

CURRICULUM VITAE



Dr. Pooja Suneja

Associate Professor

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EDUCATIONAL QUALIFICATIONS:

- PhD (BioScience) from Maharshi Dayanand University, Rohtak, Haryana, India. **Thesis entitled** “Molecular characterization of rhizobia forming nodules on reverted non-nodulating selections of chickpea.”
- M.Sc. (Microbiology) from CCSHAU Hisar, Haryana, India (**Gold Medalist**)
- B.Sc. (Life Science) from Kurukshetra University, Kurukshetra, Haryana, India



TEACHING EXPERIENCE:

- **Sept, 2022-Present: Associate Professor**, Department of Microbiology, M.D. University, Rohtak
- **Sept 2010-Sept, 2022: Assistant Professor**, Department of Microbiology, M.D. University, Rohtak
- **Nov 2001- Oct 2006: Guest Faculty**, Department of Biosciences, M.D. University, Rohtak



AWARDS/FELLOWSHIP/ SCHOLARSHIP:

- **Best Poster award** in National Seminar” Innovative Researches in Life Sciences” organized by the Department of Zoology, M.D. University on 21 st Feb, 2015
- **DST –FAST TRACK** Young scientist award 2014
- Qualified **National eligibility test (NET)** for Lectureship held by Council of Industrial Research in Dec 2000
- **Dr. Ved Vyas Gold Medal** in the M.Sc. Microbiology 1999
- **UNIVERSITY Scholarship** during M.Sc. Microbiology



RESEARCH PROFILE:

Research specialization

: Molecular Plant Microbe Interaction and Nanomicrobiology

Research guidance

**: Ph.D. Guidance: 7 students, 3 completed, 4 ongoing.
MSc. Supervised: 50 students**



RESEARCH PROJECTS:

- **Haryana state council for Science, Innovation and Technology (HSCSIT) funded Project entitled “Evaluating the role of biopriming and nanoprimering in *Cicer arietinum*: a genomics and proteomics approach under drought stress” (Tenure: Three Years; 2022-2025) **Ongoing****
- **Dr. RadhaKrishanan Foundation Fund, M D University, Rohtak** entitled “Optimization of IAA production by endophytic bacterial isolates for their potential use as bioinoculants” (Tenure: One Year; 2019-2020) **Completed**
- **DST Project** entitled “Exploration of endophytic bacterial diversity in legume based cropping system in Haryana for potential use in crop improvement” (**Young scientist start up grant**) (Tenure: Three years ;2014-2017) **Completed**
- **Dr. RadhaKrishanan Foundation Fund, M D University, Rohtak** entitled “Isolation and biochemical characterization of bacterial endophytes from roots and nodules of leguminous plants grown in Rohtak district” (Tenure: One Year; 2013-2014) **Completed**
- **UGC-Minor Project** entitled “Molecular characterization of rhizobia forming nodules on reverted non-nodulating selections of chickpea” (Tenure: Two Years; 2011-2013) **Completed**



RESEARCH INTEREST:

- Bioprospecting of endophytic bacteria from Legumes for their potential use as bioinoculants and phytohormone production
- Biogenic synthesis of nanoparticles using microorganisms and exploring their role in seed priming particularly in abiotic stress
- Analysing the probiotic potential of microbes as therapeutics for Celiac disease
- Omics analysis of host-microbe interaction
- Microbial communities and metabolic profiling of fermenting millets specifically sourdough



RESEARCH PAPERS:

1. Kumar, P., Sudesh, Kumar, A., **Suneja, P.** (2023). Studies on the physicochemical parameter's optimization for indole-3-acetic acid production by *Pantoea agglomerans* CPHN2 using one factor at a time (OFAT) and response surface methodology (RSM). *Environmental Sustainability*, 6(1), 35-44. <https://doi.org/10.1007/s42398-022-00254-5>.
2. Kumar, P., Rani, S., Dahiya, P., Kumar, A., Dang, A.S., **Suneja, P.** (2022). Whole genome analysis for plant growth promotion profiling of *Pantoea agglomerans* CPHN2, a non-rhizobial nodule endophyte. *Frontiers in Microbiology*, 7;13:998821. doi: 10.3389/fmicb.2022.998821. IF 6.064
3. Kumar, P., Chauhan, V., Dang, A.S., Kumar, A., **Suneja P.** (2022). Draft Genome Sequence of *Pantoea agglomerans* CPHN2, a Potential Plant-Growth-Promoting Endophyte. *Microbiology Resource Announcements*, e00192-22. <https://doi.org/10.1128/mra.00192-22>.
4. Bhutani N, Maheshwari R, Sharma N, Kumar P, Dang AS, **Suneja P.** Characterization of halo-tolerant plant growth promoting endophytic *Bacillus licheniformis* MHN 12. *Journal of genetic engineering & biotechnology*, 2022 ,20(1):113.

5. Batra, M., Bhatnager, R., Kumar, A., **Suneja, P.**, Dang, A. S. (2022). Interplay between PCOS and microbiome: The road less travelled. *American Journal of Reproductive Immunology*, doi.org/10.1111/aji.13580. IF 3.777
6. Maheshwari, R., Kumar, P., Bhutani, N., **Suneja, P.** (2022). Exploration of plant growth-promoting endophytic bacteria from *Pisum sativum* and *Cicer arietinum* from South–West Haryana. *Journal of Basic Microbiology*, 62(7),857-74. https://doi.org/10.1002/jobm.202100575. IF 2.65
7. Rani, S., Kumar, P., Dahiya, P., Dang, A.S., **Suneja, P.** (2022). Biogenic Synthesis of Zinc Nanoparticles, Their Applications, and Toxicity Prospects. *Frontiers in Microbiology*, 13, 824427. https://doi.org/10.3389/fmicb.2022.824427. IF 6.064
8. Rani, S., Kumar, P., Dahiya, P., Maheshwari, R., Dang, A.S., **Suneja P.** (2022). Endophytism: A Multidimensional Approach to Plant–Prokaryotic Microbe Interaction. *Frontiers in Microbiology*, 13, 861235. https://doi.org/10.3389/fmicb.2022.861235. IF 6.064
9. Maheshwari, R., Bhutani, N., Kumar, P., **Suneja, P.** (2021). Plant growth promoting potential of multifarious endophytic *Pseudomonas lini* strain isolated from *Cicer arietinum* L. *Israel Journal of Plant Sciences*, 69(1-2), 50-60. IF 1.1
10. Bhutani, N., Maheshwari, R., Kumar, P., **Suneja, P.** (2021). Bioprospecting of endophytic bacteria from nodules and roots of *Vigna radiata*, *Vigna unguiculata* and *Cajanus cajan* for their potential use as bioinoculants. *Plant Gene*, 28, 100326. https://doi.org/10.1016/j.plgene.2021.100326.
11. Rani, S., Kumar, P., **Suneja, P.** (2021). Biotechnological interventions for inducing abiotic stress tolerance in crops. *Plant Gene*, 27, 100315. https://doi.org/10.1016/j.plgene.2021.100315.
12. Bhutani, N., Maheshwari, R., Kumar, P., Dahiya, R., **Suneja, P.** (2021). Bioprospecting for extracellular enzymes from endophytic bacteria isolated from *Vigna radiata* and *Cajanus cajan*. *Journal of Applied Biology and Biotechnology*, Apr 30;9(3):2-4. http://dx.doi.org/10.7324/JABB.2021.9304.
13. Dudeja, S.S., **Suneja-Madan, P.**, Paul, M., Maheswari, R., Kothe, E. (2021). Bacterial endophytes: Molecular interactions with their hosts. *Journal of Basic Microbiology*, 61(6):475-505. https://doi.org/10.1002/jobm.202000657. IF 2.65
14. Maheshwari, R., Bhutani, N., **Suneja, P.** (2020). Isolation and characterization of ACC deaminase producing endophytic *Bacillus mojavensis* strain from *Pisum sativum*. *Iranian Journal of Biotechnology*, 18(2), 11-20. https://doi.org/10.30498%2FIJB.2020.137279.2308. IF 1.3
15. Maheshwari, R., Bhutani, N., Bhardwaj, A., **Suneja, P.** (2019). Functional diversity of cultivable endophytes from *Cicer arietinum* and *Pisum sativum*: bioprospecting their plant growth potential. *Biocatalysis and Agricultural Biotechnology*, 20, 101229. https://doi.org/10.1016/j.bcab.2019.101229. IF 4
16. Maheshwari, R., Bhutani, N., **Suneja, P.** (2019). Screening and characterization of siderophore producing endophytic bacteria from *Cicer arietinum* and *Pisum sativum* plants. *Journal of Applied Biology and Biotechnology*, 7, 7-14. http://dx.doi.org/10.7324/JABB.2019.70502.
17. Bhutani, N., Maheshwari, R., Negi, M., **Suneja, P.** (2018). Optimization of IAA production by endophytic *Bacillus* spp. from *Vigna radiata* for their potential use as plant growth promoters. *Israel Journal of Plant Science*, 65, 83-96. IF 1.3
18. Bhutani, N., Maheshwari, R., **Suneja, P.** (2018). Isolation and characterization of plant growth promoting endophytic bacteria isolated from *Vigna radiata*. *Indian Journal of Agriculture Research*, 52(6), 596-603. http://dx.doi.org/10.18805/IJARE.%20A-5047.
19. Suneja, P., Dudeja, S.S., **Dahiya, P.** (2016). Deciphering the phylogenetic relationships among rhizobia nodulating chickpea: A Review. *Journal of Applied Biology and Biotechnology* ,4 (03): 061-070. DOI: 10.7324/JABB.2016.40310.
20. **Suneja, P.**, Piplani, S., Dahiya, P., Dudeja, S.S. (2016). Molecular Characterization of Rhizobia from Revertants of Non-nodulating Cultivar and Normal Cultivar of Chickpea. *Journal of Agriculture Science and Technology*, 18: 763-773. IF 1.098

21. **Madan, P.S.**, Kumar, A., Dahiya, P. (2014). Characterization of epiphytic bacteria isolated from chickpea (*Cicer arietinum* L.) nodules. African Journal of Microbiology, 8(12):1302-1309.
22. **Madan, P.S.**, Dahiya, P. (2013). Diversity and effectivity of *mesorhizobia* nodulating reverted non nodulating lines of chickpea in comparison to the normal cultivar. Plant Archives 13(2):929-935.
23. Dudeja, S.S., Giri, R., Saini, R., **Suneja-Madan, P.**, Kothe, E. (2012). Interaction of endophytic microbes with legumes. Journal of Basic Microbiology, 52(3):248-260. <https://doi.org/10.1002/jobm.201100063>. IF 2.65
24. **Suneja, P.**, Dudeja, S.S., Narula, N. (2007). Development of multiple co-inoculants of different biofertilizers and their interaction with plants. Archives of Agronomy and Soil Science.53:2, 221 - 230. <https://doi.org/10.1080/03650340601183723>. IF 2.9



CONFERENCE PROCEEDINGS:

- ❖ Naveen, **Suneja P**, Nanda S, 2015. Microsponge delivery system of Propyl Paraben for sustained preservation of creams and ointments: Optimization, characterization and antimicrobial evaluation. International Journal of Pharmaceutical Sciences and Research IJPSR Scientific Proceeding APTICON 2015 ISSN: 0975-8232 “Strategic Approaches to Strengthen Academic and Industrial Collaboration” www.ijpsr.com 296 PA-91
- ❖ Nirupama, **Suneja P**, 2015. Isolation and Characterization of Endophytes for their Plant Growth Promoting Traits from Chickpea (*Cicer arietinum*) roots.144-148.Proceedings of National Seminar “Innovative Researches in Life Science” on ISBN 78-81-920945-5-7.
- ❖ **Suneja P**, Dang AS, 2014. Probiotics. Proceedings National Seminar “Next Generation Science: vision 2020 & Beyond” March 8, 2014. Department of Zoology, Maharshi Dayanand University, Rohtak (Haryana)
- ❖ Dang AS, **Suneja P**, 2014. Gut microbiota, major health concern: A Review Proceedings National Seminar “Next Generation Science: vision 2020 & Beyond” March 8, 2014. Department of Zoology, Maharshi Dayanand University, Rohtak (Haryana)
- ❖ Dang AS, Preeti, **Madan PS**, Kumar A, 2013. Primary characterisation of staining effects of *Lawsonia inermis* extracts on plant tissues. Proceedings National Seminar “Promising trends in Science Galaxy” March 20, 2013. Department of Zoology, Maharshi Dayanand University, Rohtak (Haryana)
- ❖ Dahiya P, Jakhar S, **Madan P**. 2013. Mold Allergy: An Overview. Proceedings National Seminar “Promising trends in Science Galaxy” March 20, 2013. Department of Zoology, Maharshi Dayanand University, Rohtak (Haryana)



BOOK CHAPTERS:

- ❖ Pushkarna, S., Bhatnager, R., Kumar, A., **Suneja, P.**, Dang, A.S. (2023). Role of Microbiome in Reproductive Health: An Expanding Dimension. https://doi.org/10.1007/978-981-99-3126-2_16
- ❖ Rani, S., Kumar, P., Dahiya, P., Dang, A.S., **Suneja, P.** (2023). Microbial Secondary Metabolites: Targeting Tumors and Associated Challenges. In Role of Microbes in Sustainable Development. Published by Springer, Singapore. https://doi.org/10.1007/978-981-99-3126-2_19
- ❖ Rani, S., Kumar, P., Dahiya, P., Priya, **Suneja, P.** (2023). Synthesis of Nanoparticles by Microbes. In Role of Microbes in Sustainable Development. Published by Springer, Singapore. https://doi.org/10.1007/978-981-99-3126-2_29
- ❖ **Suneja, P.**, Kumar, P., Rani, S., Simran, Dang, A.S. (2022). Identification of Fungal Endophytes by ITS rDNA Technique. In Endophytic Microbes: Isolation, Identification, and Bioactive Potentials (pp. 89-95). Published by Springer, New York, US. https://doi.org/10.1007/978-1-0716-2827-0_11

❖ Rani, S., Kumar, P., Deepika, Dang, A.S., **Suneja, P.** (2022). Detection of Endophytes by Reactive Oxygen Staining. In *Endophytic Microbes: Isolation, Identification, and Bioactive Potentials* (pp. 77-81). Published by Springer, New York, US. https://doi.org/10.1007/978-1-0716-2827-0_9

❖ Kumar, P., Rani, S., Sarita, Dang, A.S., **Suneja, P.** (2022). Detection of endophytes by electron microscope. In *Endophytic Microbes: Isolation, Identification, and Bioactive Potentials* (pp. 71-76). Published by Springer, New York, US. https://doi.org/10.1007/978-1-0716-2827-0_8

❖ Maheshwari, R., Kumar, P., Bhutani, N., **Suneja, P.** (2020). Bioprospecting Plant Growth Promoting Bacterial Endophytes From *C. arietinum* and *P. sativum* In: *Sustainable Intensification of Agriculture and Development. Proceedings of International Foundation for Sustainable Development in Africa and Asia (IFSDAA)*.

❖ **Suneja, P.**, Duhan, J.S., Bhutani, N., Dudeja, S.S. (2017). Recent Biotechnological Approaches to Study Taxonomy of Legume Nodule Forming *Rhizobia*. 101-124 In: *Plant Biotechnology: Recent Advancements and Developments* (Edited by Gahlawat, S.K., Salar, R.K., Siwach, P., Duhan, J.S., Kumar, S., Kaur, P). published by Springer-Verlag, Germany. ISBN 978-981-10-4731-2, ISBN 978-981-10-4732-9 (e Book) DOI 10.1007/978-981-10-4732-9

❖ **Madan, P.S.**, Jakhar, S., Dahiya, P. (2014). Plant as Potential Source of Antimicrobials In *Promotion and Globalization of Indian herbal products* (Ed. Munish Garg). Published by Lambert Academic publishing pp. 63-75. ISBN:978-3-659-59033-7



LECTURES DELIVERED:

- “Microbial Metabolites Advances and Challenges” in the workshop cum training organized under UGC-Stride organized by Department of Microbiology MDU from 14th to 19th February 2022
- “Business Opportunities in Agriculture Sector” in A one day National Webinar titled: Awakening the Entrepreneur Within” organized by Department of Microbiology MDU on 26th February 2021



MEMBERSHIP:

- Life membership of Association of Microbiologists of India
- Member, Indian Science Congress Association
- Life membership of Biotech Research Society of India

Pooja Suneja