Dr. Anjana Rustagi

Assistant Professor
Department of Botany
Gargi College
University of Delhi
Sirifort Road, New Delhi 110049
anjana.rustagi@gargi.du.ac.in
www.gargicollege.in

Educational Qualification
Ph.D. (Botany) in 2011 from Department of Botany, University of Delhi in collaboration with School of Life Sciences, Jawaharlal Nehru University, New Delhi, India.

M.Sc. (Botany) 2002 from Agra College, Agra, Uttar Pradesh

Present Employment: Associate Professor, Department of Botany, Gargi College, University of Delhi since May 2023.

Previous Experience
Assistant Professor, Department of Botany, Gargi College, University of Delhi (May, 2015-May, 2023).
Assistant Professor, Department of Botany, Ramjas College, University of Delhi (July 2009 - May, 2015)

Major Contributions to Gargi College
1. Establishment of Plant Tissue Culture laboratory, fully equipped with culture racks, laminar air flow, thermostat and photoperiod timer with DST project funds.
2. Establishment of Botany Research laboratory (caters to research requirements of faculty and students of different science departments)
3. Major equipments (-80 deep freezer and refrigerated centrifuge) to boost research infrastructure and enhance overall research impact of Gargi College.
4. Total contribution in terms of project funding: Rs 36,00,000/-

Research Interest
Regeneration and genetic transformation of crop plants for enhanced tolerance to biotic and abiotic stresses. Stress tolerant stable transgenic plants of *Brassica juncea* by overexpression of *MsrA1* and *BjFLD* gene have been obtained. Regeneration and genetic transformation in different Indian *Musa* varieties Matti, Somrani monthan, Virupakshi and Grand naine have been established. Disease and abiotic stress tolerant banana plants of Matti and Grand naine variety have been obtained by over expressing *AhSIPR10 and AhcAPX* gene respectively.

Completed Research Projects

1. (2018-2022; Project grant Rs. 36 lacs)
Project investigator of major research project entitled ‘‘Revealing the mechanism and components of systemic acquired resistance in *Brassica juncea’* funded from Science and

Enginering Research Board, Department of Science and Technoogy (DST), Government of India. (2 JRF and 1 Ph.D scholar trained)

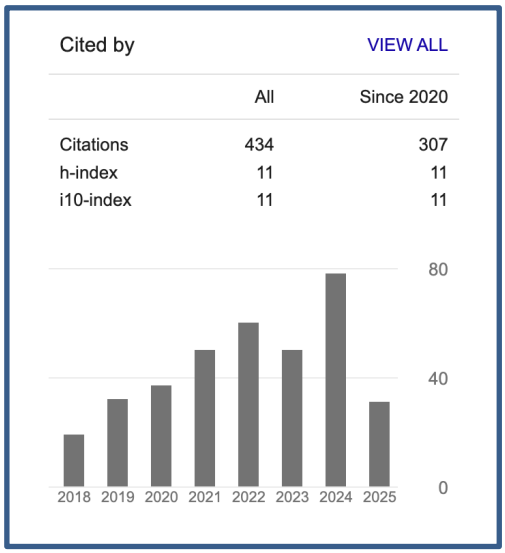
Research Guidance

1. **Doctoral thesis (under progress)**
   i. Ruby Panwar ' To investigate the mechanism of Systemic Acquired Resistance (SAR) in *Brassica juncea*'**.**

2. **M.Sc. dissertation (completed; 2021)**
   i. Rashmi Choudhary 'Assessment of the effects of exogenous application of 24-EBL on the biotic stress tolerance potential on *Brassica juncea* cv. Varuna (Indian mustard).

Publications (selected)

(* corresponding author)



Best publication

1. Shekhar S, Panwar R, Prasad SC, Kumar D, **Rustagi A***. Overexpression of flowering locus D (FLD) in Indian mustard (Brassica juncea) enhances tolerance to *Alternaria brassicae* and *Sclerotinia sclerotiorum*. Plant Cell Rep. 2023 Jul;42(7):1233-1250. doi: 10.1007/s00299-023-03021-w. Epub 2023 Apr 29. PMID: 37119284 (**impact factor 6.2**).

Other Publications (selected)

1. Thakur, M., Khushboo, Shah, S. *et al.* Unlocking the Secrets of Rhizosphere Microbes: A New Dimension for Agriculture. *Symbiosis* **92**, 305–322 (2024). https://doi.org/10.1007/s13199-024-00980-w

2. Negi NP, Prakash G, Narwal P, Panwar R, Kumar D, Chaudhry B and **Rustagi A*** (2023) The calcium connection: exploring the intricacies of calcium signaling in plant-microobe interaction. Frontiers in Plant Science 14:1248648 https://doi.org/10.3389/fpls.2023.1248648 (impact factor **5.6**)
3. Singh A., Yadav M., Panwar, R. **Rustagi A.**, Chakraborty A., Roy A. and Singh I.K. (2023) Comprehensive and evolutionary analysis of *Spodoptera litura*-inducible Cytochrome P450 mono oxygenase gene family in *Glycine max* elucidate their role in defense. *Front. Plant Sci.* . Volume 14 - 2023 | doi: 10.3389/fpls.2023.1221526 (impact factor **5.6**)

4. Panwar, R., Chaudhary, B., Kumar, D., Prakash, G., Khan, M., Pandey, A., Hamurcu, M. and **Rustagi, A***. (2023) Harnessing Stress–tolerant Wild Bananas for Crop

Improvement. *Crop and Pasture Science*. https://www.publish.csiro.au/CP/CP22294 (impact factor **2.28**).

5. Pandey A, Khan MK, Hamurcu M, Athar T, Yerlikaya BA, Yerlikaya S, Kavas M, **Rustagi A**, Zargar SM, Sofi PA, Chaudhry B, Topal A, Gezgin S. Role of Exogenous Nitric Oxide in Protecting Plants against Abiotic Stresses. *Agronomy*. 2023; 13(5):1201. https://doi.org/10.3390/agronomy13051201 (impact factor **3.94**))

6. Shekhar S., Mahajan A.,Pandey P.,Raina M., **Rustagi A.,** Prasad R., and Kumar D. Salicylic acid and methyl jasmonate synergistically ameliorate salinity induced damage by maintaining redox balance and stomatal movement in potato (2023) *J Plant Growth Regul* (2023). https://doi.org/10.1007/s00344-023-10956-7 (impact factor **4.8)**

7. Bhardwaj, K., Raina, M., Sanfratello, G.M., Pandey, P., Singh, A., Rajwanshi, R., Negi, N.P., **Rustagi, A**. and Kumar, D., 2022. Exogenous Melatonin Counteracts Salinity and Cadmium Stress via Photosynthetic Machinery and Antioxidant Modulation in Solanum lycopersicum L. *Journal of Plant Growth Regulation*, Volume 42, pp 6332–6348 https://link.springer.com/article/10.1007/s00344-022-10843-7 (impact factor **4.8**)

8. Sharma, A., Raina, M., Kumar, D., Singh A., Chugh S., JainS., Kumar M and **Rustagi A***. *l.* Harnessing phytomicrobiome signals for phytopathogenic stress management. *J Biosci* 47, 6 (2022). https://doi.org/10.1007/s12038-021-00240-9 (impact factor **2.8**)

9. Raina M, Sharma A, Nazir M, Kumari P, **Rustagi A**, Hami A, Bhau BS, Zargar SM, Kumar D. Exploring the new dimensions of selenium research to understand the underlying mechanism of its uptake, translocation, and accumulation. Physiol Plant. 2021 Apr;171(4):882-895. doi: 10.1111/ppl.13275. Epub 2020 Nov 25. PMID: 33179766 (Impact factor 6.4)

10. Shekhar, S., **Rustagi, A** , Sarin NB and Lawrence K. (2021) Synergistic effect of silver nitrate and photon flux density on the in-vitro multiplication of banana (cv. Grand nain, AAA) Plant Archives Vol. 21, No. 2, pp. 727-733 DOI https://doi.org/10.51470/PLANTARCHIVES.2021.v21.no2.113 (Impact factor **0.27**)

11. Shekhar, S., **Rustagi, A**., Kumar, D. Yusuf M.A., Sain N.B. and Lawrence K. (2019) Groundnut AhcAPX conferred abiotic stress tolerance in transgenic banana through modulation of the ascorbate–glutathione pathway. Physiol Mol Biol Plants 25, 1349–1366 (2019). https://doi.org/10.1007/s12298-019-00704-1 (Impact factor **3.1**)

12. Jain, S., **Rustagi, A**., Kumar, D., Yusuf M.A., Shekhar S and Sarin N.B. (2019) Meeting the challenge of developing food crops with improved nutritional quality and food safety: leveraging proteomics and related omics techniques. Biotechnol Lett 41, 471–481 (2019). https://doi.org/10.1007/s10529-019-02655-9 (Impact factor **2.7**)

13. **Rustagi, A**., Shekhar, S., Kumar, D., Lawrence K. Bhat V. and Sarin N.B. (2019) High speed regeneration via somatic embryogenesis in elite Indian banana cv. Somrani monthan

(ABB). Vegetos 32, 39–47 (2019). https://doi.org/10.1007/s42535-019-00005-8 (Impact factor **0.47**)

14. **Rustagi A**, Shekhar S, Kumar D., Jayaswal A., Bhat V and Sarin N.B. (2016) Genetic fidelity of in vitro cultures of an elite Indian Musa (Aa) variety Matti. Adv Plants Agric Res. 2016;4(3):292-296. DOI: 10.15406/apar.2016.04.00141 (Impact factor **0.991**)

15. Sharma S., Singh A., Singh S., Bond J. and **Rustagi A.** (2015) 'Evaluation of Antimicrobial properties of Esential oils from Clove and Eucalyptus' Asian Journal of Pharmaceutical and Clinical Research: Volume 7, Issue 5, page 291-294

16. **Rustagi A**., Jain S., Kumar D., Jain M., Shekhar S., Bhat V., Sarin N.B. (2015) 'High Efficiency Transformation of Banana [Musa acuminata L cv. Matti (AA)] for Enhanced Tolerance to Salt and Drought Stress through Overexpression of a Peanut Salinity-induced Pathogenesis-Related class 10 Protein' Molecular Biotechnology: Volume 57, Issue 1, page 27-35 (impact factor **2.8**)

17. **Rustagi A**., Kumar D., Shekhar S., Yusuf M.A., Misra S., Sarin N.B. (2014) 'Transgenic *Brassica juncea* plants expressing *MsrA1*, a Synthetic Cationic Antimicrobial Peptide, Exhibit Resistance to Fungal Phytopathogens' (2014) Molecular Biotechnology Volume 56, page 535-545 (impact factor **2.8**)

18. Jha P., Shashi, **Rustagi A**., Agnihotri P.K., Kulkarni V.M., Bhat V. (2011) Efficient *Agrobacterium*-mediated transformation of *Pennisetum glaucum* (L.) R. Br. using shoot apices as explant source. Plant Cell Tissue and Organ Culture 107:501-512 (IF **2.9**)

19. N.J.Y. Sholi, **A. Chaurasia**, A. Agrawal and N. B. Sarin (2009) ABA enhances plant regeneration of somatic embryos derived from cell suspension cultures of plantain cv. Spambia (Musa sp.) Plant Cell Tissue and Organ Culture 99:133–140 (IF **2.9**)

International Travel Awards

1. Awarded competitive International Travel Grant from **Department of Science and Technology** for presenting research work at World Congress on In vitro Biology (Society for In vitro Biology Meeting 2024) at St. Louis, Missouri, USA from June 8th – 12th, 2024.
2. Awarded competitive International Travel Grant from **University Grants Commission** for presenting research work at American Society of Plant Biology Meeting 2019 (ASPB-2019) held at San Jose, California, USA from August 3-7, 2019.
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. Received International Travel Grant from **Council for Scientific and Industrial Research** to present research paper at Society for *In vitro* Biology 2009 meeting in Charleston, United states of America.

Book/s Edited

1. Rustagi, A. , & Chaudhry, B. , (Eds.). (2022). Plant Reproductive Ecology - Recent Advances. IntechOpen. https://doi.org/10.5772/intechopen.94800

Book Chapters

1. Khan M.K., Pandey A., Harmankaya M., Hamurcu M., Arifuzzaman M., Turin M.T.S., **Rustagi A**., Topa A. and Gezgin S. Utilization of wheat wild relatives for iron and zinc improvement in wheat crops In Khan MK et al., (eds). Wheat Wild Relatives: Developing Abiotic Stress Tolerance under Climate Change. Academic Press (an imprint of Elsevier), London, United Kingdom. ISBN 978-0-443-22090-6 PP 277-299.

2. Athar T, Pandey A, Khan MK, Hamurcu M, **Rustagi A**, Gezgin S, Singhal RK and Yousaf H (2023). Climate Change triggering abiotic stresses and losses in wheat production and quality. In Khan MK et al., (eds). Abiotic Stresses in Wheat. Academic Press (an imprint of Elsevier), London, United Kingdom. ISBN 9780323953689 PP 413-427.
3. **Rustagi, A**. *et al.* (2022). Genetic Modification of *Brassica juncea*: Current Scenario and Future Prospects. In: Kole, C., Mohapatra, T. (eds) The Brassica juncea Genome. Compendium of Plant Genomes. Springer, Cham. https://doi.org/10.1007/978-3-030-91507-0_10
4. Puri, R. and **Rustagi, A**. (2022). Current Trends in Developmental Genetics and Phylogenetic Patterns of Flower Symmetry. In A. Rustagi, & B. Chaudhry (Eds.), Plant Reproductive Ecology - Recent Advances. IntechOpen. https://doi.org/10.5772/intechopen.101772
5. **Rustagi Anjana**, Chugh Samira, Sharma Shweta, Kumari Punam and Kumar Deepak. (2021). Plant–Insect Interaction in Singh IK and Singh A eds. A Proteomic Approach in Defence Mechanism. Springer Nature, Singapore doi 10.1007/978-981-15-2467-7_3 ebook ISBN 978-981-15-2467-7
6. Garima Malik, Samira Chugh, **Anjana Rustagi** and Rahul Arora. (2020). Plant species forbidden in health and their toxic constituents. In: Galanakis C.M. (ed) Food Toxicology and Forensics. Academic Press, Elsevier, UK. ISBN: 978-0-12-822360-4.
7. Rustagi A. et al. (2020) Transgenic approaches for improvement of *Brassica* species. In: Wani S, Thakur A, Jeshina Khan Y. (eds) Brassica improvement. Springer Cham ISBN (online) 978-3-030-34694-2
8. **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.) Molecular Aspects of Plant-Pathogen Interaction, 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
9. 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.) Molecular Aspects of Plant-Pathogen Interaction, pg 185-202 Springer, Singapore (ISBN 978-981-10-7370-0 ISBN978-981-10-7371-7 (eBook) https://doi.org/10.1007/978-981-10-7371-7
10. 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) Abiotic Stress-Mediated Sensing and Signaling in Plants: An Omics Perspective.

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

11. **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. The Lychee Biotechnology' Springer Nature, Singapore eBook ISBN 978-981-10-3644-6, Hardcover ISBN 978-981-10-3643-9, DOI10.1007/978-981-10-3644-6
12. **Rustagi A**, Agrawal S and Singh G (2016) In-vitro Manipulation of *Musa* species (Bananas) for Sustainable Agriculture. In: Vandana (Ed.) Biomedical and Environment, Campus Books International, New Delhi pp.223 (ISBN: 978-81-8030-479-8)
13. **Rustagi A** (2016) 'Study of Medicinal Plants: Journey from Ancient Bharat to Modern Times In: Singh G et al eds. Evolution of Education System in Bharat' 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
14. **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
15. 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
16. 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
17. 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)
18. 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)
19. **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

Research papers presented in conferences/ seminars

1. **Oral** talk entitled '**Climate smart and disease resistant transgenic *Brassica juncea* by overexpression of Flowering Locus D (FLD)***'* at World Congress on In vitro Biology (Society for In vitro Biology Meeting 2024) at St. Louis, Missouri, USA from June 8th – 12th, 2024.
2. Oral talk entitled 'Plant Tissue Culture Technique for quality banana planting material: Lab to land Entrepreneurship' at 2nd National Conference for Skill Enhancement: A road to Atmanirbhar Bharat held at Gargi College, New Delhi from November 12th – 13th, 2024.
3. **Oral** talk entitled 'Overexpression of flowering locus D (FLD) in Indian mustard (Brassica juncea) enhances tolerance to *Alternaria brassicae* and *Sclerotinia sclerotiorum'* at Society for in vitro Biology **(SIVB) Meeting-2023 (International meeting) at Norfolk, Virginia, USA** from June 10th – 14th, 2023.

4. Presented research paper entitled ' Epifoliar application of 24- epibrassinolide (24-EBL) imparts biotic stress tolerance in *Brassica juncea* via modulation of redox homeostasis and stomatal movements' in '**International Conference** on Genetics and Genomics Technologies for Crop Improvement' organized by Hansraj College, New Delji in association with International Maize and Wheat Improvement Center (CIMMYT), Mexico from 1st to 3rd August 2021.
5. Presented research paper entitled 'Overexpression of BjFLD in *Brassica juncea* confers tolerance against *Alternaria brassicae* and *Sclerotinia sclerotiorum'* in '**International Conference** on Genetics and Genomics Technologies for Crop Improvement' organized by Hansraj College, New Delhi in association with International Maize and Wheat Improvement Center (CIMMYT), Mexico from 1st to 3rd August 2021.
6. **Presented poster entitled** 'Reproducible regeneration and genetic manipulation of *Musa* species for abiotic stress alleviation' at **International Conference** on Banana-2020 on 'Innovations in sustainable production and value chain management in banana' organized by ICAR-National Research Centre for Banana, Trichy in association with Bioversity International, Rome from February 22-25, 2020.
7. Presented poster at American Society of Plant Biology meeting 2019 held at Mcenery convention center, San Jose, California, USA from August 3-7 2019.
8. Delivered **flash talk** at 40th Meeting of plant tissue culture association – India and **International Conference** on Trends in Plant Sciences and Agrobiotechnology-2019 at Indian Institute of Technology, Guwahati, Assam during February 14-16 2019.
9. Presented poster in National conference on 'Recent Development in Plant Stress Biology: translating laboratory research for human welfare (RDPSB-2018)' organized by Department of Botany, Central University of Jammu, Jammu and Kashmir during December 7th -8th 2018
10. Presented poster at **Indo-US Colloquium** on 'Recent Developments in Interdisciplinary Research' organized by Hansraj College, University of Delhi in association with Loyola University Stritch School of Medicine, USA on 2nd July 2018
11. 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
12. 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.
13. 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.
14. 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.
15. **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

16. **Poster** presentation 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.
17. **Poster** presentation entitled 'Towards improvement of *Musa* species through *in vitro* manipulations' Banana 2008 International Conference, October 5-9, 2008, Mombasa, Kenya organized by International Institute of Tropical Agriculture.
18. **Poster** presentation entitled 'ABA assisted enhanced regeneration of banana somatic embryos' IV Annual Biosparks Research Festival at School of Life Sciences, JNU, New Delhi (2008).
19. **Poster** presentation entitled 'Regeneration and transformation of Plantain var. *Spambia* with *barnase* (phosphinothricin resistance) gene' National Symposium on Plant Biotechnology, CIMAP, Lucknow organized by Plant Tissue Culture Association of India (2005).

Scholarships and Awards:

1. **Best oral Presentation** award (second prize) for presenting research paper entitled "Characterisation, isolation and overexpression studies of Flowering Locus D (FLD) from *Brassica juncea*" in International Conference on "Bioinformatics in Biology: From Pre-requisite to Post-requisite", March 2-3, 2024, organized by the Department of Botany, Gargi College, University of Delhi and funded by Department of Biotechnology, Government of India.

2. **Best poster award** at National Conference on "Realms of plant diversity: Explorations with novel perspective" held on 24th August 2021, organised by Maitreyi College, New Delhi.
3. **Best Poster presentation** award at International Conference on Banana-2020 on 'Innovations in sustainable production and value chain management in banana' organized by ICAR-National Research Centre for Banana, Trichy in association with Bioversity International, Rome from February 22-25, 2020.
4. **Best oral presentation** award at National seminar on 'Use of Scientific and technical Technologies in Sustainable Environment' organized by Gargi College, New Delhi during March 14^{th} -16^{th} 2019
5. **Best poster award** at National conference on 'Recent Development in Plant stress biology: translating laboratory research for human welfare (RDPSB-2018)' organized by Department of Botany, Central University of Jammu, Jammu and Kashmir during December 7^{th} -8^{th} 2018
6. Selected jointly by Indian National Science Academy and Indian Academy of Sciences to Present original research work entitled 'Epifoliar treatment of *Brassica juncea* plants with 24-Epibrassinolide exhibit resistance to fungal Phytopathogens' on 28^{th} February 2018 at Indian National Science Academy, New Delhi on the occasion of 'National Science Day'
7. 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
8. **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.
9. Qualified for joint **CSIR-UGC NET** and **UGC-JRF** examination in June 2004.
10. Qualified for **UGC SRF** in January 2007

Conferences/Seminars/Workshop/Faculty Development Programme Participation:
More than 25 national/international seminars/ conference/ workshop participation and four faculty development program participation.

Synergistic Activities

1. Invited talk entitled ' Biotechnological Interventions for improvement of Indian *Musa* varieties' for Knowledge Nexus Seminar Series at **University of Queensland and Indian Institute of Technology (IIT)**, Delhi Research Academy, IIT Delhi on 17th February 2025.

2. Invited talk entitled ' Genetic Transformation of banana for stress alleviation' at SERB sponsored high end workshop on 'Molecular Markers and Tissue Culture Assisted Breeding' at Division of Genetics, Indian Agriculture Research Institute, New Delhi from 24th July to 2nd August 2023.
3. Invited talk entitled 'Biotechnological Interventions for Improvement of Banana crop' on 12.12.2023 in the Refresher course on 'Life Sciences and Biotechnology' (06 December -19 December 2023) organised by the UGC- Malviya Mission Teacher Training Centre, Doctor Hari Singh Gour Vishwavidyalaya, Sagar University (M.P.)
4. Invited talk entitled 'Regeneration and Genetic Transformation in Indian banana cultivars' at International conference on Advances and Innovations in Biotechnology and Allied Sciences organised by University Institute of Biotechnology, Chandigarh University in association with International Plant Propagators Society from 24th to 25th March 2022.
5. Advisory member of two days International Conference on "Insect and Plant Biology: 2021" (7th October– 8th October, 2021) organised by Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi.
6. Session chair (poster session) at two days International Conference on "Insect and Plant Biology: 2021" (7th October– 8th October, 2021) organised by Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi.
7. Organised Student Enrichment program on topic 'Mathematics for Biologists' from July 9th to 19th 2021 at Gargi College, New Delhi
8. Co-chaired a technical session at National conference on 'Recent Development in Plant Stress Biology: translating laboratory research for human welfare (RDPSB-2018)' organized by Department of Botany, Central University of Jammu, Jammu and Kashmir during December 7th -8th 2018.
9. Assocate Editor of international journal 'Botany' (https://cdnsciencepub.com/journal/cjb)
10. Review editor of international journal 'Frontiers in Agronomy' (https://www.frontiersin.org/journals/agronomy)
11. Professional member of 'Plantae' and American Society of Plant Biologists, USA.
12. Reviewer of international journal 'Journal of American Society of Horticulture Research' 2018.

Administrative Role

1. Proctor of College (November 2024 to till date).
2. Course in Charge, B.Sc. (programme) Life science 2020-22.
3. Staff advisor of 'Gargi College Botanical Society' 2017, 2018

4. Member, Admission committee, Gargi College 2017, 2019.
5. Member, Equal Opportunity Cell, Gargi College, Delhi 2015-17
6. Member, Physical Sciences committee, Gargi College, Delhi 2015
7. Conducted summer workshop on 'Plant Tissue Culture: Technique and Applications' for graduate students at Gargi College in June 2015.
8. Member of organizing committee for 'National Seminar on Relevance of Medicinal Plants' in 21st Century' organized by Ramjas College, University of Delhi from February 10-11, 2015.
9. Member of organizing committee for 'National Seminar on Current Environmental Challenges organized by Ramjas College, University of Delhi from 15th to 16th February 2013.
10. 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.
11. 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.
12. Advised six undergraduate students of Gargi College for completion of research project entitled 'Effect of foliar application of 24-EBL on *Brassica juncea*' funded by DBT, Government of India.

Dr. Anjana Rustagi