

SHAHANAZ PARVEEN-Curriculum Vitae

Professor

Department of Genetics and Plant Breeding
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Web of Science Researcher ID: **AAB-7844-2020**

Keywords: Molecular biology, Molecular genetics, Plant Breeding, Plant Genetics, Plant Physiology

RESEARCH OVERVIEW

My research uses a combination of plant breeding, genetics, and molecular biology to answer fundamental questions related to plant developmental process.

ACADEMIC QUALIFICATIONS

2019 **PhD** – The United Graduate School of Agricultural Sciences, Kagoshima University, Kagoshima, Japan

Studies on isoprene emission from tropical tree: hormonal regulation under stressed condition and characterization of emission behavior

Shahanaz Parveen, Dr. Hirosuke Oku, Dr. Fumio Hashimoto, Dr. Hironori Iwasaki, and Dr. Teruko Konishi

2007 **Master of Science (MS) in Genetics and Plant Breeding** – Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

Variability study in F₂ progenies of the inter-varietal crosses of Brassica rapa

Shahanaz Parveen, Dr. Md. Shabidur Rashid Bhuiyan and Dr. Md. Sarowar Hossain

2004 **Bachelor of Science in Agriculture (Honors)** – Sher-e-Bangla Agricultural University, Dhaka, Bangladesh

PUBLICATIONS

International Peer-reviewed journal

1. **Shahanaz Parveen**, Md. Asif Iqbal, Ishmael Mutanda, Md. Harun-Ur-Rashid, Masashi Inafuku, Hirosuke Oku, **2019**. Plant hormone effects on isoprene emission from tropical tree in *Ficus septica*. Plant, Cell & Environment. 42(5): 1715–1728. **IF: 6.3 (2025) Category Quartile: Q1** <https://doi.org/10.1111/pce.13513>
2. **Shahanaz Parveen**, Md. Harun-Ur-Rashid, Masashi Inafuku, Hironori Iwasaki, Hirosuke Oku, **2019**. Molecular regulatory mechanism of isoprene emission under short-term drought stress in the tropical tree *Ficus septica*. Tree Physiology. 39(3): 440–453. **IF: 3.7 (2025) Category Quartile: Q1** <https://doi.org/10.1093/treephys/tpy123>
3. Takuya Higa, **Shahanaz Parveen**, Ishmael Mutanda, Md. Asif Iqbal, Masashi Inafuku, Fumio Hashimoto, Hirosuke Oku, **2018**. Evaluation of isoprene emission rates of tropical trees by an iterative optimization procedure for G-93 parameters. Atmospheric Environment. 192: 209–217. **IF: 3.7 Category Quartile: Q1** <https://doi.org/10.1016/j.atmosenv.2018.08.059>

4. Md. Asif Iqbal, Miyamoto K, Yumoto E, **Shahanaz Parveen**, Ishmael Mutanda, Masashi Inafuku, Hirosuke Oku, **2022**. Plant hormone profile and control over isoprene biosynthesis in a tropical tree *Ficus septica*. *Plant Biology*. 24(3): 492–501. **IF: 3.6** **Category Quartile: Q1** doi: <https://doi.org/10.1111/plb.13386>
5. Md. Harun-Ur-Rashid, Hironori Iwasaki, Shigeki Oogai, Masakazu Fukuta, **Shahanaz Parveen**, Md. Amzad Hossain, Toyoaki Anai, Hirosuke Oku, **2017**. Molecular characterization of cytosolic cysteine synthase in *Mimosa pudica*. *Journal of Plant Research*. 131: 319–329. **IF: 2.4 (2024)** **Category Quartile: Q2** <https://doi.org/10.1007/s10265-017-0986-5>
6. Md. Harun-Ur-Rashid, Hironori Iwasaki, Shigeki Oogai, Masakazu Fukuta, **Shahanaz Parveen**, Md. Amzad Hossain, Toyoaki Anai, Hirosuke Oku, **2018**. Cytosolic cysteine synthase switch cysteine and mimosine production in *Leucaena leucocephala*. *Applied Biochemistry and Biotechnology*. 186(3): 613–632. **IF: 3.3 (2025)** **Category Quartile: Q2** <https://doi.org/10.1007/s12010-018-2745-z>
7. Md. Harun-Ur-Rashid, Shigeki Oogai, **Shahanaz Parveen**, Hironori Iwasaki, Masashi Inafuku, Masakazu Fukuta, Md. Amzad Hossain, Toyoaki Anai, Hirosuke Oku, **2020**. Molecular cloning of putative chloroplastic cysteine synthase in *Leucaena leucocephala*. *Journal of Plant Research*. 133: 95–108. **IF: 2.4 (2024)** **Category Quartile: Q2** <https://doi.org/10.1007/s10265-019-01158-y>
8. Mst. Sufara Akhter Banu, Kazi Md. Kamrul Huda, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Narendra Tuteja, **2023**. A DEAD box helicase Psp68 positively regulates salt stress responses in marker-free transgenic rice plants. *Transgenic Research*. 32(4): 293–304. **IF: 2.0 (2025)** **Category Quartile: Q1**
9. Mst. Sufara Akhter Banu, Kazi Md. Kamrul Huda, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, S M Shahinul Islam, Narendra Tuteja, **2023**. Phenotypic and microarray analysis reveals salinity stress-induced oxidative tolerance in transgenic rice expressing a DEAD-box RNA helicase, OsDB10. *Plant Molecular Biology*. 113: 19–32. **IF: 3.8 (2025)** **Category Quartile: Q1** <https://doi.org/10.1007/s11248-023-00353-x>
10. Mst. Sufara Akhter Banu, Kazi Md. Kamrul Huda, **Md. Harun-Ur-Rashid**, Shahanaz Parveen, S M Shahinul Islam, Narendra Tuteja, **2023**. Phenotypic and microarray analysis reveals salinity stress-induced oxidative tolerance in transgenic rice expressing a DEAD-box RNA helicase, OsDB10. *Plant Molecular Biology*. 113: 19–32. **IF: 3.8 (2024)** **Category Quartile: Q1** <https://doi.org/10.1007/s11103-023-01372-2>

11. Nayema Islam Rupa, Md. Shahidur Rashid Bhuiyan, Md. Harun-Ur- Rashid, **Shahanaz Parveen**, Md. Azaharul Islam Arif and Sakila Akter, **2023**. Evaluation of the potentiality of eight advanced populations of *Brassica rapa* based on yield and yield contributing characters. SAARC Journal of Agriculture. 21(2): 109–118. <https://doi.org/10.3329/sja.v21i2.70320>
12. Md. Abdul Zabbar, **Shahanaz Parveen**, Md. Abdur Rahim, Kazi Md. Kamrul Huda, Md. Azaharul Islam Arif, Md. Raihan Sharif, Israt Jahan, Md. Harun-Ur-Rashid, **2024**. Morphological characterization and genetic diversity analysis of yield and yield contributing parameters in brinjal (*Solanum melongena* L.) genotypes. SAARC Journal of Agriculture. 22(2): 59–71. <https://doi.org/10.3329/sja.v22i1.73118>
13. Sakila Akter, Md. Shahidur Rashid Bhuiyan, **Shahanaz Parveen**, Md. Azaharul Islam Arif, Nayema Islam Rupa, Md. Abdul Zabbar, Mst. Shamima Yesmin, Hosne Ara, Md. Harun-Ur-Rashid, **2025**. Genetic variability and trait association for important agromorphological traits in advanced populations of *Brassica rapa* L. SAARC Journal of Agriculture. 23(1): 163–174. <https://doi.org/10.3329/sja.v23i1.79688>
14. Md Abdul Helal Kafy, **Shahanaz Parveen***, Faria Ahmed, Fatema Akter Mim, Nusrat Jahan Moitry, Jannatul Ferdaus Zihan, Md. Abdul Zabbar, Kazi Md. Kamrul Huda, Md. Harun-Ur-Rashid*, **2025**. Morphological and biochemical characterization of resistance mechanisms in eggplant genotypes against *Leucinodes orbonalis*. Discover Plants. 2(309). **(Corresponding author)** <https://doi.org/10.1007/s44372-025-00401-2>

National Peer-reviewed journal

15. Mst. Sufara Akhter Banu, Kazi Md. Kamrul Huda, **Shahanaz Parveen**, Md. Golam Robbani, Bulbul Ahmed, Md. Harun-Ur-Rashid, **2021**. Isolation, expression and purification of pea ascorbate peroxidase (pea-apx) in *Escherichia coli*. Journal of Experimental Bioscience. 12(1): 69–74.
16. Mst. Sufara Akhter Banu, Bulbul Ahmed, **Shahanaz Parveen**, Md. Harun-Ur-Rashid, Kazi Md. Kamrul Huda, **2021**. Agrobacterium-mediated Genetic Transformation of Rice var. BRRI Dhan 58. Plant Tissue Culture & Biotechnology. 31(1): 71–80. <https://doi.org/10.3329/ptcb.v31i1.54113>
17. Kazi Md. Kamrul Huda, Mst. Sufara Akhter Banu, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, MAM Hussien, **2019-2021**. Effect of temperature stress on *Brassica rapa* genotypes during germination and reproductive growth. Bangladesh Journal of Agriculture. 44–46: 19-29. <https://doi.org/10.3329/bjagri.v46i1-6.59970>

18. M. N. Jomadder, Kazi Md. Kamrul Huda, Mohammad Jony, M.S.Islam, Mst. Sufara Akhter Banu, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, 2019-2021. Genetic evaluation of boro rice (*Oryza sativa* L.) genotypes under irrigated and rainfed conditions. Bangladesh Journal of Agriculture. 44-46: 77–87. <https://doi.org/10.3329/bjagri.v46i1-6.59976>
19. Sithi Saha, Md. Ehsanul Haq, **Shahanaz Parveen**, Firoz Mahmud, Shukti Rani Chowdhury, Md. Harun-Ur-Rashid, 2019. Variability, correlation and path coefficient analysis: principle tools to explore genotypes of Brinjal (*Solanum melongena* L.). Asian Journal of Biotechnology and Genetic Engineering. 2(3): 1–9.
20. Md. Nur-E-Nabi, Md. Ehsanul Haq, Montasir Ahmed, Md. Monir Hossain, Md. Shefat-al-Maruf, Firoz Mahmud, **Shahanaz Parveen**, Md. Harun-Ur-Rashid, 2019. Genetic variability, correlation and path coefficient analysis in advanced generation of *Brassica napus* L. Journal of Scientific Research and Reports. 22(3): 1–12. <https://doi.org/10.9734/jsrr/2019/v22i330090>
21. Md. Akkas Ali, Md. Shahidur Rashid Bhuiyan, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Md. Golam Robbani and Monika Sonom, 2016. Breeding for an ideal plant type in *Brassica rapa* L. Plant Knowledge Journal. 5(1): 36–41.
22. Abu Yousuf Hossain, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Md. Salehur Rahman, Runa Akter and Md. Abdur Rahim, 2016. Evaluation of breeding potential of tomato germplasm using D² analysis. Advances in Bioresearch. 7(4): 217–222.
23. Taiaba Afrin, Md. Shahidur Rashid Bhuiyan, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, 2016. Variability and comparative analysis among advanced generations of *Brassica rapa* L. Plant Knowledge Journal. 5(1): 18–26.
24. Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Md. Shahidur Rashid Bhuiyan, 2015. Morphological attributes species identification of oleiferous *Brassica* species and better parents selection criteria for *Brassica juncea*. International Journal of Current Research. 7(9): 19847–19854. **(Corresponding author)**
25. Tasnia Taiana, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Md. Sarowar Hossain, Md. Azizul Haque, 2015. Selection strategies for better parents in tomato using genetic parameters. Plant Knowledge Journal. 4(1): 33–39.
26. Golam Sarwar, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Md. Sarowar Hossain, 2015. Correlation and Path coefficient analysis for agro-morphological important traits in Aman rice genotypes (*Oryza sativa* L.). Advances in Bioresearch. 6(4): 40–47.

27. **Shahanaz Parveen**, Md. Harun-Ur-Rashid, Md. Shahidur Rashid Bhuiyan, **2015**. Assessment of breeding potential of rape seed germplasm using D² analysis. *Journal of Experimental Biosciences*. 6(1): 59–64.
28. Md. Salehur Rahman, **Shahanaz Parveen**, Md. Harun-Ur-Rashid, Runa Akter, Abu Yousuf Hossin and Md. Golam Rabbani, **2015**. Correlation and path coefficient analysis of tomato germplasm. *International Journal of Applied Sciences and Biotechnology*. 3(2): 223–226.
29. Golam Sarwar, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Md. Sarowar Hossain, **2015**. Evaluation of genetic diversity in agromorphological traits of forty-two Aman rice genotypes (*Oryza sativa* L.) using D² analysis. *American Journal Experimental Agriculture*. 8(5): 280–288.
30. Golam Sarwar, Md. Sarowar Hossain, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, **2015**. Assessment of genetic variability for agro-morphological important traits in aman rice (*Oryza sativa* L.). *International Journal of Applied Sciences and Biotechnology*. 3(1): 73–79. <https://doi.org/10.3126/ijasbt.v3i1.11896>
31. **Shahanaz Parveen**, Md. Harun-Ur-Rashid, Md. Shahidur Rashid Bhuiyan, **2013**. Genetic variation and selection criteria for seed yield related traits in rape seed (*Brassica napus* L.). *Bangladesh Journal of Plant Breeding and Genetics*. 26(2): 15–22. <https://doi.org/10.3329/bjpbg.v26i2.23845>
32. Labony Yeasmin, Shamim Ahmed, Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Naheed Zeba, **2011**. Effect of nitrogen and potassium on *in vitro* development of microtuber of potato (*Solanum tuberosum* L.). *Journal of Experimental Biosciences*. 2(1): 107–112.
33. Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Md. Shahidur Rashid Bhuiyan, **2010**. Genetic variability, Correlation and Path coefficient analysis in nineteen *Brassica rapa* germplasm. *Journal of Sher-e-Bangla Agricultural University*. 4(1): 84–89.
34. **Shahanaz Parveen**, Md. Harun-Ur-Rashid, Md. Shahidur Rashid Bhuiyan, **2010**. Selection criteria for high yielding genotypes in early F₂ generation of twelve inter varietal crosses of *Brassica rapa*. *Journal of Sher-e-Bangla Agricultural University*. 4(2): 69–72.
35. Md. Harun-Ur-Rashid, Md. Shahidur Rashid Bhuiyan, Md. Ali Akbar, **Shahanaz Parveen**, **2009**. Diversity analysis of the germplasms oleiferous *Brassica sp.* *Journal of Sher-e-Bangla Agricultural University*. 3(1): 30–34.
36. **Shahanaz Parveen**, Md. Shahidur Rashid Bhuiyan, Md. Sarowar Hossain, Md. Harun-Ur-Rashid, **2008**. Variability study in F₂ progenies of the inter-varietal crosses of *Brassica rapa*. *Journal of Sher-e-Bangla Agricultural University*. 2(2): 34–40.

CONFERENCE PRESENTATIONS

Oral Presentation

Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Masashi Inafuku, Hironori Iwasaki, Masakazu Fukuta, Md. Amzad Hossain, Hirosuke Oku (2019). ***Molecular Characterization of Chloroplastic Cysteine synthase in Leucaena leucocephala***. International Conference on Environmental Science and Resource Management (ICERM). 8-9 February, Mawlana Bhashani Science and Technology University, Tangail, Bangladesh.

Tasnia Taiana, **Shahanaz Parveen**, Md. Sarowar Hossain, Md. Harun-Ur- Rashid (2019). **Variability study and better parent selection criteria of tomato germplasm**s. International Conference on Environmental Science and Resource Management (ICERM). 8-9 February, Mawlana Bhashani Science and Technology University, Tangail, Bangladesh.

Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Masashi Inafuku, Hironori Iwasaki, Masakazu Fukuta, Md. Amzad Hossain, Hirosuke Oku (2019). ***Molecular cloning and characterization of chloroplastic cysteine synthase in Leucaena leucocephala: its regulatory cross-talk of cysteine and mimosine synthesis***. National Conference on DNA and Genome Research for Sustainable Development in Agriculture and Health. 2-3 May, Rajshahi University, Rajshahi, Bangladesh.

Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Masashi Inafuku, Hironori Iwasaki, Masakazu Fukuta, Md. Amzad Hossain, Hirosuke Oku (2019). ***Cloning and characterization of putative chloroplastic cysteine synthase in Leucaena leucocephala***. Innovations in Plant and Food Sciences and International Conference on Biotechnology in Health and Agriculture. 11-13 November, University of Dhaka, Bangladesh.

Md. Harun-Ur-Rashid, **Shahanaz Parveen**, Masakazu Fukuta, Michael Chandra Roy, Hirosuke Oku (2020). ***Molecular characterization and docking dynamics simulation prediction of putative cytosolic oastl operate cysteine and mimosine metabolism in Leucaena leucocephala***. 9th International Plant Tissue Culture & Biotechnology Conference. 8-10 February, University of Dhaka, Bangladesh.

Shahanaz Parveen, Md. Harun-Ur-Rashid, Hirosuke Oku (2020). ***Molecular regulatory mechanism of VOC emission under drought stress in Ficus septica***. 9th International Plant Tissue Culture & Biotechnology Conference. 8-10 February, University of Dhaka, Bangladesh.

PROJECT MANAGEMENT & ADMINISTRATION

2018 –2019 **Principal Investigator**. *Assessment of genetic diversity and selection of superior types of rice genotypes under salinity stress*. Ministry of Science and Technology, Government of the People's Republic of Bangladesh.

2018 –2019 **Principal Investigator.** *Assessment of genetic diversity and selection of superior types of tomato genotypes under drought stress.* Sher-e-Bangla Agricultural University Research System, Sher-e-Bangla Agricultural University, Dhaka, Bangladesh.2

Professional Experience:

Designation	Professor (15.03.2024 to till now)
Name of Company	Department of Genetics and Plant Breeding, Sher-e-Bangla Agricultural University, Sher-e-Bangla Nagar, Dhaka, Bangladesh
Job Responsibility	To teach undergraduate and post graduate students To conduct research To supervise MS and PhD students
Designation	Associate Professor (15.03.2019 to 14.03.2024)
Name of Company	Department of Genetics and Plant Breeding, Sher-e-Bangla Agricultural University, Sher-e-Bangla Nagar, Dhaka, Bangladesh
Job Responsibility	To teach undergraduate and post graduate students To conduct research To supervise MS students
Designation	Assistant Professor (04.12.2013 to 14.03.2019)
Name of Company	Department of Genetics and Plant Breeding, Sher-e-Bangla Agricultural University, Sher-e-Bangla Nagar, Dhaka, Bangladesh
Job Responsibility	To teach undergraduate and post graduate students To conduct research To supervise MS students
Designation	Lecturer (04.12.2011 to 03.12.2013)
Name of Company	Department of Genetics and Plant Breeding, Sher-e-Bangla Agricultural University, Sher-e-Bangla Nagar, Dhaka, Bangladesh
Job Responsibility	To teach undergraduate and post graduate students To conduct research To supervise MS students
Designation	Faculty (01.06.2008 to 03.12.2011)
Name of Company	College of Agricultural Sciences (CAS), International university of Business Agriculture and Technology (IUBAT), 4, Embankment Road, Uttara Model Town, Dhaka.
Job Responsibility	To teach undergraduate To conduct research
Designation	Researcher (07.02.2015 to 15.04.2015)
Name of Company	Center of Molecular Bioscience (COMB), University of the Ryukyus, Okinawa, Japan
Job Responsibility	To conduct research

Membership

Life member, Plant Breeding and Genetics Society of Bangladesh
Life member, Krishibid Institution of Bangladesh
Life member, Japanese Universities Alumni Association in Bangladesh
Member, Plant Biotechnology Society of Bangladesh
Member, Botanical Society of Bangladesh

Award/Prizes

Merit Scholarship Award in undergraduate and postgraduate study
Merit Scholarship Award in Higher Secondary Level
Junior and Primary Scholarship Award

Training

Title: Contemporary approaches to genetic resources conservation and use
Date: 7-25 April, 2014
Place: The Centre for Development and Innovation, Wageningen UR, The Netherlands
Organizer: NFP/TP-Fellowship by the Netherlands Government

Title: **Workshop on Participatory plant breeding**
Date: 22 - 24 July, 2014
Place: Bangladesh Jute Research Institute (BJRI) auditorium, Dhaka
Organizer: UBINIG and Plant Breeding and Genetics Society of Bangladesh (PBGSB) supported by Local Initiatives for Biodiversity, Research and Development (LI-BIRD) and funded by Development Fund (DF), Norway.

Title: **Training on Curriculum Development and Teaching-learning Assessment**
Date: 17-21 December, 2013
Place: Sher-e-Bangla Agricultural University, Dhaka
Organizer: Higher Education Quality Enhancement Project (HEQEP) funded by World Bank

Organizational/Managerial Skills

Advisor, Sher-e-Bangla Agricultural University Debating Society
Founder member of Sher-e-Bangla Agricultural University Debating Society(SAUDS)
Founder member of Ag-Biotech and Information Technology Forum (ABIT Forum)- A science club of Sher-e-Bangla Agricultural University

Referee

1. **Professor Md. Shahidur Rashid Bhuiyan, Ph.D.**
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3. **Professor Hirosuke Oku, Ph.D.**
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