

# Profile of Dr. Sujay Kumar Bhajan

## Dr. Sujay Kumar Bhajan

### Lecturer

Department of Biotechnology and Genetic Engineering (BGE)  
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Date of Birth : 20<sup>th</sup> October 1981  
Nationality : Bangladeshi (by birth)  
Marital Status : Married  
Blood Group : A (+Ve)

### **Profile summary:**

I am working as an lecturer in the department of Biotechnology and Genetic Engineering (BGE) Bangabandhu Sheikh Mujibur Rahman Science & Technology University, Gopalganj. I have completed my Ph.D. in plant Biotechnology at the Department of Botany, University of Dhaka. I have a keen interest in plant biotechnology, plant genetic improvement, environmental biotechnology, identification of microorganisms in different sources, molecular biology and bioinformatics analysis. I have experience with plant tissue culture, plant genetic transformation, genome editing, identification of different microorganisms and several molecular techniques such as genomic DNA isolation, bacterial plasmid DNA isolation, bacterial culture, gene cloning, PCR, RT PCR, Southern Blotting technique, primer design and bioinformatics analysis. I have experience in handling several projects as a research associate and project director. I am also working as an additional director in the institutional quality assurance cell (IQAC). Hard work coupled with dedication, honesty, and creative potential will help me to achieve the goal of the institution in the best possible way in all my endeavors.

### **Educational Qualification:**

Degree Name	Group/Major Subject	Board/Institute	Country	Passing Year
Ph.D.	Plant Biotechnology	University of Dhaka	Bangladesh	2021
Masters (1 <sup>st</sup> class 2 <sup>nd</sup> )	Biotechnology and genetic engineering	Islamic University, Kushtia	Bangladesh	2008
Bachelor (1 <sup>st</sup> class 5 <sup>th</sup> )	Biotechnology and genetic engineering	Islamic University, Kushtia	Bangladesh	2006
HSC First Division	Science	Dhaka	Bangladesh	2000
SSC First Division	Science	Dhaka	Bangladesh	1998

### **List of Publications:**

1. Hassen Yusuf Bekere , Md. Rifat Ahmed , Ayesha Akter Anne , Farhana Faiza Bristy , Mosabbir Ahmed , **Sujay Kumar Bhajan \***, Michael Abdi , and Dawit Kassaye (2023) **Spatial and Temporal Distribution of Foot and Mouth Disease (FMD) Outbreaks**. American Journal of Pure and Applied Biosciences, 5(2), 28-44. <https://doi.org/10.34104/ajpab.023.028043>.
2. **Sujay Kumar Bhajan**, Mohammad Mahmood Hasan, Md. Anwarul Haque and Mohammad Nurul Islam (2022) **Genetic Modified Food for Ensuring Food Security Issues** Intech open. DOI: 10.5772/intechopen.106810
3. Md. Monjur Alam, Md. Abu Sayeed Imran, **Sujay Kumar Bhajan**, Umma Hany, Md. Mahbub Morshed, and Mst. Mimmi Mizan (2022) **Performance of Aromatic Rice Varieties as Influenced by Nitrogen Does Int. J. Agric. Vet. Sci., 4(4), 68-74.**
4. **Sujay Kumar Bhajan**, Setara Begum, Mohammad Nurul Islam, M. Imdadul Hoque and Rakha Hari Sarker. (2019) **In vitro Regeneration and Agrobacterium-mediated Genetic Transformation of Local Varieties of Mungbean (*Vigna radiata* (L.) Wilczek)**. Plant Tissue Cult. & Biotech. 29(1): 81-97.
5. Mohammad Mahmood Hasan, **Sujay Kumar Bhajan**, M. Imdadul Hoque, R. H. Sarker and Mohammad Nurul Islam (2019). **In Planta Genetic Transformation of Mungbean (*Vigna radiata* (L.) Wilczek) with Marker Gene**. Plant Tissue Cult. & Biotech. 29(2): 245-255.
6. **Sujay Kumar Bhajan.**, Ansari,A., Sony,S.K., Islam,M.N., Haque,M.I. and Sarker,R.H (2017) Mungbean yellow mosaic virus segment DNA-B movement protein (BC1) gene, partial cds; and nuclear shuttle protein (BV1) gene, complete cds. GenBank: KY303697.1 NCBI database.
7. Md Mostafa Kamal, **Sujay Kumar Bhajan**, Nadra Tabassum, and Mohammad Nurul Islam. (2015) **Molecular diagnosis of tomato leaf curl virus disease**. Proc.of the Third Intl. Conf. Advances in Bio-Informatics, Bio-Technology and Environmental Engineering- UK, ABBE 2015.
8. Nadra Tabassum, Sonia Khan Sony, **Sujay Kumar Bhajan** and Mohammad Nurul Islam. (2013) **Analysis of Genetic Diversity in Eleven Tomato (*Lycopersicon Esculentum* Mill.) Varieties Using Rapd Markers**. Plant Tissue Cult. & Biotech. 23(1): 49-57.
9. **Sujay Kumar Bhajan**, N. Biswas, N. M. R. B. Rahman<sup>1</sup>, M. M. Hasan<sup>1</sup>, S. K. Saha, and A. Khatun. (2012) **Study on the development of salt tolerant kenaf varieties through *Agrobacterium*-mediated genetic transformation**. International Research Journal of Biotechnology Vol. 3(8) pp. 128-133.
10. Sajoy Kanti Saha, **Sujay Kumar Bhajan**, A. N. M. Rubaiyath Bin Rahman, M. A. Hossain and Asma Khatun. (2010) **Development of Transgenic Mesta (*Hibiscus sabdariffa* L.) Plant through *Agrobacterium* Mediated Transformation**. J. Environ.Sci & Natural Resources, 3 (2): 143-146.

### **Book Chapter:**

1. **Sujay Kumar Bhajan**, Mohammad Mahmood Hasan and Mohammad Nurul Islam (2021). Mungbean [(*Vigna radiata* (L.) Wilczek)] Importance, Production Constraints and Genetic Improvement. Book Chapter- *Vigna radiata* Production, Cultivation and uses. **Editor- Martin L. Bech**, NOVA Science Publishers, New York, USA. <https://novapublishers.com/shop/vigna-radiata-production-cultivation-and-uses/>

### **Manuscript under Preparation:**

- 1) **Sujay Kumar Bhajan**, Mohammad Nurul Islam, M. Imdadul Hoque and Rakha Hari Sarker. **Micrografting of in vitro regenerated shoots of mungbean (Submitted [In Vitro Cellular & Developmental Biology - Plant](#)).**
- 2) **Sujay Kumar Bhajan**, Sonia Khan Sony, Mohammad Nurul Islam, M. Imdadul Hoque and Rakha Hari Sarker. **Molecular cloning and characterization of Mungbean Yellow Mosaic Virus (MYMV) DNA-A & DNA-B clone isolated in Bangladesh.**
- 3) **Sujay Kumar Bhajan**, Mohammad Nurul Islam, M. Imdadul Hoque and Rakha Hari Sarker. **Agrobacterium-mediated genetic transformation of mungbean with coat protein gene of mungbean yellow mosaic virus (MYMV)**

### **List of Seminar presentation and workshop attending:**

- 1) Four day online training ``**Introductory Genomics**'' organized by Seqbee Bioscience ( 6<sup>th</sup> , 7<sup>th</sup>, 13 and 14 april , 2023).
- 2) Two day online training Program ``**Next generation sequencing, Linux operation and 16s r RNA amplicon data analysis**'' Organized by Future Bioscience. (4<sup>th</sup>-5<sup>th</sup> July, 2021).
- 3) Online training ``**Real Time PCR detection of Covid 19**'' Organized by IEDCR, Bangladesh. (15th April, 2021).
- 4) Attended ``**National Agri Scientific Conference- 2020**'' Organized by IAAS Bangladesh. (June, 2020).
- 5) Training Workshop on ``**Application of Genome Editing (CRISPR/Cas9) Technique for Crop Improvement**''. Held at the department of Botany, University of Dhaka, Bangladesh (July 23- 27, 2018).
- 6) **Sujay Kumar Bhajan**, M.N. Islam, M.I.Hoque and R.H.Sarker. ``**Integration of Mungbean Yellow Mosaic Virus resistance CP-AC2 gene in tobacco plants through Agrobacterium mediated genetic transformation**''. Annual Plant Tissue Culture & Biotechnology Conference. Dhaka, Bangladesh. (28th march, 2015).
- 7) **Sujay Kumar Bhajan**, Sonia Khan Sony, Rita Sarah Borna, Mohammad Nurul Islam, M.I.Hoque and R.H. Sarker. **Cloning and Expression of CP-AC2 Gene in obtaining Mungbean Yellow Mosaic Virus (MYMV) Resistance**. 7th international plant tissue culture & Biotechnology Conference Dhaka, Bangladesh. (1-3th March, 2014).
- 8) **Sujay Kumar Bhajan**, Sonia Khan Sony, Rita Sarah Borna, Mohammad Nurul Islam, M.I. Hoque and R.H.Sarker. **Construction of an anti-viral vector targeting Mungbean Yellow Mosaic Virus**. Poster presentation in First International Conference on Biotechnology on the theme `` Application of biotechnology in the addressing the development needs of Bangladesh. Westin Hotel, Gulshan-2, Dhaka (25-26 May, 2013).
- 9) Attended the workshop on ``**Genomics and proteomics**''. Held at the department of Botany, University of Dhaka, Bangladesh (July 16-24, 2012).
- 10) Attended the workshop on ``**Plant Genetic Transformation, in situ Hybridization and Bioinformatics**''. Held at the Department of Botany, University of Dhaka, Bangladesh (October 06-14, 2012).
- 11) **Sujay kumar Bhajan**, Mohammad Nurul Islam, M. I. Hoque and R. H. Sarker.

Development of in vitro regeneration System in mung bean [Vigna radiata (L.) Wilczek]. Annual Plant Tissue Culture & Biotechnology Conference Ishurdi, Bangladesh (6-7th January, 2012).

**Google Scholar link:**

[https://scholar.google.com/citations?hl=en&user=hrvPZTgAAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com/citations?hl=en&user=hrvPZTgAAAAJ&view_op=list_works&sortby=pubdate)

**Work experience:**

1. **Assistant Professor** and head of the Department, Department of Microbiology, Rabindra Maitree University, Kushtia, Bangladesh (April 2023-July 2023)
2. **Senior Lecturer**, Department of Microbiology, Rabindra Maitree University, Kushtia, Bangladesh (March, 2022- April 2023)
3. **Lecturer**, Department of Microbiology, Rabindra Maitree University, Kushtia, Bangladesh (October, 2021- March, 2022).
4. **Lecturer**, Department of Agriculture, Rabindra Maitree University, Kushtia, Bangladesh (Sep, 2019- October, 2021).
5. **Research Associate in a BAS-USDA project (2014 -2018).**  
**Project Title:** Development of Mungbean Genotypes Conferring Yellow Mosaic Virus (YMV) Resistance” funded by **BAS-USDA Program in Agricultural and Life Sciences** Plant Breeding and Biotechnology Laboratory, department of Botany, University of Dhaka.
6. **Ph.D. Research Fellow:** Plant Breeding and Biotechnology Laboratory Department of Botany, University of Dhaka (2011-2014).  
**Title of Ph.D. Thesis:** Development of yellow mosaic virus resistant mungbean line through genetic transformation.  
**Supervisors:**  
Professor Dr. Rakha Hari Sarker, Professor Dr. Mohammad Nurul Islam and Professor Dr. M. Imdadul Hoque, Department of Botany, University of Dhaka.
7. **Research assistant (2009-2010). Bangladesh Jute Research Institute.**
8. **M.Sc. Thesis work (2008-2009), Bangladesh Jute Research Institute**  
**M.Sc. Thesis Title:** Development of salt tolerant Kenaf Varieties through *Agrobacterium*-mediated genetic transformation.

**Supervisors:**

Dr. Asma Khtun, Ex-Chief Scientific Officer, Bangladesh Jute Research Institute and Dr.A.N.M Rubaiyath bin Rahaman, Associate professor, Department of Biotechnology & Genetic engineering, Islamic university, Kushtia.

9. **Project work (2006-2007).** Department of Biotechnology and genetic engineering, Islamic University, Kushtia.  
**Project Title:** The bacterial growth of urinary tract infection is inhibited by honey.

**Technical, instrument and software skill**

- Tissue culture and *Agrobacterium* mediated genetic transformation techniques.
- Molecular identification of different bacteria. Preparation of different media and cultures of bacteria. Development of vector construct and gene cloning technique.

- Molecular techniques- PCR, semi qRT-PCR, Southern Blotting and Western Blotting.
- Bioinformatics analysis
- Operate PCR Machine, Autoclave, Laminar air flow; various types of centrifuge machines, Micropipette, Southern blotting machines, Gel documentation system, distillation pump, etc.
- Maintenance of laboratory invents and maintenance of biosafety guidelines.
- Work experience with MS Word, MS Excel PowerPoint, Photoshop and Illustrator.

**Language skills:** Bengali: Mother language, English: Excellent in reading, writing, speaking and listening.

### **Members**

1. Life member (2021-Present), Bangladesh Association for Plant Tissue Culture & Biotechnology (BAPTC&B).
2. General member (2012-Present), Bangladesh Botanical Society.

### **References:**

#### **1. Dr. Rakha Hari Sarkar**

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#### **2. Dr. M. Imdadul Hoque**

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#### **3. Dr. Md. Anwarul Haque**

**Professor**  
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#### **Name & Signature**

Dr. Sujay Kumar Bhajan

