CURRICULUM VITAE

OF

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ABOUT ME:

As a Visiting Research Fellow at the Rice Genetic Design and Validation Unit of the International Rice Research Institute (IRRI), I am engased in two projects that hold immense potential for revolutionizing rice production in vulnerable areas. My primary focus revolves around validating candidate genes for drought tolerance in popular rice backgrounds in collaboration with New York University (NYU). This entails creating transgenic rice plants and meticulously evaluating their performance under challenging drought conditions. In parallel, I am actively involved in crafting arsenic-safe rice varieties through genome editing, customized to the specific needs of farmers in Bangladesh. This endeavor involves editing potential genes that can curtail arsenic accumulation in rice grains without yield penalty and rigorously validating the efficacy of these new rice cultivars. As a key contributor to this collaborative project, my expertise extends beyond gene manipulation. I excel in a wide range of related techniques, including molecular cloning, vector construction, and validation methodologies.

With a Ph.D. in Agricultural Biotechnology from Chungbuk National University in South Korea, JSPS Postdoctoral Fellowship at Tsukuba University in Japan and Research associate At the University of Florida, USA and a proven track record of excellence, I remain updated with the latest research advancements. Committed to making meaningful contributions to my field, I am driven by a sense of purpose and a passion for scientific exploration.

ACADEMIC QUALIFICATIONS:

Ph.D.	Agriculture/Plant Biotechnology	Chungbuk National University, South Korea	2006
M.Sc.(Thesis)	Botany (Thesis in Plant Biotechnology)	Rajshahi University, Bangladesh	2002
B.Sc. (Hons)	Botany	Rajshahi University, Bangladesh	2000

DATE OF BIRTH: December 21, 1977

NATIONALITY: BANGLADESH

PRESENT STATUS (July 2022~to date):

Visiting Research Fellow at the Rice Genetic Design & Validation Unit of International Rice Research Institute (IRRI) and Professor, Department of Biotechnology and genetic Engineering, Jahangirnagar University, Savar, Dhaka 1342.

ACADEMIC AND RESEARCH EXPERIENCES:

Visiting Research Fellow at IRRI (2022-2023)

Developed and validated candidate genes for drought and arsenic tolerant rice cultivars working with Dr. Inez Slamet Loedin and Dr. Amelia Henry.

- Created transgenic rice plants and meticulously evaluated their performance under drought conditions.
- Developing arsenic-safe rice varieties to reduce arsenic accumulation in rice grains and validated the effectiveness tailored to the needs of farmers in Bangladesh.

Faculty Member | Department of Biotechnology and Genetic Engineering, Jahangirnagar University, Savar, Dhaka, Bangladesh | 2011 - Present

- Led theory and practical courses in Biotechnology and Genetic Engineering, fostering a stimulating and engaging learning environment.

- Developed and delivered curriculum for courses encompassing various aspects of biotechnology and genetic engineering.
- Mentored and supervised students' research projects, providing guidance and support.
- Conducted impactful research in the field of plant cell genetics and biotechnology, contributing to the advancement of knowledge and addressing key challenges.
- Published research findings in reputable scientific journals and presented research at national and international conferences.
- Collaborated with fellow faculty members and researchers to promote interdisciplinary projects and foster a culture of innovation.
- Engaged in continuous professional development, attending workshops, seminars, and training programs to stay abreast of the latest advancements in the field.

Postdoctoral Research Associate, Cell Genetics and Citrus Improvement Lab, CREC, IFAS, University of Florida (June 2009 - February 2011).

- Cloned pathogen-related genes for developing transgenic citrus plants resistant to HLB and canker.
- Utilized Agrobacterium-mediated transformation and protoplast/GFP transformation techniques.
- Conducted Insilco studies to identify suitable target genes for cloning and transformation.
- Performed molecular characterization of transgenic plants and conducted field trials.

Postdoctoral Researcher, Gene Research Center, Tsukuba University, Japan (April 2007 - March 2009) through the JSPS Fellowship program.

- Cloned the taste-modifying protein-producing gene (Miraculin) from Miracle Fruits.
- Transformed lettuce plants using Agrobacterium to express Miraculin.
- Carried out molecular characterization of transgenic plants and focused on plasmid construction, transgene-induced silencing, and cell and tissue culture.

Visitor/Collaborator, Plant Molecular Biology Lab, IRRI (July 2006 - March 2007)

- Worked on the expression analysis of plasma membrane intrinsic protein (PIP) in drought-affected rice.
- Focused on understanding aquaporin genes and their role in rice seedlings under drought stress.

OTHER EXPERIENCES:

Period	**Position/Activities**	**Department/Field**	**Institute/Country**
June 17-24, 2022	ICGEB-DBT International Workshop "SynBio-2022"	Synthetic Biology of photosynthetic organisms to produce value-added products	ICGEB, New Delhi, INDIA
January 2021	Workshop on Brain engaging pedagogy	Pedagogy	Institute for the Development of Online Learning (IDOL)
Septemeber-November-2020	BioE 271: Frugal Science. (A new global project class at Stanford)	Prakash Lab, Department of BioEngineering	Stanford University, USA
November 5-19, 2019	Eighth International Training Course	*In vitro* and cryopreservation approaches for the conservation of plant genetic resources	ICAR-NBPGR, New Delhi
Nov 19-30, 2018	Training (NFAO-2018)	New Frontiers in Algal Omics	ICGEB, New Delhi, INDIA
May~June 2015	Visiting Fellow	Plant Biotechnology	Chungbuk National University, South Korea
2003-2006	Research Assistant (Graduate)	Plant Biotechnology	Chungbuk National University, South Korea

PROFESSIONAL ENGAGEMENTS:

Position	Name of the Organization	Description
Founder, CEO	Science Porter Bangladesh (SPB) www.scienceporterbd.org	Science communication network.
President	Microbiologists Society, Bangladesh Chapter	Scholarly scientific community contributing to popularized microbial research in Bangladesh.
General Secretary	Network for Agri-Biotech and Nutrition (NABN) www.nabnbd.org	An organization dedicated to creating awareness, policy, and intervention in Agricultural Biotechnology and Nutrition.

RESEARCH INTEREST:

Plant biotechnology and genetic engineering, plant tissue cell and organ culture, stress-tolerant plant production, nanotechnology, food biotechnology, proteomics, functional genomics, environmental stress physiology, plant molecular and cellular biology, protoplast fusion and transformation, nutraceuticals and nutrigenomics, food biotechnology, bio-prospecting of medicinal plants, commercialization of in vitro grown plant cell through the bioreactor, soilless culture, vertical gardening, NBT for crop improvement, environmental microbiology, algal omics, and bio-fuel production.

ACADEMIC AWARDS AND DISTINCTIONS:

1. Shahid Habibur Rahman Gold medal in Rajshahi University, Bangladesh, (For the outstanding academic performance at the undergraduate & graduate level)
2. Rajshahi University scholarship
3. Best paper award 2007 in Korean Society of Horticultural Sciences "Histological observation of developmental somatic embryos of *Eleutherococcus sessiliflorus*."
4. 6th Annual South Asia Biosafety Conference-2018, Dhaka (Sept15-17, 2018). Bangladesh. (Second prize awarded in poster presentation)

MEMBERSHIP AND AWARDS:

1. Member of American Society for Microbiology (ASM). No: 100129967 (www.asm.org)
2. Member of American Society of Plant Biologists. Member ID: 75270. (http://www.aspb.org)
3. Member of International Society for Horticultural Science. Member ID: 60112. (http://www.ishs.org)
4. Member of International Association for Plant Biotechnology (IAPB). (www.iapbhome.com)
5. Member of the International Society for the Biosafety Research (ISBR). Member ID: 2018-288-09. (http://isbr.info/)
6. Life Member of Bangladesh Association for Plant Tissue Culture & Biotechnology (BAPTC&B). Member ID: L-105 (www.baptcb.org)
7. Life Member of Bangladesh Botanical Sciety. Member ID: L-617
8. Life Member of Bangladesh JSPS Alumni Association (BJSPSAA). http://www.bjspsaa.org/
9. Life Member of Biosafety and Biosecurity Association of Bangladesh (BBBA) (Member ID BBBA-138). http://bdbiosafetysecurity.org/
10. Life Member of Microbiologist Society, India (Member ID: LM/248) http://microbiosociety.org/