Jakaria Chowdhury Onik, PhD

Date of birth: 16/12/1992 | **Nationality:** Bangladeshi | **Sex:** Male | **Phone:** (+880) 1303641522 (Mobile) | **Email:** jconik@gmail.com | **Email:** j.conik@yahoo.com | **Address:** Vadoi, Habiganj Sadar, 3300, Habiganj, Bangladesh (Work) | **Address:** Kasba Mollapara, Sherpur Sadar, 2100, Sherpur, Bangladesh (Home)

ABOUT MYSELF

A resourceful individual with a proven track record of driving innovative advancements in agricultural research. Self-motivated and hard working professional with methodical and detail-oriented approach. Possesses extensive expertise in advanced genomic analysis, molecular cloning, and biochemistry, with a particular focus on enhancing post-harvest quality. A collaborative and effective team member with outstanding communication skills, committed to applying advanced knowledge and experience to contribute meaningfully to the advancement of agricultural science and sustainability.

WORK EXPERIENCE

HABIGANJ AGRICULTURAL UNIVERSITY – HABIGANJ, BANGLADESH

LECTURER – 09/05/2023 – CURRENT

Department of Horticulture, Faculty of Agriculture

LEIBNIZ INSTITUTE OF VEGETABLE AND ORNAMENTAL CROPS – BERLIN, GERMANY

VISITING RESEARCHER – 01/11/2019 – 25/02/2020

EDUCATION AND TRAINING

2016 – 2019 Beijing, China

PH.D. Graduate school of chinese academy of agricultural sciences

Website https://gs.caas.cn/en/

2014 – 2016 Gazipur, Bangladesh

M.SC. Bangabandhu Sheikh Mujibur Rahman Agricultural University

Website https://bsmrau.edu.bd/

2010 – 2014 Gazipur, Bangladesh

B S (AGRICULTURE) Bangabandhu Sheikh Mujibur Rahman Agricultural University

Website https://bsmrau.edu.bd/

2007 – 2009 Mymensingh, Bangladesh

H.S.C Cantonment Public School and College

2005 – 2007 Sherpur, Bangladesh

S.S.C Ganai Shahid Motaleb High School

LANGUAGE SKILLS

Mother tongue(s): **BENGALI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
CHINESE	A2	A2	A2	A2	A1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

PUBLICATIONS

2025

An IoT-enabled AI system for real-time crop prediction using soil and weather data in precision agriculture

MS Sharafat, ND Kabya, RI Emu, MUAhmed, JC Onik, MA Islam, Riasat Khan, An IoT-enabled AI system for real-time crop prediction using soil and weather data in precision agriculture, Smart Agricultural Technology, Volume 12, 2025, 101263 (IF:5.7)

Journal Name: Smart Agricultural Technology | **Volume, Issue and Pages**: Volume 12, 2025, 101263 | **Publisher**: Elsevier

2021

Melatonin treatment reduces ethylene production and maintains fruit quality in apple during postharvest storage

Onik, J. C., Wai, S. C., Li, A., Lin, Q., Sun, Q., Wang, Z., & Duan, Y. (2021). Melatonin treatment reduces ethylene production and maintains fruit quality in apple during postharvest storage. Food Chemistry, 337, 127753. (IF: 8.5)

2019

UV-C treatment promotes quality of early ripening apple fruit by regulating malate metabolizing genes during postharvest storage

Onik, J. C., Xie, Y., Duan, Y., Hu, X., Wang, Z., & Lin, Q. (2019). UV-C treatment promotes quality of early ripening apple fruit by regulating malate metabolizing genes during postharvest storage. PLoS ONE, 14(4), e0215472. (IF: 2.9)

2018

Comparative Transcriptomic Profiling to Understand Pre- and Post-Ripening Hormonal Regulations and Anthocyanin Biosynthesis in Early Ripening Apple Fruit

Onik, J. C., Hu, X., Lin, Q., & Wang, Z. (2018). Comparative transcriptomic profiling to understand pre- and post-ripening hormonal regulations and anthocyanin biosynthesis in early ripening apple fruit. Molecules, 23(1908). (IF: 4.2)

2018

Effects of (S)-Carvone and Gibberellin on Sugar Accumulation in Potatoes during Low Temperature Storage

Xie, Y., Onik, J. C., Hu, X., Duan, Y., & Lin, Q. (2018). Effects of (S)-Carvone and Gibberellin on sugar accumulation in potatoes during low temperature storage. Molecules, 23(3118). (IF: 4.2)

2024

Anomalous Responses of Rice Yield and Quality in Extreme Climate to Predict and Escape Future Damages

Siddik, M. A., Onik, J. C., Fagun, I. A., & Alam, A. M. (2024). Anomalous responses of rice yield and quality in extreme climate to predict and escape future damages. Scope, 14(1), 354–366.

2024

Effect of Integrated Use of Poultry Manure with Fertilizer Urea for Sustainable Nitrogen Management in Rice (cv. BRRI Dhan 29) under Two Water Management Systems

Chadny, D. N., Onik, J. C., Sarkar, D., & Ahmed, F. (2023).Effect of Integrated Use of Poultry Manure...Nitrogen Management in Rice (cv.BRRI Dhan 29) under Two Water Management Systems . International Journal of Plant & Soil Science, 35(23), 151–165.

2015

Formulation and nutritional analysis of jackfruit yogurt

Onik, J. C., Ali, M. A., Rahman, M. H., Ali, S. M. Y., & Iqbal, M. N. (2015). Formulation and nutritional analysis of jackfruit yogurt. International Journal of Business and Social Science Research, 3(4), 258–262.

2025

Assessing the Growth Response of Gimakalmi (Ipomoea Aquatica) under Alternative Wetting and Drying (AWD) System as In

Khadezatul Kubra, Md. Rofekuggaman, Md. Habibullah Siddiki, Rebeka Sultana, Jakaria Chowdhury Onik and Md. Abubakar Siddik (2025). Assessing the Growth Response of Gimakalmi (Ipomoea Aquatica) under Alternative Wetting and Drying (AWD).10(1):01-05

2015

COMPARATIVE EFFECTS ON STORAGE PERIOD OF VARIETIES PINEAPPLE FRUITS

Ali, S. M. Y., Ahiduzzaman, M., Akhter, S., Biswas, M. A. M., Iqbal, N., Onik, J. C., & Rahman, M. H. (2015). Comparative effects on storage period of varieties of pineapple fruits. Research in Agriculture, Livestock and Fisheries, 2(3), 395–410.

2015

Physical and chemical characteristics of pineapples grown in Bangladesh

Ali, S. M. Y., Ahiduzzaman, M., Hossain, M. M., Ali, M. A., Biswas, M. A. M., Rahman, M. H., & Onik, J. C. (2015). Physical and chemical characteristics of pineapples grown in Bangladesh. Int. J. of Business and Soc. Sci. Res, 3(4), 234–246.

2015

Formulating and analysing consumer preference of gluten-free bread

Rahman, M. H., Ali, M. A., Onik, J. C., Ali, S. M. Y., & Iqbal, M. N. (2015). Formulating and analysing consumer preference of gluten-free bread. International Journal of Business and Social Science Research, 3(4), 271–276.

2025

Effect of Organic Amendments in Sandy Soils on Increasing Tomato Yield at Rooftop Garden

Md. Habibullah Siddiki, Jakaria Chowdhury Onik, Mamunur Rashid and Md. Abubakar Siddik, 2025, Journal of Agroforestry and Environment, 2025, 18(2):8-12

CONFERENCES & SEMINARS

03/05/2019 – 05/05/2019 China

The 6th International Symposium on Dairy Cow nutrition and Milk Quality

19/04/2017 – 21/04/2017 China

International Conference of food Quality and Safety & The 4th Fruit Quality Biology

17/11/2016 – 18/11/2016 China

International Conference on Nanotechnology Applications and Implications of Agrochemicals toward Sustainable Agriculture and Food System

PROJECTS

2024 – CURRENT

Adaptation of Climate Resilient and Precision Agriculture to Develop Multi Crop Cultivation Method in Habiganj Haor Basin by Cultivating Boro Rice with French Bean as Relay Crop

Funding Agency: Southeast Bank PLC
Role: Co- Principal Investigator
Funding: US$ 16,500

2023 – 2024
PGR (GA3 and TIBA) mediated Parthenocarpy induction in Pointed Gourds (Trichosanthes dioica Roxb.)

Role: Principal Investigator
Funding Agency: UGC - HAURES

2023 – 2024
The adoption of floating agriculture in Bangladeshi wetlands to advance climate-smart farming: Innovation transfer's successes and shortcomings

Role: Principal Investigator
Funding Agency: Ministry of Science and Technology

HONOURS AND AWARDS

2017
Young Scientist's Fund (31601527) – National Natural Science Foundation of China

2016
Chinese Government Scholarship – China Scholarship Council (CSC)

2018
Agricultural Science and Technology Innovation Program (ASTIP) – Chinese Central Government

2014
NST Fellowship – Ministry of Science and Technology, Bangladesh

ACADEMIC AND ADMINISTRATIVE EXPERIENCES

17/07/2023 – CURRENT
Chairman (acting)

Department of Horticulture, Faculty of Agriculture
Habiganj Agricultural University, Habiganj-3300, Bangladesh

10/01/2024 – CURRENT
Member, Academic Council

Habiganj Agricultural University, Habiganj-3300, Bangladesh

COURSES TAUGHT

2023 – CURRENT
Fundamentals of Horticulture (HRT 111)

2024 – CURRENT
Ornamental and Plantation Horticulture (HRT 211)

ROLE AS A REVIEWER

2023 – CURRENT
BMC Plant Biology (Springer Nature)

2021 – CURRENT
Biotechnology Journal International

2018 – CURRENT
Advances in Environmental Studies

2018 – CURRENT
Journal of Biostatistics and Biometric Applications

REFERENCE

Dr. Oliver Körner

Senior Scientist
Head of Program Area Next-Generation Horticultural Systems (acting)
Leibniz-Institute of Vegetable and Ornamental Crops, Grossbeeren, Germany
Phone: +49 (0) 33 701 78355
E-mail: koerner@igzev.de

Dr. Qiong Lin

Professor (Associate)
Institute of Food Science and Technology
Chinese Academy of Agricultural Sciences (CAAS), Beijing, P.R. China
Phone: +86-17710366759
E-mail: linqiong1026@126.com

TRAINING AND WORKSHOP

25/12/2024 – 28/12/2024
Training on Public Procurement Management

Organised by Habiganj Agricultural University, Habiganj, Bangladesh

06/06/2024 – 06/06/2024
Workshop on Effective Research Designing, Writing and Publishing

Organised by Habiganj Agricultural University, Habiganj, Bangladesh

05/06/2024 – 05/06/2024
Workshop on Outcome Based Education (OBE) Curriculum Development (UGC'S Template)

Organised by Habiganj Agricultural University, Habiganj, Bangladesh

28/05/2024 – 28/05/2024
Workshop on Formulation of Master Plan on Blended Education

Organized by Bangladesh University Grants Commission (UGC)

22/02/2024 – 22/02/2024
Navigating, Quality Assurance, R&I and Sustainable Development in Higher Education

Organised by Habiganj Agricultural University, Habiganj, Bangladesh

11/08/2015 – 12/08/2015
Workshop on Plan Disease Diagnosis

Organised by Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh

PROFESSIONAL OBJECTIVES

Driving Innovation and Excellence in Agriculture

- To contribute to academic excellence through teaching and mentoring future agricultural scientists.
- To lead impactful projects addressing ongoing challenges in agricultural production, processing, and preservation, focusing on innovative and sustainable solutions to enhance efficiency and quality.
- To publish high-quality research in peer-reviewed journals and disseminate knowledge globally.
- To foster international collaborations to drive agricultural innovation and sustainability.
- To lead academic and administrative initiatives to ensure quality education and innovation.
- To participate in and facilitate professional training and workshops for continuous knowledge and skill development.

TECHNICAL SKILLS

PRACTICAL SKILLS

- Comparative multivariate experiments
- Extensive experience in DNA, RNA and protein extraction from different plant tissues
- Isolation of plant DNA and RNA, Preparation of cDNA, PCR, RT-PCR (Reverse Transcription), Real-time PCR (qPCR), and primer design
- Molecular Cloning: Regular cloning (plasmid isolation, digestion, purification, ligation, transformation of *E. coli*, Transformation into Agrobacterium)
- Transgenic Research: Simplified Arabidopsis transformation through flower dip methods, overexpression and antisense work
- Culture Method: Coupled and De-coupled Hydroponic, plant tissue culture in MS media
- Experience using Agilent 2100 Bioanalyzer and Nanodrop Spectrophotometer to determine proteins and nucleic acids quality and quantity
- Performed micro-array analysis and Scanning Electron microscope (SEM) observation
- Transient protein expression in *Nicotiana benthamiana* leaves
- Stable transformation of *Nicotiana benthamiana*, Arabidopsis mediated by *Agrobacterium tumefaciens*

BIOCHEMICAL ASSAY

- HPLC, UPLC, ion chromatography, DPPH radical scavenging, Determination of total flavonoid, Total phenolics content, Total anti-oxidant activity, Enzymatic assay

COMPUTER SKILLS

- Operating System - Windows
- Word processing - Microsoft Word, Power point, LaTex
- Spread sheet Analysis - Microsoft Excel
- Molecular Analysis tools - BLAST, EBI, NCBI, Primer premier, Origin, MeV, Clustal X, Tophat, GOSeq, KOBAS, Cytoscape

RESEARCH INTEREST

Advancing Postharvest Biology for Enhanced Quality and Sustainability in Fruits and Vegetables

Research is focused on postharvest molecular biology of fruits and vegetables, with emphasis on understanding the genetic and biochemical mechanisms influencing quality, hormonal regulations, shelf life, and stress responses, processing and Preservation.

MANAGEMENT AND LEADERSHIP SKILLS

Member of innovation team, IFST, CHINESE ACADEMY OF AGRICULTURAL SCIENCES

Member, YOUNG PROFESSIONALS FOR AGRICULTURAL DEVELOPMENT (YPARD)

I hereby consciously certify that all of the above information is correct and that it accurately represents my credentials, experience, and myself. If there is any misinformation, I shall be held personally responsible for it.

Habiganj, Bangladesh , 06/01/2025

Jakaria Chowdhury Onik, PhD