (2016). Analysis of relationship between yield and some yield contributing characters in few advanced lines of rapeseed (*Brassica rapa*) by using correlation and path analysis. *AAB Bioflux*, 8(1), p.36-44. <http://www.aab.bioflux.com.ro/docs/2016.36-44>.
- **Halder, T.**, Bhuiyan, M. S. R. and Islam, M. S. (2014). Variability and correlation study of some advanced lines of rape seed (*Brassica rapa*). *Bangladesh Journal of Plant Breeding and Genetics*, 27(1), pp. 25-36. DOI: 10.3329/bjpbg.v27i1.23975.
- Islam, M., **Halder, T.**, Hossain, J., Mahmud, F. and Rahman, J. (2015). Genotype-environment interaction in spring wheat (*Triticum aestivum*) of Bangladesh. *Bangladesh Journal of Plant Breeding and Genetics*, 28(2), pp. 17-24. DOI: 10.3329/bjpbg.v28i2.29957.

Conferences and important training attended

• **Oral presentations:**

- “Genes, proteins, and molecular markers for improving root traits in wheat (*Triticum aestivum* L.)” at 10th International Conference Agriculture & Food (16-19 Aug 2022), Burgas, Bulgaria.
- “Unravelling the genetics of wheat root system architecture” at 2022 Postgraduate Showcase: Frontiers in Agriculture, The UWA Institute of Agriculture: 23 Jun 2022 (https://www.youtube.com/watch?v=D2dNAP54mao&ab_channel=TheUWAInstituteofAgriculture).
- “Production of novel antibacterial Polyhydroxyalkanoates (PHAs) incorporating medicinal plant extracts” at 6th International Conference on Plants & Environmental Pollution (ICPEP-6), CSIR-National Botanical Research Institute, Lucknow, India: 27–30 Nov 2018.

• **Poster presentations:**

- “Identification of candidate genes for root traits using genotype-phenotype association analysis of near-isogenic lines in wheat” at ISRR11/Rooting2021 “Root Biology Never Sleeps!”: 26 May 2021.
- “Antibacterial biomaterial development using *Azadirachta indica* extract” and played co-chair role in the UK Society for Biomaterials-16th Annual Conference at Loughborough University, UK: 20–21 Jun 2017.

• **Important trainings:**

- “Protein extraction, quantification and analysis” at the Centre for Microscopy, Characterization & Analysis, UWA, Perth, Australia, 15 Aug 2021–21 Jan 2022.

- “Application of Genome Editing (CRISPR/Cas9) Technique for Crop Improvement” at University of Dhaka, Bangladesh, 23–27 Jul 2018.

Scholarship and awards

- Travel grants for presenting PhD research at an international conference in Burgas, Bulgaria, in the University of Bonn, Germany, and in the Wageningen University & Research, the Netherlands:
 - The UWA Postgraduate Students' Association (PSA) Conference Travel Award
 - Convocation Postgraduate Research Travel Award
 - The UWA Graduate Research School Travel Award
 - Travel grant from the UWA School of Agriculture and Environment
- Underwood PhD Completion Scholarship 2022 (Aug 2022 to Feb 2023) for completing PhD in Agriculture, The University of Western Australia.
- Research Training Program (RTP) Scholarship and University Postgraduate Award-2019-continued for studying PhD in Agriculture, The University of Western Australia.
- Westminster International Scholarship-2016 for studying MSc in Applied Biotechnology in the University of Westminster.
- Dean’s Award, and Sher-e-Bangla Agricultural University Gold Medal Award-2015 for outstanding result in B.Sc.Ag. (Hons.) from Sher-e-Bangla Agricultural University

Professional memberships

- Genetics Society of America: May 2022–continued.
- International Society of Root Research (ISRR): May 2019–continued.
- Plant Breeding and Genetics Society of Bangladesh: 2012–continued.
- Bangladesh Association for Plant Tissue Culture & Biotechnology: Aug 2018–continued.

Extracurricular activities

- **Postgraduate representatives:**
 - UWA School of Agriculture and Environment (SAGe) Community and Engagement Committee (Feb–Dec 2021)
 - Course representative of MSc Applied Biotechnology, the University of Westminster (Oct 2016–Sep 2017)
 - General Secretary of UWA Society of Bangladeshi Culture (Jan–Dec 2021)
- **Cultural activities:**
 - Vice-President, “Sher-e-Bangla Agricultural University Debating Society,” Sher-e-Bangla Agricultural University, Bangladesh (Jul 2012–Jun 2013)
 - Member: Agri Rover Scout, Saptak and Ataindrila
 - Assistant Moderator: SAU Bondhushava, Saptak
- **Volunteering:**
 - Research UniMentor, UWA: May 2020–May 2022
 - Pingelly Astrofest 2021: 20 Mar 2021 at WA
 - Postgraduate Representative of SAGe in PSA research week 2020: 07 Oct at UWA
 - National Science Week (Australia) 2020 on 19 Aug 2020 at WA
 - Perth Science Festival on 24 Aug 2019 at WA
 - Westminster International Student Blogger, UK