




**DEPARTMENT OF BOTANY**  
**DYAL SINGH COLLEGE, UNIVERSITY OF DELHI**  
**FACULTY DETAIL**



Title	Dr.	First Name	ANITA	Last Name	RANI	Photograph
Designation		Associate Professor				
Address		Department of Botany, Dyal Singh College, University of Delhi; Lodhi Road, New Delhi – 110003.				
Phone No Office		24367819				
Residence						
Mobile		9891909207				
Email		<a href="mailto:anitarani@dsc.du.ac.in">anitarani@dsc.du.ac.in</a> ; <a href="mailto:annuarani2007@gmail.com">annuarani2007@gmail.com</a>				
Web-Page						
Educational Qualifications						
Degree		Institution			Year	
B.Sc. Botany (Hons)		Daulat Ram College; University of Delhi			1999	
M.Sc. Botany		Department of Botany; University of Delhi			2001	
Ph.D. Botany		Department of Botany; University of Delhi			2011	
Career Profile						
<p>Dr. Anita is a recipient of JRF and SRF from Council of Scientific and Industrial Research (CSIR) and she began her teaching career as a guest lecturer in botany at Daulat Ram College, in 2002. She joined Dyal Singh College, University of Delhi in 2004, and has a teaching experience of 20 years. She has been teaching Mycology and Phytopathology, Genetics, Molecular Biology, Plant Physiology, Cell and Biomolecules, Cell and Molecular Biology, Analytical Techniques and Biostatistics, to undergraduate students. Dr. Anita has twenty-four papers, eight in international and five in national journals, and eleven book chapters to her credit. She has developed <b>four e-lessons</b> for the Department of Higher Education, Ministry of Human Resource Development (MHRD) Government of India, under the project “National Mission on Education through Information and Communication Technology” (NMEICT) for Discipline: <b>Botany, Paper: Plant Anatomy</b>, in 2014. She has also developed <b>two e-lessons</b> for Botany Discipline Course-I in 2013, for <b>Paper 3: Mycology and Phytopathology</b>, under the Four-Year Undergraduate Programme.</p> <p>Dr. Anita was the <b>Principle Investigator</b> in the innovation project <b>DSC-202 entitled “Screening of local anaesthetics (LAs) for antifungal / antimicrobial activities”</b>, funded by Delhi University for the year 2013-14. She has also convened a workshop for teachers in March 2019 on “<b>Recent Trends in Plant Systematics and Future Prospects</b>” and a National Symposium in February 2020 on “<b>Bioimaging</b>”, in the Department of Botany, Dyal Singh College. In October 2023, she also organized a national workshop at the Department of Botany on “<b>Exploring Opportunities in Organic Farming and Vermicomposting</b>”. Dr. Anita has been actively participating as a subject expert for the up-gradation of the <b>Botany glossary, Comprehensive Glossary of Sciences and preparation of the Environmental Science</b> glossary organized by the Commission for Scientific and Technical Terminology, Ministry of Human Resource Development (Department of Higher Education) from February 2014 till date.</p> <p>Dr. Anita has participated in five international, and twenty national conferences/symposia/seminars and presented twelve papers/posters. She has also attended sixteen workshops from 2003-2019. She has also attended 39 International Webinars / 115 National webinars/ 9 online Faculty Development programmes and 2 workshops in 2020-2021. In the academic year 2021-2022, she attended 5 online FDPs / workshops and in 2022-2023, attended one national and one international conference along with three workshops in offline mode. She attended two national webinars, one offline workshop, and one international conference during the academic year 2023–2024. In 2008, Dr. Anita was awarded the <b>Young Scientist medal</b> for a paper presentation at the National Seminar on Physiological and Biotechnological Approaches to Improve Plant Productivity, organized by Centre for Plant Biotechnology, Department of Science &amp; Technology, CCS Haryana Agricultural University New Campus, Hisar.</p>						

<b>Administrative Assignments (From 1<sup>st</sup> July 2019 onwards)</b>
<ul style="list-style-type: none"> <li>• Working as <b>Convener in Academic Committee</b> of the <b>Department of Botany</b> for the academic session 2024-2025</li> <li>• Working as <b>Co-convener in Admission Committee</b> of the <b>Department of Botany</b> for the academic session 2024-2025.</li> <li>• Working as a <b>Member of the Maintenance Committee</b> of the <b>Department of Botany</b> for the academic session 2024-2025.</li> <li>• Working as a <b>Superintendent, Practical Examination</b> of the <b>Department of Botany</b> for the academic session 2024-2025.</li> <li>• Working as <b>Member of Purchase and Instrument Maintenance</b> of the <b>Botany of Department</b> for the academic session 2024 – 2025.</li> <li>• Working as a <b>Member of Committee of Courses in Botany of Department, University of Delhi</b> for the academic session 2023 – 2025.</li> <li>• Worked as <b>Science Convener</b> in Admission Committee for the academic session 2023-2024</li> <li>• Worked as a <b>Member of the Fee Concession Committee</b> in 2023 - 2024.</li> <li>• Worked as a <b>Convener of Library Committee</b> of the Botany Department in 2023- 2024.</li> <li>• Worked as a <b>Member of the Grievance and Discipline</b> of Botany Department in 2023 - 2024.</li> <li>• Worked as a <b>Co-coordinator of the Mentor and Mentee</b> group of Botany Department in 2023 - 2024.</li> <li>• Worked as <b>Teacher In-Charge</b>, Department of Botany for the academic session 2022-2023.</li> <li>• Worked as <b>Convener of Purchase and Instrument Maintenance</b> of the Botany Department in 2022 – 2023.</li> <li>• Worked as a <b>member of the Grievance and Discipline</b> of Botany Department in 2022 - 2023.</li> <li>• Worked as a <b>Co-convener of the Academic Committee</b> of the Botany Department in 2022 - 2023.</li> <li>• Worked as a <b>member of the Fee Concession Committee</b> in 2022 - 2023.</li> <li>• Worked as <b>Science Convener in Admission Committee</b> for the academic session 2022-2023.</li> <li>• Worked as a <b>Convener of the Time Table Committee</b> of the Botany Department in 2021 - 2022.</li> <li>• Worked as a <b>Convener of the Academic Committee</b> of the Botany Department in 2021 - 2022.</li> <li>• Worked as a <b>Practical coordinator for Practical Exams</b> 2020 -2021.</li> <li>• Worked as a <b>Superintendent, Practical Examination</b> 2020 -2021 of the Department of Botany.</li> <li>• Worked as a <b>Member of the Library Committee</b> of the Botany Department in 2020 - 2021.</li> <li>• Worked as a <b>Member of the Admission Committee</b> for B.Sc. Life Sciences and a <b>member of the Instrument and Lab Maintenance Committee</b> (2019 - 2020).</li> </ul>
<b>Areas of Interest / Specialization</b>
Plant Physiology
<b>Subjects Taught</b>
Plant Physiology; Genetics and Plant Breeding; Molecular Biology of cell; Mycology and Phytopathology; Biostatistics; Analytical Techniques in Plant Sciences, Biomolecules and Cell Biology.
<b>Research Guidance</b>
<b>Publications Profile (From 1<sup>st</sup> July 2019 onwards)</b>
<ol style="list-style-type: none"> <li>1. Yasheshwar, Mukesh Kumar, <b>Anita Rani</b> and Shahid Umar (2023). Evaluating drought tolerance in marigold cultivars across different soil moisture levels. Journal of Soil and Water Conservation 22(4): 421-426, ISSN: 0022-457X (Print); 2455-7145 (Online); DOI: 10.5958/2455-7145.2023.00054.</li> </ol>

2. Dinesh Kumar, Bharat Singh, Gaurav Kumar, Rashmi Shakya, Kumar Vikram, **Anita Rani** and Himmat Singh (2023). Phyto-fabrication and characterization of *Alternanthera sessilis* leaf extract-mediated silver nanoparticles and evaluation of larvicidal potential. *Biomass Conversion and Biorefinery*. ISSN 21906815, 21906823 <https://doi.org/10.1007/s13399-023-04948-6> Impact factor: 4.05
3. Ayyagari Ramlal, **Anita Rani**, Aparna Nautiyal, Charu Kalra, Reeta Kumari, Jitendra Kumar, Shivamurthy Veeranna and Vachaspati Mishra (2023). Importance of omics approaches in plant-microbe interaction for plant disease control. *Physiological and Molecular Plant Pathology*, (128) 102153, ISSN 0885-5765, <https://doi.org/10.1016/j.pmpp.2023.102153> Impact factor: 2.741
4. Piyush Bhanu; S. Anagha Setlur; K. Chandrashekar; Vidya Niranjana ; Nisha Hemandhar Kumar; Sakshi Buchke; Jitendra Kumar; **Anita Rani**; M. Sushil Tiwari; Vachaspati Mishra (2023) Repurposing of known drugs for COVID-19 using molecular docking and simulation analysis. *Bioinformation* (2):149-159, DOI: 10.6026/97320630019149 Online ISSN 0973-2063; Print ISSN 0973-8894
5. Ayyagari Ramlal, Ritasree Sarma, **Anita Rani**, Aparna Nautiyal, Jitendra Kumar, and Vachaspati Mishra (2023) Plant-virus interactions in plant innate immunity. In: *Plant RNA Viruses: Molecular Pathogenesis and Management*. (Editors: Rajarshi Gaur, Basavaprabhu Patil, Ramasamy Selvarajan), Edition 1, Chapter 15 <https://doi.org/10.1016/B978-0-323-95339-9.00002-8>
6. Saurabh Sonwani, Anshu Gupta, Pallavi Saxena, and **Anita Rani** (2022) Fly ash toxicity, concerned issues and possible impacts on plant health and production. In: *Plants and their Interaction to Environmental Pollution* (Ed. Azamal Husen), Edition 1, Elsevier pp 109 -123. <https://doi.org/10.1016/B978-0-323-99978-6.00022-4>
7. Pendyala Chitrakleha, **Anita Rani**, Roma Katyal, Rashmi Mathur, and Saloni Gulati (2022). *Cuscuta reflexa* Roxb. Parasitism: The Development of Haustorium. *Phytomorphology: An International Journal of Plant Morphology* 72(3 & 4), 55–68. DOI 10.56024/ispm.72.3&4.2022/55-68
8. Pendyala Chitrakleha and **Anita Rani** (2022) Parasitism: Structural Development of Adhesive Disk. *Phytomorphology: An International Journal of Plant Morphology* 72(1&2):1-12. DOI: 10.56024/ispm.72.1&2.2022/1-12.
9. Riyazuddin Riyazuddin, Kalpita Singh, Nadeem Iqbal, Nisha Nisha, **Anita Rani**, Manu Kumar, Nisha Khatri, Manzher H. Siddiqui, Yasheshwar, Sun Tae Kim, Fehér Attila and Ravi Gupta (2022). Iodine: an emerging biostimulant of growth and stress responses in plants. *Plant Soil*. <https://doi.org/10.1007/s11104-022-05750-5>. <https://doi.org/10.1007/s11104-022-05804-8>
10. **Anita Rani**, Ruchi Raina and Arun Kumar Maurya (2022). Biodiversity conservation in india: techno-legal aspects in current scenario. *Journal of Agroecology and Natural Resource Management*. Volume 9, Issue 1; January-March, pp. 30-38. p-ISSN: 2394-0786, e-ISSN: 2394-0794
11. Jitendra Kumar, Ayyagari Ramlal, Kamal Kumar, **Anita Rani** and Vachaspati Mishra (2021) Signaling Pathways and Downstream Effectors of Host Innate Immunity in Plants. *International Journal of Molecular Sciences*, 22, 9022. <https://doi.org/10.3390/ijms22169022>. ISSN No. 1422-0067; Impact factor: 5.923
12. Ritu Singh, Sanjeev Kumar, Sushmita Kamarkar, Arif J Siddiqui, Ankita Mathur, Mohd Adnan, Vishnu D. Rajput, **Anita Rani** and Narendra Kumar (2021) Causes, Consequence and Control of Persistent Organic Pollutants Causes. In *Persistent Organic Pollutants in the Environment: Origin and Role* (Kumar N and Shukla V), CRC press, Taylor and Francis group, Chapter 2, (ISBN 9780367512880).
13. Sanjeev Kumar, Nisha Kumari, Susmita Karmakar, Ankit, Ritu Singh, Monalisha Behera, **Anita Rani** and Narendra Kumar (2020) *Advances in plant-microbe-based remediation approaches for environmental cleanup*.

<p>In Emerging Eco-friendly Technologies for Wastewater Treatment, Microorganisms for Sustainability (Eds Bharagava RN), Springer Nature, Singapore, pp 103-128. <b>ISSN No. 978-981-15-1389-3.</b></p> <p><b>14.</b> Ritu Singh, Monalisha Behera, Sanjeev Kumar and <b>Anita Rani</b> (2019) <i>Current state of knowledge on algae - mediated remediation of endocrine disrupting chemicals (EDCs) from wastewater.</i> In Application of Microalgae in wastewater treatment – Volume – I: Domestic and Industrial Wastewater Treatment (Eds Gupta SK and Bux F), Springer Nature Switzerland AG, pp 101-120. <b>ISBN No. 978-3-030-13913-1.</b></p>
<p>Conference Organization/ Presentations (From 1<sup>st</sup> July 2019 onwards)</p>
<ul style="list-style-type: none"> <li>Delivered an invited talk on “<b>The Role of Biological and Applied Sciences in Biodiversity Conservation</b>” in an international conference on “Integrative Interdisciplinary Avenues in Biology and Applied Sciences: Perspectives to Sustainable Development (ICIABASPSD-2024)” held on 27- 28th April 2024, organized by Faculty of Bio Sciences, M.L.K. (P.G.) College, Balrampur (U.P.), in association with Asian Biological Research Foundation (ABFR), Prayagraj, (U.P.)</li> <li>Convened a National Workshop on “<b>Exploring Opportunities in Organic Farming and Vermicomposting</b>”, in the Department of Botany, Dyal Singh College, University of Delhi, on 26th October, 2023.</li> <li>Organized online talk on “<b>Plastics and Biodiversity</b>”, in the Department of Botany, Dyal Singh College, University of Delhi, on 5th June, 2023.</li> <li>Organized a National Seminar on “<b>Recent Trends in Life Science Entrepreneurship in the Era of G20</b>”, in the Department of Botany, Dyal Singh College, University of Delhi, on 15th April, 2023</li> <li>Convened a National Symposium on “<b>Bioimaging</b>”, in the Department of Botany, Dyal Singh College, University of Delhi, on 19<sup>th</sup> February 2020.</li> <li>Convened a one-day workshop on “<b>Recent Trends in Plant Systematics and Future Prospects</b>”, in the Department of Botany, Dyal Singh College, New Delhi, on 12<sup>th</sup> March 2019.</li> <li>Ruchi Raina and <b>Anita Rani</b> “<b>Medicinal Plants and Intellectual Property Rights</b>” Presented a <b>poster</b> in the Interdisciplinary National Conference on “Intellectual Property Rights: Challenges and Prospects” organized by Department of Botany, Maitreyi College, University of Delhi from October 22- 23, 2019.</li> </ul>
<p>Research Projects (Major Grants/Research Collaboration) (From 1<sup>st</sup> July 2019 onwards)</p>
<p>Awards and Distinctions (From 1<sup>st</sup> July 2019 onwards)</p>
<p>Association With Professional Bodies</p> <ul style="list-style-type: none"> <li>❖ Life member of KK Nanda Foundation for Advancement of Plant Sciences.</li> <li>❖ Life member of DUBS (Delhi University Botanical Society).</li> <li>❖ Life member of ATBS (Association of Teachers in Biological Sciences).</li> <li>❖ Life Members of Professor H S Srivastava Foundation for Science and Society.</li> <li>❖ Life member of The Society for Science of Climate Change and Sustainable Environment (SSCE).</li> </ul>
<p>Other Activities like MOOCs/ Patents etc. (From 1<sup>st</sup> July 2017 onwards)</p>

*Anita Rani*

**Anita Rani**  
Signature of Faculty Member