

SHORT CV BUSHRA RASHID

PERSONAL INFORMATION

Present Position: Assistant Professor (Tenure Track)
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PhNo. 092 423 5293141-6 Ext. 142
Address: Centre of Excellence in Molecular Biology, University of The Punjab,
Lahore, 53700, Pakistan.

ACADEMIC QUALIFICATIONS

- **2008 PhD (Molecular Biology)**
National Centre for Excellence in Molecular Biology University of the Punjab, Lahore Pakistan. Thesis Title: “*Transformation of cotton with Bt genes to develop sustainable resistance*”.
- **1994 MSc Hons. Agriculture (Horticulture)**
University of Agriculture, Faisalabad, Pakistan, Thesis entitled, “*Callogenesis, Embryogenesis and Organogenesis in Orchid*”.
- **1991 BSc Hons. Agriculture**
University of Agriculture, Faisalabad, Pakistan.

RESEARCH

2006-Date: Identification of novel genes for abiotic stress tolerance in *Gossypium arboreum*

2001-2006: Transformation of cotton with Bt genes to develop sustainable resistance. This is the first GM crop in Pakistan and has been approved as variety Bt Cotton CEMB-II by National Biosafety Committee, Ministry of Environment, Pakistan (<http://www.isaaa.org/kc/cropbiotechupdate/article/default.asp?ID=5081>).

1995-2000: Established tissue culture conditions in cotton (Callus, meristem and cell suspension culture).

1991-1994: M.Sc Research thesis entitled “*Callogenesis, Embryogenesis and Organogenesis in Orchid*”.

NATIONAL TRAININGS ATTENDED

- One day research workshop, “Citation and Referencing in Research using EndNote X4” organized by The University of Lahore and Institute of Research Promotion, held at The University of Lahore, 26th April, 2011.
- Workshop on “Writing project proposals for Competitive Grant System (CGS)”, organized by and held at Punjab Agricultural Research Board, Lahore, Pakistan, November, 09-11, 2009.
- International Thematic Workshop “Nanomedicine: The use of nano particles in medical

diagnostics” Jointly organized by OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTECH) and Higher Education Commission (HEC), held at COMSTECH Secretariat Islamabad, Pakistan, March,13-20, 2008.

- Training course “Modern Techniques in Biotechnology”, organized by National Institute in Biotechnology and Genetic Engineering (NIBGE), Faisalabad, Pakistan, April 03-08, 2005.
- Training workshop “Latest developments in Molecular Biology and Biotechnology” organized by UGC in collaboration with National Centre of Excellence in Molecular Biology Lahore, Oct. 08-13, 2001.
- Training course "Kitchen Gardening", held at National Agricultural Research Council (NARC) Islamabad, Pakistan, March, 26-31, 1994.

INTERNATIONAL TRAININGS ATTENDED

- Endeavour Executive Award, 2010 (Second Round) by Austraining Int. Australia.
- “Biochip Training Course” organized by “Genomic Solutions”, held at Varsity Drive, Ann Arbor, Michigan, USA, Aug. 04-17, 2006.
- Training on, “Development of Genomic Laboratory for Gene Discovery and Plant Pathogen Interaction,” in University of Illinois, Urbana-Champaign USA (Dr Hans Bohnert’s Lab), June-Dec. 2005.
- Lecture and Hands-On Computer Workshop, “A Field Guide to GenBank and NCBI Molecular Biology Resources”, held at University of Illinois Urbana-Champaign USA. Sep. 22-23, 2005.

PUBLICATIONS

Book Chapter

- **Rashid, B.,** Husnain, T., Riazuddin, S. (2010) Plant Adaptation and Phytoremediation, Chapter 19 Herbicides and pesticides as potential pollutants – A global problem. Ashraf, M.; Ozturk, M.; Ahmad, M. S. A. (Eds.) 1st Ed., 482 p., Springer Netherlands - Dordrecht, Hardcover ISBN: 978-90-481-9369-1. <http://dx.doi.org/10.1007/978-90-481-9370-7>

Book

- **Rashid, B.,** Husnain, T., Riazuddin, S. (2010). Gene Pyramiding: An Approach Towards Sustainable Insect Resistance. (Book) by Publishers VDM Verlag Dr. Müller Aktiengesellschaft & Co. Kg Dudweiler Landstr. 99,66123 Saarbrücken, Germany. ISBN 978-3-639-25629-1.

Research Articles

- Qaisar, U., Irfan, M., Maqbool, A., Zahoor, M., Khan, M.Y.K., **Rashid, B.,** Husnain, T., Riazuddin, S. (2010). Mystery of Fructose Bisphosphate Aldolase. Can. J. Plant Sci. 90(1): 49-60.
- Zahur, M., Maqbool, A., Irfan, M., Barozai, M.Y.K., Qaiser, U., **Rashid B.,** Husnain, T., Riazuddin, S. (2009). Functional analysis of cotton small heat shock protein promoter region in response to abiotic stresses in tobacco Using Agrobacterium-Mediated transient assay. Mol. Biol. Rep. 36(7): 1915-1921.

- **Rashid, B.**, Husnain, T., Riazuddin, S. (2009). Field Evaluation and Fibre Analysis of Transgenic Cotton. *J. Crop Sci. Biotech.* 12(3): 135-141.
- Zahur, M., Maqbool, A., Irfan, M., Barozai, M.Y.K., **Rashid B.**, Husnain, T. and Riazuddin, S. (2009). Isolation and Functional Analysis of Cotton Universal Stress Protein Promoter in Response to Phytohormones and Abiotic Stresses. *Mol. Biol.* 43(4): 578-585.
- **Rashid, B.**, Husnain, T. and Riazuddin, S. (2009). Rapid *in vitro* root induction in transgenic cotton shoots. *Plant Tissue Cult. & Biotech.* 19(2): 247-251
- **Rashid, B.**, Saleem, Z., Husnain, T., Riazuddin, S. (2008). Transformation and Inheritance of Bt Genes in *Gossypium hirsutum*. *J. Plant Bio.* 51(4): 248-254.
- Barozai, M.Y.K., Irfan, M., Yousaf, R., Ali, I., Qaisar, U., Maqbool, A., Zahoor, M., **Rashid, B.**, Hussnain, T., Riazuddin, S. (2008). Identification of micro-RNAs in cotton. *Plant Physiol. Biochem.* 46: 739-751.
- Maqbool, A., Zahur, M., Irfan, M., Barozai, M.Y.K., **Rashid, B.**, Husnain, T., Riazuddin, S. (2008). Identification and Expression of six drought responsive transcripts through Differential Display in desi cotton (*Gossypium arboreum*). *Mol. Bio.* 42(4):492-498.
- **Rashid, B.**, R. Islam, M.N. Malik and I.A. Khan. 2008. Callogenesis, embryogenesis and organogenesis in Orchids. *Plant Environment Development* 2(1):71-75
- Maqbool, A., Zahur, M., Irfan, M., Qaiser, U., **Rashid, B.**, Husnain, T., Riazuddin, S. (2007) Identification, characterization and expression of drought related alpha-Crystalline heat shock protein gene (*GHSP26*) from desi cotton (*Gossypium arboreum L.*). *Crop Science*.47:2437-2444.
- **Rashid, B.**, Husnain, T., and Riazuddin, S. (2004). In-vitro shoot tip culture of cotton (*Gossypium hirsutum*) *Pak. J. Bot.*, 36(4): 817-823.

EST's

- Shahid, M.N., Jamal, A., Aftab, B., **Rashid, B.**, Sabir, F., Husnain, T. (2011). Identification of Salt Stress Responsive Gene(s) in Desi Cotton (*Gossypium arboreum L.*) by Differential Display (JG294129- JG294141, 13EST'S)
- Aftab, B., Irfan, M., Zahur, M., Maqbool, A., Aftab, M., Shahid, M.N., Jamal, A., Rehman, S., Shamim, Z., **Rashid, B.** and Husnain, T. (2009). Identification of CLCuV responsive expressed sequence tags from leaves of *Gossypium hirsutum*. **GT66293-GT66299 (07 EST's)**
- Irfan, M., Barozai, M.Y.K., Maqbool, A., Qaiser, U., Zahur, M., **Rashid, B.**, Hernandez, A.G., Bohnert, H.J., Husnain, T., Riazuddin, S. (2008). Drought stressed cDNA library from leaves of *Gossypium arboreum*. GenBank accession number **FL576377- FL577777 (1401 EST's)**.
- Maqbool, A., Zahur, M., Irfan, M., Younas, M., Barozai, K., **Rashid, B.**, Husnain, T., Riazuddin, S. (2008) Identification and Expression of Six Drought-Responsive Transcripts through Differential Display in Desi Cotton (*Gossypium arboreum*) GenBank accession number **EE298190- EE298195 (06 EST's)**.