




Faculty Details proforma for Gargi College

Title	Dr.	First Name	Anjana	Last Name	Rustagi	Photograph
Designation		Assistant Professor				
Address		Department of Botany, Gargi College, Sirifort Road, New Delhi 110049				
Phone No Office						
Residence *		0124-2250412				
Mobile *		9211335295				
Email		anjana.chaurasia@gmail.com				
Web-Page						
Educational Qualifications						
Degree		Institution			Year	
Ph.D.		University of Delhi, Delhi			2011	
M.Sc. (Botany)		Dr. B. R. Ambedkar University, Agra			2002	
B.Sc.		Dr. B. R. Ambedkar University, Agra			2000	
Career Profile						
<p>Dr. Anjana Rustagi obtained Ph.D. in Botany, while doing research on ‘Genetic Manipulation of <i>Musa</i> spp.’ Her research interests include regeneration and genetic transformation of plants for enhanced tolerance to biotic and abiotic stresses. Her research is focused on obtaining stress tolerant stable transgenics of <i>Musa</i> spp. and <i>Brassica juncea</i> using Pathogenesis Related genes and antimicrobial peptide genes respectively. She has also worked to elucidate the role of ABA in embryogenesis in <i>Musa</i> variety Spambia. She has published research papers in peer reviewed journals and authored many book chapters. During her post doctoral research, she was involved in teaching post graduate students and guided many trainees for successful completion of their M.Sc. and M.Phil dissertation at School of Life Sciences, Jawaharlal Nehru University, New Delhi. She has served as staff advisor for Gargi College Botanical Society and Ramjas College Botanical Society for conducting its annual program and publication of its yearly magazine. At present she is involved in teaching Botany and Life sciences to undergraduate students. Dr. Rustagi has been awarded ‘Early Career Research Award’ by Department of Science and Technology, Ministry of Science, Govt. of India to carry major research project ‘‘Revealing the mechanism and components of systemic acquired resistance in <i>Brassica juncea</i>’.</p>						
Administrative Assignments						
<ol style="list-style-type: none"> 1. Staff advisor of ‘Gargi College Botanical Society’ 2017, 2018 2. Member, Equal Opportunity Cell, Gargi College, Delhi 2015, 2016 3. Member, Physical Sciences committee, Gargi College, Delhi 2015 						
Areas of Interest/ Specialization						
Plant tissue culture and genetic transformation for biotic and abiotic stress alleviation						
Subjects Taught						
Biodiversity, Biostatistics, Embryology of angiosperms, Ecology						

Research Guidance
Guiding one JRF in major project funded by DST
Recent Publications
<p>Research Articles</p> <ol style="list-style-type: none"> 1. Rustagi A, Shekhar S, Kumar D, Jayaswal A, Bhat B and Sarin NB (2016) Genetic Fidelity of In Vitro Cultures of an Elite Indian <i>Musa</i> (AA) Variety Matti. <i>Advances in Plants and Agriculture Research</i> 4(3): 00141. DOI: 10.15406/apar.2016.04.00141 2. Suman Sharma, Apekshita Singh, Stuti Singh, James Bond and Anjana Rustagi (2015) 'Evaluation of Antimicrobial properties of Essential oils from Clove and Eucalyptus' <i>Asian Journal of Pharmaceutical and Clinical Research: Volume 7, Issue 5, page 291-294</i> 3. Anjana Rustagi, Shalu Jain, Deepak Kumar, Mukesh Jain, Shashi Shekhar, Vishnu Bhat, Neera Bhalla Sarin (2015) 'High Efficiency Transformation of Banana [<i>Musa acuminata</i> L cv. Matti (AA)] for Enhanced Tolerance to Salt and Drought Stress through Overexpression of a Peanut Salinity-induced Pathogenesis-Related class 10 Protein' <i>Molecular Biotechnology: Volume 57, Issue 1, page 27-35</i> 4. Anjana Rustagi, Deepak Kumar, Shashi Shekhar, Mohd Aslam Yusuf, Santosh Misra, Neera Bhalla Sarin (2014) 'Transgenic <i>Brassica juncea</i> plants expressing <i>MsrA1</i>, a Synthetic Cationic Antimicrobial Peptide, Exhibit Resistance to Fungal Phytopathogens' (2014) <i>Molecular Biotechnology</i> Volume 56, page 535-545 5. Pooja Jha, Shashi, Anjana Rustagi, Pankaj Kumar Agnihotri, Vishvas M. Kulkarni, Vishnu Bhat (2011) Efficient <i>Agrobacterium</i>-mediated transformation of <i>Pennisetum glaucum</i> (L.) R. Br. using shoot apices as explant source. <i>Plant Cell Tissue and Organ Culture</i> 107:501-512 6. Nasser JY Sholi, Anjana Chaurasia, Anuradha Agrawal and Neera Bhalla Sarin (2009) ABA enhances plant regeneration of somatic embryos derived from cell suspension cultures of plantain cv. Spambia (<i>Musa</i> sp.) <i>Plant Cell Tissue and Organ Culture</i> 99:133-140 <p>Book Chapters</p> <ol style="list-style-type: none"> 1. Rustagi A, Singh G, Agrawal S and Gupta PK (2018) Proteomics studies revealing enigma of plant-pathogen interaction In: Singh, A. and Singh I.K. (Eds.) <i>Molecular Aspects of Plant-Pathogen Interaction</i>, pg 239-234 Springer, Singapore (ISBN978-981-10-7370-0 ISBN978-981-10-7371-7 (eBook) https://doi.org/10.1007/978-981-10-7371-7) 2. Singh P, Shekhar S, Rustagi A, Sharma V, and Kumar D (2018) Insights into the Role of WRKY Superfamily of Protein Transcription Factor in Defense Response In: Singh, A. and Singh I.K. (Eds.) <i>Molecular Aspects of Plant-Pathogen Interaction</i>, pg 185-202 Springer, Singapore (ISBN978-981-10-7370-0 ISBN978-981-10-7371-7 (eBook) https://doi.org/10.1007/978-981-10-7371-7) 3. Chugh S., Sharma S., Rustagi A, Kumari P., Agrawal A., Kumar D. (2018) Enhancing Cold Tolerance in Horticultural Plants Using In Vitro Approaches. In: Zargar S., Zargar M. (eds) <i>Abiotic Stress-Mediated Sensing and Signaling in Plants: An Omics Perspective</i>. Springer, Singapore (ISBN 978-981-10-7478-3 ISBN 978-981-10-7479-0 (e book) https://doi.org/10.1007/978-981-10-7479-0_8) 4. Rustagi A, Malik G, Chugh S, Agrawal S, Shekhar S and Pandey N (2017) 'Genetic Manipulation of Litchi for crop Improvement: Challenges and Possibilities In: Kumar M et al eds. <i>The Lychee Biotechnology</i>' Springer Nature, Singapore eBook ISBN 978-981-10-3644-6, Hardcover ISBN 978-981-10-3643-9, DOI10.1007/978-981-10-3644-6 5. Rustagi A, Agrawal S and Singh G (2016) In-vitro Manipulation of <i>Musa</i> species (Bananas) for Sustainable Agriculture. In: Vandana (Ed.) <i>Biomedical and Environment</i>, Campus Books International, New Delhi pp.223 (ISBN: 978-81-8030-479-8) 6. Rustagi A (2016) 'Study of Medicinal Plants: Journey from Ancient Bharat to Modern Times In: Singh G et al eds. <i>Evolution of Education System in Bharat</i>' Centre for Professional Development in Higher Education, UGC-Human

Resource Development Centre, University of Delhi, Delhi. New Delhi Publishers, New Delhi. ISBN 978-93-85503-46-7

7. **Rustagi A**, Shekhar S, Jain S, Kumar D and Sarin NB (2016) 'Enhancing abiotic stress tolerance in banana through genetic engineering' In: Mohandas S. and Ravishankar K.V. eds. *Banana: Genomics and Transgenic approaches for genetic improvement* Springer-verlaug Ltd. London ISBN 978-981-10-1583-0
8. Chaudhry B and **Rustagi A** (2016) Electronic lesson entitled 'Anther' In: Sisodia R ed. *Reproductive Biology of Angiosperms*. Institute of Life long Learning, University of Delhi ISBN 978-93-85611-91-9
9. Chaudhry B and **Rustagi A** (2016) Electronic lesson entitled 'Pollen Development and Maturation' In: Sisodia R ed. *Reproductive Biology of Angiosperms*. Institute of Life long Learning, University of Delhi ISBN 978-93-85611-91-9
10. Singh G, **Rustagi A** and Agrawal S (2016) Active Sun-screening Compounds in Cynobacteria. In: Vandana (Ed.) *Biomedical and Environment*, Campus Books International, New Delhi pp.203-222 (ISBN: 978-81-8030-479-8)
11. Agrawal S, Singh G, **Rustagi A** and Narayan R (2016) Phytoremedial Potential of Dry Tropical Peri-urban Vegetation. In: Vandana (Ed.) *Biomedical and Environment*, Campus Books International, New Delhi pp. 180-202 (ISBN: 978-81-8030-479-8)
12. **Rustagi A**, Sarin NB, Bhat V and Khaling MK (2015) 'Transgenic Banana: Biotic and Abiotic Stress Challenges' In: Suresh K and Vandana eds. 'Environment and Chemistry' New Campus publishers, New Delhi pages 127-137 ISBN 978-81-8030-432-3

Conference Organization/ Presentations

1. Delivered invited lecture entitled 'Watering and Weeding' in workshop on "Why to Grow and How to Multiply Plants" held at Department of Botany, Gargi College 2018
2. Presented Poster entitled 'Epifoliar treatment of *Brassica juncea* plants with 24-Epibrassinolide exhibit resistance to fungal Phytopathogens' on 28th February 2018 at Indian National Science Academy, New Delhi on the occasion of 'National Science Day' organized by Indian National Science Academy and Indian Academy of Sciences.
3. Presented research paper entitled 'Genetic Manipulation of *Musa* species (banana) for Biotic and Abiotic Stress Tolerance' at American Society of Plant Biology Meeting 2016 (ASPB-2016) held at Austin, Texas, USA from July 9-13, 2016.
4. Presented research paper entitled 'Pathogenies Related class 10 Proteins: Molecular insights and potential application in abiotic stress tolerance' at International Conference on Functional and Interaction Proteomics organized as a part of '8th Annual Meeting of Proteomics Society of India (PSI)' and '11th Annual Meeting of Asia Oceania Agricultural Proteomics Organisation (AOAPO)' organized by National Institute of Plant Genetic Resources (NIPGR), New Delhi from December 14th -17th 2016.
5. Oral presentation of research paper entitled 'Transgenic Bananas for Sustainable Development' at National Conference on 'Combating Industrial Pollution for Sustainable Environment- A fusion of Industrial and Scientific efforts (CIPSE-2016)' organized by Department of Chemistry, Gargi College, University of Delhi, Delhi from September 22-23, 2016
6. Conducted summer workshop on 'Plant Tissue Culture: Technique and Applications' for graduate students at Gargi College in June 2015.
7. Member of organizing committee for 'National Seminar on Current Environmental Challenges and Possible Solutions' and 'National Seminar on Relevance of Medicinal Plants' in 21st Century' organized by Ramjas College, University of Delhi from 15th to 16th February 2013 and February 10-11, 2015 respectively
8. Staff advisor of 'Genomics Workshop' and workshop on 'Microbial Biotechnology' organized by Department of Botany, Ramjas College, University of Delhi, from 1st to 3rd March 2012 and from 10th to 13th December 2012 respectively which was sponsored by Department of Biotechnology, Government of India.
9. Member of organizing committee for the workshop 'Fundamentals of Bioinformatics' for faculty of University of Delhi, at Institute of Lifelong Learning, University of Delhi from 26th to 30th September 2011.
10. Presented Poster entitled 'Vacuum assisted transformation of Indian *Musa* spp. cv. Matti (AA)' at XXXI Annual Meeting of Plant Tissue Culture Association of India and National Symposium on Plant Cell Tissue and Organ Culture, March 3-10, 2010, University of Calcutta, Kolkata.
11. Presented Poster entitled 'Regeneration and transformation of Plantain var. *Spambia* with *barnase* (phosphinothricin resistance) gene' at National Symposium on Plant Biotechnology organised by Plant Tissue Culture Association of India at CIMAP, Lucknow, November 2005
12. Presented Poster entitled 'ABA assisted enhanced regeneration of banana somatic embryos' at IV Annual Biosparks Research Festival at School of Life Sciences, JNU, New Delhi in 2004.

Research Projects (Major Grants/Research Collaboration)
Major research project entitled “Revealing the mechanism and components of systemic acquired resistance in <i>Brassica juncea</i> ” from Department of Science and Technology (DST), Government of India
Awards and Distinctions
<ol style="list-style-type: none"> 1. Selected jointly by Indian National Science Academy and Indian Academy of Sciences to Present original research work entitled ‘Epifoliar treatment of <i>Brassica juncea</i> plants with 24-Epibrassinolide exhibit resistance to fungal Phytopathogens’ on 28th February 2018 at Indian National Science Academy, New Delhi on occasion of ‘National Science Day’ 2. Received Early Career Research Award (ECRA) from Scientific and Engineering Research Board (SERB), Department of Science and Technology (DST), Government of India in May 2017 3. Awarded competitive International Travel Grant from University Grants Commission for presenting research work at American Society of Plant Biology Meeting 2016 (ASPB-2016) held at Austin, Texas, USA from July 9-13, 2016. 4. Best Poster award at International Conference on Functional and Interaction Proteomics organized as a part of ‘8th Annual Meeting of Proteomics Society of India (PSI)’ and ‘11th Annual Meeting of Asia Oceania Agricultural Proteomics Organisation (AOAPO)’ organized by National Institute of Plant Genetic Resources (NIPGR), New Delhi from December 14th -17th 2016. 5. Qualified for joint CSIR-UGC NET and UGC-JRF examination in June 2004. 6. Qualified for UGC SRF in January 2007 7. Received International Travel Grant from CSIR to present research paper at Society for <i>In vitro</i> Biology 2009 meeting in Charleston, United states of America.
Association With Professional Bodies
<ol style="list-style-type: none"> 1. Professional member of ‘Plantae’ and American Society of Plant Biologists, USA. 2016 2. Reviewer of international journal ‘Journal of American Society of Horticulture Research’ 2018
Other Activities