

Curriculum vitae of
Dr. Shahanaz Sultana
 PhD in Genetic Engineering & Molecular Biology
Principal Scientific Officer
Biotechnology Division
Bangladesh Rice Research Institute (BRRI)
Gazipur, Bangladesh
E-mail: shahanaz107@yahoo.com

PERSONAL DETAILS:

Full Name : Shahanaz Sultana
 Nationality : Bangladeshi
 Date of Birth : 30.08.1971
 Place of Birth : Tangail, Bangladesh
 Marital Status : Married
 Sex : Female

Correspondence Address:

Dr. Shahanaz Sultana
 Principal Scientific Officer
 Biotechnology Division
 Bangladesh Rice Research Institute (BRRI)
 Gazipur-1701, Bangladesh

FIELD OF SPECIALIZATION:

Rice breeding, Tissue culture, Molecular biology, Genetic Engineering in rice, Marker Aided Selection (MAS) and Marker Aided backcross (MAB)

ACADEMIC DETAILS:

Doctor of Philosophy (Ph. D)	2010	Universiti Putra Malaysia (UPM), Malaysia	Genetic Engineering and Molecular Biology Dissertation: Towards the Development of Salt Tolerant Rice Varieties by Overexpressing cDNAs from a Mangrove Plant <i>Acanthus ebracteatus vahl</i>
Masters of Science	1998	Bangladesh Agricultural University, Bangladesh	Genetics and Plant Breeding Thesis: Study of Genotypic Variation for Yield and Phosphorus Efficiency of Wheat under Water and Phosphorus stress
Bachelor of Science	1992	Bangladesh Agricultural University, Bangladesh	Agriculture
Higher Secondary Certificate (HSC)	1988	Rifles Public School and College, Dhaka, Bangladesh	Field of Study : Science (Physics, Chemistry, Botany, Zoology)
Secondary School Certificate (SSC)	1986	Rifles Public School and College, Dhaka, Bangladesh	Field of Study : Science

ADDITIONAL ACADEMIC COURSES:

Courses	Year	Universities
Bio-Informatics Methods I	2014	University of Toronto

EMPLOYMENT HISTORY:

Position : **Principal Scientific Officer**
Organization : Bangladesh Rice Research Institute
Address : Gazipur-1701, Bangladesh.
Web site : www.brri.org
Period : July 2018 to date

Key responsibilities:

- Research program development, execution and scientific report writing.
- Guide and support to the junior scientist/ laboratory staff.
- Conduct technical training for junior scientist /laboratory staff.
- Supervise the Master Degree student's research project.
- Contribute, and where necessary lead relevant scientific meetings /seminar /workshop.
- Undertake any other duties relevant to the program of research.

Position : **Senior Scientific Officer**
Organization : Bangladesh Rice Research Institute
Address : Gazipur-1701, Bangladesh.
Web site : www.brri.org
Period : July 2006 to date

Key responsibilities:

- Research program development, execution and scientific report writing.
- Guide and support to the junior scientist/ laboratory staff.
- Conduct technical training for junior scientist /laboratory staff.
- Supervise the Master Degree student's research project.
- Contribute, and where necessary lead relevant scientific meetings /seminar /workshop.
- Undertake any other duties relevant to the program of research.

Position : **Program Director**
Organization : Bangladesh Rice Research Institute
Address : Gazipur-1701, Bangladesh.
Web site : www.brri.org
Period : May 2014 to June 2016

Key responsibilities:

- Project Management and report writing.
- Project evaluation and monitoring.
- Financial/budget management, while maintaining compliance with all applicable requirements and regulations

Position : **Project Director**
Organization : Bangladesh Rice Research Institute
Address : Gazipur-1701, Bangladesh.
Web site : www.brri.org
Period : May 2011 to June 2013

Key responsibilities:

- Project Management and report writing.
- Project evaluation and monitoring.
- Financial/budget management, while maintaining compliance with all applicable requirements and regulations

Position : **Scientific Officer**
Organization : Bangladesh Rice Research Institute
Address : Gazipur-1701, Bangladesh.
Web site : www.brri.org
Period : August 1998 to June 2006

Key responsibilities:

- Research program execution and scientific report writing.
- Contribute, and where necessary lead relevant scientific meetings /seminar /workshop.
- Undertake any other duties relevant to the program of research.

IN –SERVICS WORKSHOP AND TRAINING COURSES ATTENDED:

Name of the Course	Institution	Year
Visiting Scholar for 6.5 months	Arcadia Bioscience, Davis, CA, USA	2014
Manpower Development Program on Real Time PCR (7500 Fast)	Life Technologies Holdings Pte Ltd, Singapore	2013
Seed Industry Program(SIP)	Hyderabad, India	2011
Genomics and Bioinformatics for Agricultural Applications	Universiti Putra Malaysia, Malaysia	2010
Molecular Methods of Breeding	Keseseart University, Thailand	2004
Training on Marker Aided Selection	International Rice Research Institute (IRRI), Philippine	2002
Foundation training	Bangladesh academy for Rural Development (BARD), Bangladesh	2000
Training on Biotechnology	University of Western Sydney, Australia	1999
Rice Production, Office Management and Communication	Bangladesh Rice Research Institute (BRRI), Bangladesh	1998

AWARDS:

1. Awarded “ **Suddhachar Puroskar**” 2018 given by Bangladesh Rice Research Institute
2. **Champion**, in the poster presentation at Square-ACI International Conference on Biotechnology in Health and Agriculture 2017 organized by Global network of Bangladeshi Biotechnologist (GNOBB).
3. Awarded **Gold medal** in “Invention, Research and Innovation Exhibition 2012 (PRPI)” for Research project entitled “Overexpression of Monodehydroascorbate Reductase from a Mangrove Plant (AeMDHAR) Confers Salt Tolerance on Rice”. University Putra Malaysia, Malaysia.
4. Awarded “**Post Graduate Fellowship**” from “Organization for Women in Science for the Developing World (OWSDW). Formerly Third World Organization for Women in Science (TWOWS)” Trieste – Italy, to pursue Ph D degree in Universiti Putra Malaysia, Malaysia.
5. Awarded “**National Science and Technology Fellowship**” to pursue MS degree in Bangladesh Agricultural University, Bangladesh.

COMPUTER LITERACY

Proficient in Microsoft Word, Excel, XP and Power Point and have experience of using Adobe photoshop. I have knowledge on various bioinformatics program also.

RESEARCH INTEREST

Bioinformatics, comparative genetics, functional genomics, and environmental control of plant stress tolerance.

LIST OF PUBLICATIONS

1. **Shompa Das Joya, Shahanaz Sultana, J Ferdous¹, M A Qayum, Hoque, M.E.** (2020). Response to Callus Induction and Regeneration of Newly Released BRRI Rice Varieties. *Bangladesh Rice J.* 23 (2) : 17-25, 2019, doi.org/10.3329/brj.v23i2.48244
2. **Shahanaz Sultana, Chai-Ling Ho, Parameswari Namasivayam and Suhaimi Napis** (2014) Genotypic differences in response to the effect of hygromycin on calli and germination of rice. *Bangladesh Rice Journal.* V18(1&2): pp41-45
3. Roy, R.K., Majumder, R.R., **Shahanaz Sultana**, Hoque, M.E. and Ali, M.S. (2014). Genetic Variability, Correlation and Path Coefficient Analysis for Yield and Yield Components in Transplanted Aman Rice (*Oryza sativa* L.). *Bangladesh Journal of Botany* (Under Review)
4. Shakil, M S K., **Sultana, S.**, Hasan MM., Hossain, MM., Ali M.S and Prodhan SH (2014). SSR Marker Based Genetic Diversity Analysis of Modern Rice Varieties and Coastal Landraces in Bangladesh. *Indian Journal of Biotechnology* (Accepted)
5. **Shahanaz Sultana**, Veronika Turečková, Chai-Ling Ho, Suhaimi Napis and Parameswari Namasivayam (2014). Molecular Cloning of a Putative *Acanthus ebracteatus* 9-cis-epoxycarotenoid deoxygenase (AeNCED) and its Overexpression in Rice. *Journal of Crop Science and Biotechnology*, (4) : 239 – 246
6. A.K.M. Mohiuddin, Nilufer Hye Karim and **Shahanaz Sultana** (2014) Development of Improved Double Haploid through Anther culture of Indica Rice. *Annals of Biological Research*, 5 (10): 6-13
7. Israt Nadia, A.K.M. Mohiuddin, **Shahanaz Sultana** and Jannatul Ferdous. (2014) Diversity analysis of indica rice accessions (*Oryza sativa* L.) using morphological and SSR markers. *Annals of Biological Research*. 5(11): 20-31
8. **Shahanaz Sultana**, Choy-Yuen Khew, M. Mahbub Morshed, Parameswari Namasivayam, Suhaimi Napis, and Chai-Ling Ho (2012). Overexpression of monodehydroascorbate reductase from a mangrove plant (AeMDHAR) confers salt tolerance on rice. *Journal of Plant Physiology*, 169(3): 311-318
9. M. Mahbub Morshed, Rosli B. Mohamad, Samsuri B. Abd Wahed, **Shahanaz Sultana** and Dzolkhifli Omar (2012). Determination of Paraquat Emitted in the Air After its Application During Rice Growing Seasons in Sungai Besar, Selangor, Malaysia. Volume 21(1a). *Fresenius Environmental Bulletin*: 181-190
10. Mohiuddin AKM, **Shahanaz Sultana**, Ferdous J and Karim NH (2011). Recovery of green plantlets from albino shoot primordia derived from anther culture of indica rice (*Oryza sativa* L.). *Tropical Life Sciences Research* 22(1):1-12
11. Mohiuddin AKM, **Shahanaz Sultana**, Ferdous J and Karim NH (2010). Culturability Behaviour in Indica and Japonica Rice Varieties. *Bangladesh Rice Journal* 15(1):39-47
12. Mohiuddin A.K.M., **Shahanaz Sultana**, Ferdous J and Karim NH. (2006). Increased Regeneration Efficiency in Seed Derived Callus of Rice (*Oryza sativa* L.). *Plant Tissue Culture and Biotechnology* 16(1): 45-52.
13. MS Ali, MA Salam, M.E Hoque, **Shahanaz Sultana**, MS Kabir, M.S Islam, H.U Ahmed, S Khatun and BAA Mustafi (2006). Breeding and adoption of Boro Rice varieties in Bangladesh. *International Journal of Sustainable Agricultural Technology* 2(4): 61-68.
14. MS Ali, M.E Hoque, **Shahanaz Sultana**, S Islam, S. Kiyosawa, D Purba, M Kawase and K. Okuno (2005). Gene analysis for Field resistant to Rice (*Oryza sativa* L) blast. *Bangladesh Journal of Plant Breeding and Genetics* 16(2): 9-19
15. Ferdous J, ME Hoque, MS Ali, AKMR Baksha and **Shahanaz Sultana**. (2005). Effect of NaCl on Callus Induction and Subsequent Regeneration in Some Fine Grain and Aromatic Rice Varieties. *Molecular Biology and Biotechnol Journal* 3(1&2): 19-22

16. **Shahanaz Sultana**, M. A. Islam, M. R. Islam, M. M. Morshed and M. R. Islam. (2002). Correlation and Regression Analysis for Heading Date, Yield and Yield Contributing Characters in Wheat under Water and Phosphorus Stress. *Pakistan Journal of Biological Sciences*. 5(2): 149-151.
17. **Shahanaz Sultana**, M A. Islam and M. R. Islam. (2001). Genotype variation for heading date, biomass and its components of wheat under water and phosphorus stress. *Bangladesh Journal of Training and Development* 14(1 & 2):205-212
18. **Shahanaz Sultana**, M A. Islam and M. R. Islam. (2000). Genotypic Variation for Phosphorus Efficiency Ratio and Phosphorus Uptake of Wheat (*Triticum aestivum* L) under Phosphorus and Water Stress. *Bangladesh Journal of Plant Breeding and Genetics* 13(2):35-40
19. **Shahanaz Sultana**, M A. Islam and M. R. Islam. 2000. Genotypic Variation for Spike Characters and Yield Component of Wheat under Phosphorus and Water Stress. *Progressive Agriculture*:11(1 and 2):5-8
20. M.R. Islam, M.A.R. Bhuiyan, M. F. Islam, **Shahanaz Sultana** and B. Prased. (1999). Effect of Salt on Germination and Seedling Growth in Rapeseed and Mustard Varieties. *Journal of Agrilcultural Education and Technology*., 2(2):93-96

Book

1. M.S. Ali, M.E Hoque, **S. Sultana**, M. Z. Hossain, S.M.H.A Rabbi, R.K. Roy, N. Haque, H. Hossain and M. M. Islam (2013). An Integrated Approach to Characterize BRRRI Released Rice Varieties. Bangladesh rice Research Institute. Bangladesh

ABSTRACTS PUBLISHED IN PROCEEDING OF NATIONAL AND INTERNATIONAL CONFERENCE:

1. Mohiuddin AKM, Nilufer Hye Karim, Shahanaz Sultana and Jannatul Ferdous: Studies on Development of Double Haploid Lines Through Anther Culture of F₁ Rice Crosses. Presented in International Plant Tissue Culture and Biotechnology Conference. Dhaka : p
2. Roy R.K, R.R. Majumder, **S. Sultana**, M.E. Hoque and M.S. Ali. 2014. Genetic variability, correlataion and path coefficient analysis for yield and yield components in transplanted Aman Rice (*Oryza sativa* L.). In: 9th Biennial Conference of Plant Breeding and Genetics Society of Bangladesh. P 76. KIB and BARC, Dhaka, 25-26 October 2014.
3. M Monirul Islam, **Shahanaz Sultana**, M Enamul Hoque and M Shamsheer Ali (2013). Pyramiding Genes for Resistance to Bacterial Blight in Rice. International Conference on Biotechnology, Committee of Action for Research, Extension and Services (CARES). Dhaka Bangladesh: p 51
4. M.M. Islam, M.E Hoque, S.M.H.A Rabbi, H. Hossain, RK Ray, **Shahanaz Sultana** and MS Ali (2010). Diversity Analysis of BRRRI Genotypes and their Parents. Presented in 6th International Plant Tissue Culture and Biotechnology Conference. Dhaka : p 40
5. **Shahanaz Sultana**, Ho Chai Ling, Parameswari A/P Namasivayam and Suhaimi B Napis (2009). Over-expression of Monodehydroascorbate Reductase (AcMDHAR) from a Mangrove Plant in Rice for Salt Tolerance. Presented in Plant Biotechnology Post Graduate Symposium : p 7
6. Ferdous J, ME Hoque, MS Ali, AKMR Baksha and **Shahanaz Sultana**. (2008). Effect of NaCl on Callus Induction and Subsequent Regeneration in Some Fine Grain and Aromatic Rice Varetities. International Biotechnology Conference, Bangladesh Association for Biotechnology and Genetic Engineering (BABGE). Dhaka Bangladesh: p 80
7. **Shahanaz Sultana**, Ho Chai Ling, Parameswari A/P Namasivayam and Suhaimi B Napis. (2008) Over-expression of Monodehydroascorbate Reductase (MDHAR) from a Mangrove Plant in Rice for Salt Tolerance. Presented in 17th scientific meeting of the Malaysian Society for Molecular Biology and Biotechnology (MSMBB): p34 -35
8. **Shahanaz Sultana**, Ho Chai Ling, Parameswari A/P Namasivayam Suhaimi B Napis, Ruslan Abdullah (2007) Development of Salt Tolerant Rice by Overexpressing Genes from a Mangrove Plant in Rice.

Presented in Asia Pacific Conference on Plant Tissue Culture and Agribiotechnology (APaCPA) held in, Malaysia: p78

9. Karim NH, Mohiuddin AKM and **Shahanaz Sultana** (2002). Development of improved dihaploids through anther Culture of Rice. Presented in Annual Plant Tissue Culture Conference held in BIRRI : p 17
10. Karim NH, Mohiuddin AKM and **Shahanaz Sultana** (2001). Studies on increased efficiency of regeneration from seed derived callus of Rice (*Oryza sativa* L.). Presented in Annual Plant Tissue Culture Conference held in Botany Department of Dhaka University: p 107

MS THESIS SUPERVISED/CO-SUPERVISED:

- Ishrat Nadia, **Shahanaz Sultana** and Mohiuddin AKM (2011). Diversity Analysis of Rice Varieties using Morphological and SSR markers. A thesis submitted to the Department of Biotechnology and Genetic Engineering Mawlana Bhashani Science and Technology University, For partial fulfilment of MS in Biotechnology
- Sultana Razia, **Shahanaz Sultana** and KM Nasiruddin (2012). Evaluation of Salt tolerance through marker assisted selection and phenotypic screening in rice. A thesis submitted to the Department of Biotechnology, Bangladesh Agriculture University, Mymensingh For partial fulfilment of MS in Biotechnology
- Mabiya Zaman, **Shahanaz Sultana** and Mohiuddin AKM (2020). Molecular Studies of *DREB* Gene in Rice under Stress Conditions. This thesis report is submitted to Mawlana Bhashani Science and Technology University in partial fulfilment of the requirements for the Degree of Master of Science (M.S.) in Biotechnology and Genetic Engineering.

PROFESSIONAL MEMBERSHIP:

- Plant Breeding and Genetical Society, Bangladesh
- Professional Organisation of Women in Extension and Research (POWER), Bangladesh.
- Krishibid (Agriculturist) Institution, Bangladesh
- Bangladesh Association of Plant Tissue Culture and Biotechnology
- Organization for Women in Science and Development (OWSD)