

CURRICULUM VITAE
OF
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Web of Science Researcher ID: AAQ-3000-2020

ABOUT ME:

I have joined the International Rice Research Institute (IRRI) as a research collaborator after completing my Ph.D. in Agricultural Biotechnology from Chungbuk National University, South Korea in 2006 where I worked on the oversee of aquaporin functions of drought-tolerant mechanisms in rice. While pursuing my JSPS Postdoctoral fellowship from 2007 to 2009 at Tsukuba University, Japan my prior responsibility was to develop genetically modified lettuce plants harboring a taste modifying protein Miraculin. As a Research-Associate of the University of Florida (2009-2011), I attained my research goal successfully by developing a model on Greening and Canker resistant transgenic Citrus cultivars. I have a long research track on plant tissue culture, commercial production of plant cells through the bioreactor, and plant genetic engineering. I have published articles in many international journals and books (total citation 849, h-index 15, i10-index 16; RG score 20.49). My key research interests to isolate novel genes from local biodiversity, genome engineering, and genome editing approach to develop environmentally resilient plants. I am also interested in metabolomics, metabolic engineering, secondary metabolism study from various endangered species, and their conservation. As a coordinator of the institutional biosafety committee I am trying to establish institutional biosafety & biosecurity guidelines and procedures. Conducting various activities and innovative strategy development are my duty as an assistant director in the Institutional Quality Assurance Cell of the Jahangirnagar University (IQAC, JU). I am arranging campaigns to create public awareness, and motivation towards the new technologies.

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**PROFESSIONAL EXPERIENCES:**

<u>Period</u>	<u>Position/Activities</u>	<u>Department/Field</u>	<u>Institute/Country</u>
March 23-27, 2021	Hands on Laboratory Course on CRISPR- Cas Gene Editing	CRISPR-Cas gene editing	SGT University and CIAT, 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 Bio Engineering	Stanford University, USA
November 5- 19, 2019	Training	<i>In vitro</i> and cryopreservation approaches for the conservation of plant genetic resources	ICAR-NBPGR, New Delhi
January 2019~	Member	Board of Studies	Institute of Biological Sciences (IBSc), University of Rajshahi, Bangladesh
March 2019~	Assistant director	Institutional Quality Assurance Cell (IQAC)	Jahangirnagar University

Nov 19-30, 2018	Training (NFAO-2018)	New Frontiers in Algal Omics	ICGEB, New Delhi, INDIA
October 2017~	Professor	Biotechnology & Genetic Engineering	Jahangirnagar University
Aug 2013~ Sept 2017	Associate professor	Biotechnology & Genetic Engineering	Jahangirnagar University
July 2011~ July 2014	Head of the Department	Biotechnology & Genetic Engineering	Jahangirnagar University
Jan 2011-July 2013	Assistant professor	Biotechnology & Genetic Engineering	Jahangirnagar University
April 2011~	Warden	Nawab Faizunnessa Female Student Hall	Jahangirnagar University
June 2013~	Coordinator	Bio-safety, bio-security, and ethical committee.	Jahangirnagar University
2015~2018	Expert	Department of Biotechnology and Genetic Engineering.	Bangabandhu Sheikh Mujibur Rahman Science and Technology University.
April 2018~	Master Trainer	Biosafety and Biosecurity	Dhaka Region
2017-2018	Student Advisor	Biotechnology & Genetic Engineering	Jahangirnagar University
May~June 2015	Visiting Fellow	Plant Biotechnology	Chungbuk National University, South Korea
2011~	Member	Academic Council, Board of governance, Biological science faculty.	Jahangirnagar University
2012~	Foreign Expert	MPhil/Ph.D. Thesis Evaluation	Bharathidasan University Tiruchirappalli 620 024 India
2012~	Foreign Expert	MPhil/Ph.D. Thesis Evaluation	University of Malaya Malaysia

2012~	External Member	MPhil/Ph.D. Thesis Evaluation	University of Rajshahi Bangladesh
2011~	External Member	MS Thesis Evaluation	The University of Rajshahi, Mawlana Bhashani Science and Technology University, Islamic University, Chittagong University, Khulna University, Shajalal Science and Technology University. Sylhet Agriculture University
June 2012~	Group Leader	Plant Biotechnology	Jahangirnagar University
2009-2011	Research Associate	Cell Genetics & Genetic Engineering	CREC, IFAS, University of Florida, USA
2007-2009	Post-Doctoral Research Fellow (JSPS)	Plant Biotechnology	Gene Research Center, University of Tsukuba, Japan
2006-2007	Visitor/Collaborator	Rice Molecular Biology	International Rice Research Institute (IRRI), The Philippines
2003-2006	Research Assistant (Graduate)	Plant Biotechnology	Chungbuk National University, South Korea
2004-2006	Provincial Development Monitor	Chungbuk Province	South Korea

PRESENT STATUS (October 2017~to date):

Professor, Department of Biotechnology & Genetic Engineering, Jahangirnagar University, Savar-1342, Dhaka, BANGLADESH.

OTHER AFFILIATIONS:

<u>Position</u>	<u>Name of the Organization</u>	<u>Description</u>
Founder, CEO	Science Porter Bangladesh (SPB)	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)	Organization dedicated to create awareness, policy and intervention of Agricultural Biotechnology and Nutrition.

Courses Teaching:

Basic biology, Biology laboratory and fieldwork, Plant breeding, Food biotechnology, Plant and animal breeding laboratory, Analytical methods in Biotechnology, Plant tissue culture theory & practices, Plant biotechnology, Plant and animal biotechnology laboratory, Advanced agricultural biotechnology, Advanced agricultural biotechnology laboratory, Research methodology, Trends in plant biotechnology, Bio-prospecting of medicinal and aromatic plants, Advanced molecular biology.

ONGOING RESEARCH PROJECTS:

Date	Project Title
2020-2021	1. Prevalence of micronutrient deficiencies among children and women of reproductive age in an indigenous population of Bangladesh
2019-2020	2. Effects of smoking on oral microbial growth among the selected population in Dhaka 3. Karyomorphological analysis of popular brinjal varieties in Bangladesh
2018~	4. Health effects on street vending Aloe vera juice and leaf in Dhaka city: Laboratory Investigations 5. Green Synthesis of Silver Nanoparticles (AgNPs) for Agricultural Biotechnology
2018~	6. Analysis of the Consumer Perceptions of Genetically Modified Foods in Bangladesh
2017~	7. <i>Agrobacterium</i> -mediated transformation and expression of a vacuolar Na ⁺ /H ⁺ antiporter gene (AtNHX3) in fodder crops under salt stress in Bangladesh
2017~	8. Salt tolerant fodder development through genetic engineering
2017~	9. Assessment of Arsenic contamination in the food chain
2016~	10. Molecular characterization of drought responses in local rice cultivars in Bangladesh
2015~2017	11. Micropropagation and molecular characterization of Moringa, a promising target as fodder supplement in Bangladesh

2014~	12. Development of salt-tolerant Napier cultivar for the coastal area through genetic engineering
2014~2016	13. Development of farm to table technology for soilless vegetable production
2014~	14. Establishment of Bioreactor system for the commercial production of valuable medicinal plant cells
2013~	15. Improvement of passion fruit through biotechnology
2013~	16. Identification of salt-tolerant candidate genes and genome engineering in legumes
2013~	17. Identification of stress-responsive genes in aromatic rice (<i>Oryza sativa</i> L.) cultivars in Bangladesh
2012~2015	18. Somatic embryogenesis and somaclonal variation at the nucleotide sequence level in local rice cultivars
2012~	19. The exploitation of plant cells for the production of secondary metabolites in large scale bioreactors
2012~	20. Rapid propagation of endangered medicinal plants and studies of their secondary metabolites

FUNDING SOURCES:

1. GARE, Ministry of Education, GoB
2. Bangladesh Medical Research Council (www.bmrc.org)
3. Ministry of Science and Technology, GoB
4. University Grants Commission, Bangladesh
5. Jahangirnagar University Research Funds
6. Well Green Corporation, Chungbuk National University, South Korea.
7. Investment Corporation of Bangladesh
8. GlaxoSmith Kline, Bangladesh

COMPLETED MS THESIS UNDER MY SUPERVISION:

	Student name, thesis title, and Institute	Year
1.	Sium Ahmed. Insights into the Bioactivity of Panax ginseng Adventitious Roots Grown in Bangladesh: A Combined In Vitro and In Silico Approach	2018
2.	Ashikul Islam. Determination of Heavy Metals in Different Locations of Bangladesh & In Silico Approach to Predict Genes Associated with Heavy Metal Remediation	2018

3.	Hasnat Uz zaman. In Vitro Regeneration and Karyomorphological Studies of Different Varieties of Brinjal (<i>Solanum melongena</i> L.) Cultivated in Bangladesh	2018
4.	Jahid Hasan. Studies of the anticoagulant, antimicrobial, antioxidant and phytochemical activities of Colombo lemon peel and pulp extracts.	2017
5.	Tanvir Ahamed. Approaches for the development of salt-tolerant BLRI Napier cultivar (<i>Pennisetum puerperium</i>) cultivars for the coastal areas of Bangladesh.	2017
6.	Shaheen Reza. Phytochemical screening, antioxidant activities and antimicrobial studies of <i>Moringa oleifera</i> and <i>Zanthoxylum limonella</i> .	2017
7.	Hanan Ashrafi. Identification of a Novel Drug and Vaccine Target HPAG1_0576 from the Hypothetical Proteins of <i>Helicobacter pylori</i> HPAG1; An In silico Approach.	2016
8.	Selina Malek. Determination of Biological Titer by TCID ₅₀ Assay of three Foot and Mouth Disease Virus (FMDV) Serotypes (A,O and Asia 1) from In Vitro culture of BHK-21 cell line.	2016
9.	Swarna Reza. Detection of foot and mouth disease virus in cloven-hoofed animals from different areas of Bangladesh.	2016
10.	Juthi Adhikari. Micropropagation of Napier cultivars (<i>Pennisetum purpureum</i>) through organogenesis and their genetic diversity analysis using RAPD and ISSR markers.	2016
11.	Umme Habiba Munmun. In vitro responses of <i>Moringa oleifera</i> in different plant growth regulators and evaluation of genetic divergence of selected germplasm using PCR marker.	2016
12.	Pratima Saha. Regeneration of black gram and grass pea via somatic embryogenesis and shoot organogenesis.	2014
13.	Mimma Afrin. Development of a fast and efficient plant regeneration system via somatic embryogenesis of aromatic rice cultivars in Bangladesh.	2013

RESEARCH STUDENTS SUPERVISING:

M Phil/PhD	4
MS	5
Undergrad	10
Research Student	2

RESEARCH EXPERIENCES AT THE UNIVERSITY OF FLORIDA (June 2009~ February 2011):

Postdoctoral Research Associate in Cell Genetics and Citrus Improvement Lab. Worked with Prof. Jude W Grosser, Citrus Research and Education Center, University of Florida, Florida-33850 in the citrus improvement project. The main responsibilities were cloning of pathogen-related genes to develop transgenic citrus to protect HLB and Canker through *Agrobacterium*-mediated transformation and Protoplast/GFP transformation, Insilco studies to find suitable target gene/genes for cloning and transformation, molecular characterization of transgenic plants and their field trial against a specific pathogen.

RESEARCH EXPERIENCES AT TSUKUBA UNIVERSITY JAPAN THROUGH JSPS FELLOWSHIP: (April 2007 ~ March 2009).

Worked as a Postdoctoral fellow through the JSPS Fellowship program in Gene Research Center at Tsukuba University under the supervision of Professor Hiroshi Ezura. The research theme was `Mass Production of Miraculin protein through *in vitro* culture`. Key responsibilities were; cloning of taste-modifying protein inducing gene (Miraculin) from Miracle fruits and *Agrobacterium*-mediated transformation into lettuce to produce miraculin expressing lettuce plants. Molecular characterization of transgenic plants, construction of different plasmids, observation of transgene inducing silencing in lettuce, related cell, and tissue culture, etc.

RESEARCH EXPERIENCES AT INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI): (July 2006 ~ March 2007)

Worked as a visitor/collaborator at Plant Molecular Biology Lab in International Rice Research Institute (IRRI), my work focused on expression analysis of plasma membrane intrinsic protein (PIP) in rice seedlings under drought stress entitled “An expression analysis of aquaporin genes in drought-affected rice.” with Dr. John Bennett.

RESEARCH TOPICS DURING Ph.D.: (March 2003 ~ Feb 2006)

Three years of Ph.D. work in Horticulture and Biotechnology. Title of the Ph.D. Thesis “**Somatic embryogenesis and production of secondary metabolites through bioreactor culture of *Eleutherococcus***”.

RESEARCH EXPERIENCE IN MS:

One-year M.Sc. Thesis Work in Plant Biotechnology (Thesis entitled “**Somatic embryogenesis and *Agrobacterium*-mediated gene transformation in maize *Zea mays* L.**”).

OVERALL RESEARCH EXPERIENCES:

Plant tissue culture: Plant tissue culture specialist, all basic techniques including somatic embryogenesis, cell suspension culture, adventitious root suspension culture, and protoplast culture, in vitro manipulations, etc.

Tissue culture commercialization: Commercial-scale production of tissue culture product for micropropagation or metabolic interest. Experienced in bioreactor culture to scale up plant cell/embryo/roots up to 1000L scale.

Secondary metabolism: Extraction and analysis of different secondary metabolites for medicinal uses from endangered medicinal plants.

Antioxidant enzyme analysis: Analysis of various antioxidant enzymes.

Molecular Analysis: Construction of plasmids, in-silico studies for analysis of different genes of interest; *Agrobacterium*-mediated genetic transformation, PEG-mediated genetic transformation, primer design, transgene validation.

Techniques Achieved: Genomic PCR, Real-Time PCR, RT-PCR, Cloning, Southern blotting, SDS-PAGE, Western blotting, Ploidy analysis, Histological studies of different plant parts, Gene Sequencing, culture and maintenance of different bacterial strains, Extraction and quantification of DNA, RNA, Protein, protoplast isolations, protoplast fusions and protoplast/PEG transformation.

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, secondary metabolism, soilless culture (hydroponics & aquaponics), vertical gardening, traditional and molecular breeding 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. Member of Bangladesh Association for Plant Tissue Culture & Biotechnology (BAPTC&B). (www.bap tcb.org)
7. Life Member of Bangladesh JSPS Alumni Association (BJSPSAA). <http://www.bjpsaa.org/>
8. Member of Biosafety and Biosecurity Association of Bangladesh (BBBA) (Member ID BBBA-138). <http://bdbiosafetysecurity.org/>
9. Life Member of Microbiologist Society, India (Member ID: LM/248) <http://microbiosociety.org/>
10. Member of Bangladesh Botanical Society (BBS)

EDITORIAL BOARD MEMBER:

1. Jahangirnagar Journal of Biological Sciences (ISSN: 2306-0263)

REVIEWER:

1. Current Traditional Medicine, Current Drug Metabolism, Recent Patent on Drug, Acta Physiologiae Plantarum, Journal of Biotechnology, Bangladesh Journal of Biological Sciences, International Journal of Biosciences.

LIST OF PUBLICATIONS:

IN JOURNALS

1. Sium Ahmed, Faisal Bin Rahman and **Abdullah Mohammad Shohael** (2021). In vitro analysis of phytoconstituents and bioactivities of *Senna alata* L. leaf extracts. *Discovery Phytomedicine* (Accepted)
2. Moin AT, Chowdhury MA, Riana SH,Ullah Md.A, Araf Y, Sarkar B, Shohael AM (2021). An Updated Overview of Herpes Simplex Virus-1 Infection: Insights from Origin to Mitigation Measures. *Electron J Gen Med.* 18(1):emXXX.
3. Bishajit Sarkar, Fayza Akter, Fatema Tuz Johora, Md. Asad Ullah, and **Abdullah Mohammad Shohael** (2021) Micronutrient Biofortification in Rice through New Breeding Techniques (NBTs): Bangladesh Perspective. **Current Nutraceuticals** (DOI: 10.2174/2665978601999201202114714) (In Press)
4. Shahad Saif Khandker, Alamgir Kabir, Md. Jahid Hasan, **Abdullah Mohammad Shohael**, Siew Hua Gan, Md. Ibrahim Khalil, Md Asiful Islam, Tareq Hossan and Mohammad Amjad Kamal. (2020) Elachi Lemon (*Citrus limon*) Peel and Pulp: Antioxidant, Antimicrobial, Anticoagulant Activities, Bioactive Compounds, Minerals, and Heavy Metals. **Current Bioactive Compounds**.(DOI:10.2174/1573407215999201005164239) (In Press)
5. Faisal Bin Rahman.....**Abdullah Mohammad Shohael** (2020). A comprehensive multi-directional exploration of phytochemicals and bioactivities of flower extracts from *Delonix regia* (Bojer ex Hook.) Raf., *Cassia fistula* L. and *Lagerstroemia speciosa* L. **Biochemistry and Biophysics Reports**. (DOI: [10.1016/j.bbrep.2020.100805](https://doi.org/10.1016/j.bbrep.2020.100805)) (In press).
6. Sium Ahmed, Dil Afroj Moni, Kailas Dashrath Sonawane, Kee Yoeup Paek and **Abdullah Mohammad Shohael** (2020). A comprehensive in silico exploration of pharmacological properties, bioactivities and COX-2 inhibitory potential of eleutheroside B from *Eleutherococcus senticosus* (Rupr. & Maxim.) Maxim., **Journal of Biomolecular Structure and Dynamics**. (DOI: [10.1080/07391102.2020.1803135](https://doi.org/10.1080/07391102.2020.1803135))
7. Sium Ahmed, Bilkis Mehrin Moni, Shawon Ahmed, Donald James Gomes and **Abdullah Mohammad Shohael** (2020). Comparative phytochemical, antioxidant, and antibacterial study of different parts of Doigota plants (*Bixa orellana* L.) **Bull Natl Res Cent** 44, 95. <https://doi.org/10.1186/s42269-020-00349-1>

8. Tania Jabin, Tanvir Ahamed, Shahin Alam, **Abdullah Mohammad Shohaël** (2020). Investigation on phytochemical screening, thin layer chromatographic profiling and antibacterial potential of ten widely used spices in Bangladesh. **Int. J. Biosci.** 16(3), 208-220. <http://dx.doi.org/10.12692/ijb/16.3.208-220>
9. Sium Ahmed and **Abdullah Mohammad Shohaël** (2019). *In silico* studies of four anthraquinones of *Senna alata* L. As potential antifungal compounds. **PharmacologyOnline.** 2: 259-268.
10. Hanan Ashrafi, Muntequa Ishtiaq Siraji, Nazmir Nur Showva, Md. Mozammel Hossain, Tareq Hossen, Md. Ashraful Hasan, **Abdullah Mohammad Shohaël** and Mohammad Mahfuz Ali Khan Shawan (2019). Structure to function analysis with antigenic characterization of a hypothetical protein, HPAG1_0576 from *Helicobacter pylori* HPAG1. **Bioinformatics.** 15(7): 456-466.
11. Sium Ahmed, Shawon Ahmed, Swapan Kumar Roy, Sun Hee Woo, Kailas Dashrath Sonawane and **Abdullah Mohammad Shohaël** (2019). Effect of salinity on the morphological, physiological and biochemical properties of lettuce (*Lactuca sativa* L.) in Bangladesh. **Open Agriculture.** 4: 361-373.
12. Sium Ahmed, Faisal Bin Rahman, Shawon Ahmed and **Abdullah Mohammad Shohaël** (2018). Insights into the bioactive compounds, antioxidant potential and TLC profiling of different extracts of Tomato plants. **Jahangirnagar University J. Biol. Sci.** 7 (2): 65-77.
13. Apurba Kumar Sarker, Mohammad Shaker, Mohammed Asef Iqbal and **Abdullah Mohammad Shohaël** (2018). Prevalence of extended-spectrum β -lactamase and Metallo β -lactamase genes among clinical isolates of non-fermenting gram-negative bacteria. **International Journal of Pharmacy and Biological Sciences.** 8 (4):994-1001.
14. Shakil Ahmed Polash, Nilofar Yakub Nadaf, Md. Atikur Rahman and **Abdullah Mohammad Shohaël** (2018). Green synthesis of silver nanoparticles (AgNPs): Agricultural applications and future vision. **Journal of Biodiversity and Environmental Sciences.** 13(2): 35-57.
15. Ki-Won Lee, Md. Atikur Rahman, Ki-Yong Kim, Gi Jun Choi, Joon-Yung Cha, Mi Sun Cheong, **Abdullah Mohammad Shohaël**, Chris Jones, Sang Hoon Lee (2018). Overexpression of the alfalfa DnaJ-like protein (MsDJLP) gene enhances tolerance to chilling and heat stresses in transgenic tobacco plants. **Turkish Journal of Biology.** 42:12-22.

16. P Saha, M Afrin, AKM Mohiuddin, **AM Shohael** (2017). Development of an effective in vitro Regeneration protocol for BARI Mash 2 (*Vigna mungo* L.) an important legume crop in Bangladesh. *Jahangirnagar University Journal of Biological Sciences* 6 (1), 23-33.
17. Alam M.K., N.R. Sarker., K.M. Nasiruddin and **A.M. Shohael** (2017). Salinity stress on the morphological and nutritional quality of Napier cultivars under hydroponic condition. *Bang. J. Anim. Sci.* 46 (2): 102-108
18. **A.M. Shohael**, A.A. Hrishia, T. Ahamed and S.M. Khatun (2017). An easy and reproducible field to table technology for the production of hydroponic lettuce in Bangladesh. **International Journal of Agronomy and Agricultural Research** 10 (3) 37-47
19. H.R. Jang, H.J. Lee, **A.M. Shohael**, B.J. Park, K.Y. Paek, and S.Y. Park (2016). Production of biomass and bioactive compounds from shoot cultures of *Rosa rugosa* using a bioreactor culture system. **Horticulture, Environment, and Biotechnology.** 57(1):79-87 (<http://dx.doi.org/10.1007/s13580-016-0111-z>)
20. P. Saha, M. Afrin, A.K.M Mohiuddin and **A.M Shohael** (2015). *In vitro* Regeneration of Grass Pea (*Lathyrus sativus* L.). **Jahangirnagar University J. Biol. Sci.** 4(2): 1-8
21. **A.M. Shohael**, H.N. Murthy & K.Y. Paek (2014). The pilot-scale culture of somatic embryos of *Eleutherococcus senticosus* in airlift bioreactors for the production of eleutherosides. **Biotechnology Letters.** 36: 1727-1733 (<http://dx.doi.org/10.1007/s10529-014-1534-1>)
22. **A.M. Shohael**, K.Y. Paek (2013). Production of eleutherosides, total phenolics and total flavonoids from somatic embryos of Siberian ginseng affected by different aeration volume in the bioreactor. **International Journal of Biosciences.** 3(4): 213-221. (<http://dx.doi.org/10.12692/ijb/3.4.213-221>)
23. **A.M. Shohael**, S.M. Khatun, M.F. Alam, K.Y. Paek (2013). Effects of Murashige and Skoog medium strength on germination and secondary metabolites production of *Eleutherococcus senticosus*'s somatic embryos in the bioreactor. **International Journal of Biosciences.** 3(3) 155-163. (<http://dx.doi.org/10.12692/ijb/3.3.155-163>)
24. **T. Hirai, A.M. Shohael**, Y.W. Kim, M. Yano. H. Ezura (2011) Ubiquitin promoter-terminator cassette promotes the genetically stable expression of the taste-modifying protein miraculin in transgenic lettuce. **Plant Cell Reports.** 30: 2255-2265. (<http://dx.doi.org/10.1007/s00299-011-1131-x>)
25. **A.M. Shohael**, H.N. Murthy, E.J. Hahn, H.L. Lee, K.Y. Paek (2008) Increased eleutheroside production in *Eleutherococcus sessiliflorus* embryogenic suspension cultures with methyl jasmonate treatment. **Biochemical Engineering Journal.** 38: 270-273. (<http://dx.doi.org/10.1016/j.bej.2007.07.010>)
26. **A.M. Shohael**, M. B. Ali, E.J. Hahn, and K. Y. Paek. (2007) Glutathione metabolism and antioxidant responses during *Eleutherococcus senticosus* somatic embryo development. **Plant Cell Tissue & Organ Culture.** 89:121-129. (<http://dx.doi.org/10.1007/s11240-007-9220-9>)

27. **A.M. Shohael**, H.N.Murthy, E.J. Hahn, and K.Y. Paek. (2007) Methyl jasmonate induced overproduction of eleutherosides in somatic embryos of *Eleutherococcus senticosus* cultured in bioreactors” **Electronic Journal of Biotechnology** [online].Vol. 10. No 4, October 15, 2007. (<http://dx.doi.org/10.2225/vol10-issue4-fulltext-13>)
28. **A.M. Shohael**, M. B. Ali, K. W. Yu, E. J. Hahn, R. Islam, and KY.Paek (2006). Effect of light on oxidative stress, secondary metabolites and induction of antioxidant enzymes in *Eleutherococcus senticosus* somatic embryos in the bioreactor. **Process Biochemistry**. **41:1179-1185**. (<http://dx.doi.org/10.1016/j.procbio.2005.12.015>)
29. **A.M. Shohael**, D. Chakrabarty, M. B. Ali, K. W. Yu, E. J. Hahn, H.L.Lee and KY.Paek (2006). Enhancement of eleutherosides production in embryogenic cultures of *Eleutherococcus sessiliflorus* in response to sucrose-induced osmotic stress. **Process Biochemistry**. **41: 512-518**. (<http://dx.doi.org/10.1016/j.procbio.2005.09.005>)
30. **A.M. Shohael**, M. B. Ali, K.W. Yu, E. J. Hahn, and KY. Paek (2006) Effect of temperature on secondary metabolites production and antioxidant enzyme activities in *Eleutherococcus senticosus* somatic embryos. **Plant Cell, Tissue & Organ Culture**. **85: 219-228**. (<http://dx.doi.org/10.1007/s11240-005-9075-x>)
31. **A.M. Shohael**, R. Islam, E. J. Hahn, and K. Y. Paek. (2006) Histological observation of developmental somatic embryos of *Eleutherococcus sessiliflorus*. **Horticulture, Environment & Biotechnology**. **47: 45-50**.
32. **A.M. Shohael**, D. Chakrabarty, K.W. Yu, E.J Hahn and K.Y. Paek. (2005) Application of bioreactor system for large-scale production of *Eleutherococcus sessiliflorus* somatic embryos in an air-lift bioreactor and production of Eleutherosides. **Journal of Biotechnology (Elsevier)**. **120: 228-236**.(<http://dx.doi.org/10.1016/j.jbiotec.2005.06.010>)
33. M.B. Ali, N. Singh, **A.M. Shohael**, E.J. Hahn and K.Y. Paek. (2006) Phenolic metabolism and lignin synthesis in root suspension cultures of *Panax ginseng* in response to copper stress. **Plant Science**. **171: 147-154**. (<http://dx.doi.org/10.1016/j.plantsci.2006.03.005>)
34. **A.M. Shohael**, M. A. L. Akanda, S. Parvez, S. Mahfuja, M. F. Alam, R. Islam, and N. Joarder. (2003) Somatic embryogenesis and plant regeneration from immature embryo-derived callus of inbred maize (*Zea mays* L.) **Biotechnology** **2(2): 154-161**.
35. M. G. Ahmed, M. F. Alam, M. Nuruzzaman, **A.M. Shohael**, M. Nasiruddin, and M. M. Hossain. (2003) Evaluation of nutrient film technique and sand culture for year-round production of tomato (*Lycopersicon esculentum* Mill.) in tropical Asia. **Asian Journal of Plant Science**. **2(5): 420-424**.

36. M. Nuruzzaman, M. F. Alam, M. G. Ahmed, **A.M. Shohael**, M. K. Biswas, M. R. Amin, and M. M. Hossain (2002). Studies on parental variability and heterosis in rice. **Pakistan Journal of Biological Science**. **5 (10): 1006-1009**.
37. Lipika Ghosh, M.S.Alam, M.R. Ali, **A.M. Shohael**, F.Alam and R.Islam (2003). Changes in some biochemical parameters of mulberry (*Morus Sp.*) leaves after infected with leaf spot disease. **Online Journal of Biological Science** **3(5): 508-514**.
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1. Effect of COVID-19 lockdown on the attitudes, conditions, and activities of the Bangladeshi adults across their socio-demographic and medical conditions: A quantitative cross-sectional study.
2. Evaluation of different phytochemical properties of betel nut (*Areca catechu* Linn.)
3. Which type of face mask should be used during daily activities in the COVID-19 pandemic?
4. Evaluation of growth and some unexplored bioactivities of bioreactor grown adventitious root culture of Ginseng (*Panax ginseng* C.A. Meyer) in Bangladesh.

BOOK CHAPTER:

1. P. Saha, A.K.M. Mohiuddin and **A.M. Shohael** (2016). Regeneration of Black Gram and Grass Pea via Somatic Embryogenesis and Shoot Organogenesis. LAP LAMBERT Academic Publishing, Omni Scriptum GmbH & Co. KG, Germany. ISBN: 978-3-659-94496-3
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POSTER AND ORAL PRESENTATIONS IN DIFFERENT CONFERENCES:

ABSTRACTS FOR POSTER PRESENTATION:

1. **Abdullah Mohammad Shohael**, Ahmad A Omar and Jude W Grosser. Development of Greening (HLB) and Canker Resistant Citrus Cultivars through Genetic Engineering. 6th Annual South Asia Biosafety Conference-2018, Dhaka (Sept15-17, 2018). Bangladesh. (Second prize Awarded)
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11. M Afrin, **Shohael A.M.** et al. Development of Fast and Efficient Plant Regeneration System via Somatic Embryogenesis of Aromatic Rice Cultivars in Bangladesh. 7th International Plant Tissue Culture & Biotechnology Conference, March 1-3, 2014 in Dhaka.
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2. **Shohael A.M.**, Yu K.W., Hahn E.J. and Paek K.Y. Large-scale production of *Eleutherococcus sessiliflorus* somatic embryos and eleutherosides in the bioreactor. Conference for the Korean Society for Horticultural Science, Spring, 2005. Cheju 26~27 May, **SOUTH KOREA**.
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