

Dr Sunita Devi

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Research Projects

- Externally funded project on “Microbial keratinases – An economic, ecofriendly and innovative approach for waste management” funded by Ministry of Environment, Forests and Climate Change, Govt. of India under Integrated Eco- Development Research Programme in Himalayan Region for ₹ 19.68 lakhs from 2016-2019 (Principal Investigator).
- Externally funded project on “Culturable microbial diversity of *Arnebia euchroma* (Ratanjot): A critically endangered plant growing in trans-Himalayas of Himachal Pradesh” funded by Ministry of Environment, Forests and Climate Change, Govt. of India under National Mission on Himalayan Studies (NMHS) fellowships for ₹ 16.28 lakhs from 2016-2019 (Principal Investigator).
- Externally funded project on “Bioconversion of waste chicken feathers into N-rich organic fertilizer by keratinolytic bacteria for effective waste management in Himachal Pradesh” funded by Department of Environment, Science & Technology, Shimla, Govt. of Himachal Pradesh for ₹ 6.16 lakhs from 2022-2025 (Principal Investigator).
- Externally funded project on, “Proposal for setting up of honeybee disease diagnostic and treatment laboratory”, funded by National Bee Board, Govt. of India for ₹ 28.30 lakhs from 2021-2023 (Co-Principal Investigator).
- Externally funded project on, “Exploration of gut microbiome for sustainable beekeeping”, funded by National Bee Board under NBHM of DAC, Ministry of Agriculture and Farmers welfare, Govt. of India for ₹ 9.00 lakhs from 2022-2024 (Co-Principal Investigator).
- Externally funded project on, “Mass production of bio-fertilizers/PGPR: Promotion of technology for sustainable horticultural and vegetable crops for entrepreneurship”, funded by Department of Agriculture, Govt. of Himachal Pradesh for ₹ 33.00 lakhs from 2025-2026 (Co-Principal Investigator).

Important Research Publications

- Devi D, Thakur M and **Devi S.** 2026. Survey studies on diseases and pests associated with hivebees: beekeeper’s perception. International Journal of Tropical Insect Science. <https://doi.org/10.1007/s42690-026-01872-w> . **(Naas Rating: 7.20: impact factor: 1.20)- Scopus indexed**
- Sharma S, Tomar M, Watpade S and **Devi S.** 2026. First report of bacterial canker and gummosis of Plum caused by *Staphylococcus warneri* in the Indian Himalayan region. Australasian Plant Pathology 55, 3. <https://doi.org/10.1007/s13313-026-01089-y>. **(Naas Rating: 7.10: impact factor: 1.0)- Scopus indexed**
- Sharma R, Thakur M, **Devi S** and Rana K. 2026. Assessing melissopalynological diversity and geographical origin indicators of *Apis mellifera* L. honey from Himachal Pradesh,

India. *Palynology* 50(2): <https://doi.org/10.1080/01916122.2025.2601526> (**Naas Rating: 7.3; impact factor: 1.3**)- **Scopus indexed**

- **Devi S**, Rana A, Manorma K, Sharma P, Chand S and Sharma M. 2026. Antibacterial efficacy and bioactive pigments' profiling of *Arnebia euchroma* (Ratanjot): A critically endangered medicinal plant from the Trans-Himalayan region. *Pharmacological Research - Natural Products*. 10:100457 (**Scopus indexed**)
- Chauhan S, Kumari A, **Devi S**, Saini P. 2025. Effect of N₂-fixing non-Frankia actinomycete inoculum on the growth and nodulation status of *Elaeagnus umbellata* Thunb. *Ecological Frontiers* 45 (4): 959-968. <https://doi.org/10.1016/j.ecofro.2025.03.004> . (**NAAS rating: 12.3; Impact factor: 6.3**) - **Scopus indexed**
- Sharma M, **Devi S**, and Chand S. 2025. Biocontrol strategies for sustainable management of root-knot nematodes. *Physiological and Molecular Plant Pathology* 136:102548. ISSN 0885-5765. (**NAAS rating: 9.30; Impact factor: 3.30**) - **Scopus indexed**
- Chand S, **Devi S**, Sharma M and Manorma K. 2025. Nano-Biofertilizers for Sustainable Agriculture. *Communications in Soil Science and Plant Analysis* 1–19. (**NAAS rating: 7.40; Impact factor: 1.4**) - **Scopus indexed**
- Kaul R, **Devi S**, Sharma M and Chand S. 2025. Relevance of microorganisms in Causing Rain and Snow. *Recent Patents on Biotechnology* 19 (4): 319 – 330. - **Scopus indexed**
- Arya P, Vaidya D, Kaushal M, **Devi S**, Gupta A and Chand S. 2025. Effects of different solvents on phytochemical constituents, in-vitro antimicrobial activity, and volatile components of *Boehmeria rugulosa* Wedd. wood extract. *Scientific Reports* 15, 29135. (**NAAS rating: 9.90; Impact factor: 3.9**) - **Scopus indexed.**
- Arya P, Vaidya D, **Devi S**, Kaushal M, Myathtwe H, Devi D, Gupta A. 2025. Fermentation-driven bioactive enhancement in cereal grains: Mechanisms, nutritional improvements, and functional food applications. *Trends in Food Science & Technology* 166: 105403. <https://doi.org/10.1016/j.tifs.2025.105403>. (**NAAS rating: 20.00; Impact factor: 14.0**) - **Scopus indexed.**
- Kumar A, Gupta M, Sharma S K, Kumar S, Shukla A and **Devi S**. 2025. Evaluation of biochemical basis of chemical induced basal rot tolerance affecting garlic cultivation in Himachal Pradesh. *Plant Science Today* 12(4):<https://doi.org/10.14719/pst.9913> (**NAAS rating: 6.80; Impact factor: 0.8**) - **Scopus indexed.**
- **Devi S**, Chand S, Sharma P, Katna S, Abhay and Sharma M. 2025. Plant growth-promoting rhizobacteria in pesticide biodegradation: A comprehensive review. *Soil and Sediment Contamination: An International Journal* 34:1–37. doi.org/10.1080/15320383.2025.2532729. (**NAAS rating: 7.40; Impact factor: 1.4**) - **Scopus indexed.**
- Sharma S, Tomar M, Watpade S, Shukla A, **Devi S** and Verma P. 2025. Characterization of *Pantoea* agglomerans associated with shot hole, canker and gummosis in peaches and plums from the Northwestern Himalayan region of India. *Crop Protection* 191:107143.

<https://doi.org/10.1016/j.cropro.2025.107143> (NAAS rating: 8.50 and impact factor: 2.50)-
Scopus indexed.

- Sharma R, Thakur M, Rana K and **Devi S**. 2025. Characterization of unique unifloral honeys from the Indian North-Western Himalayas: physicochemical and mineral properties with prospects for GI tagging. *International Journal of Tropical Insect Science* 45: 3131–3147. <https://doi.org/10.1007/s42690-025-01662-w> (NAAS rating: 7.20 and impact factor: 1.20) - **Scopus indexed.**
- Sharma R, Thakur M, **Devi S**, and Rana K. 2025. Assessing melissopalynological diversity and Geographical origin indicators of *Apis mellifera* L. honey from Himachal Pradesh, India. *Palynology*. <https://doi.org/10.1080/01916122.2025.2601526> (NAAS rating: 7.30 and impact factor: 1.30) - **Scopus indexed.**
- **Devi S**, Kesta K, Sharma M, Chand S, Manorma K, Dilta BS, Upadhyay NK, and Chauhan PK, and Gupta S. 2024. Effect of Chicken Feather Hydrolysate on Growth and Yield of French Bean. *Waste Biomass and Valorization* 15: 5387–5414. <https://doi.org/10.1007/s12649-024-02532-1> (Naas rating: 9.20; Impact factor:3.2) - **Scopus indexed**
- Chand S, **Devi S**, Devi D, Arya P, Manorma K, Kesta K, Sharma M, Bishist R, and Tomar M. 2023. Microbial and physico-chemical dynamics associated with chicken feather compost preparation vis-à-vis its impact on the growth performance of tomato crop. *Biocatalysis and Agricultural Biotechnology* 54: 102885, <https://doi.org/10.1016/j.bcab.2023.102885> (NAAS rating: 10.00 and impact factor: 4.0)- **Scopus indexed**
- **Devi S**, Chauhan A, Bishist R, Sankhyan N, Rana K and Sharma N. 2022. Production, partial purification and efficacy of keratinase from *Bacillus halotolerans* L2EN1 isolated from the poultry farm of Himachal Pradesh as a potential laundry additive. *Biocatalysis and Biotransformation*: 1-21 DOI: [10.1080/10242422.2022.2029851](https://doi.org/10.1080/10242422.2022.2029851) (NAAS rating: 8.33 and impact factor: 2.33)- **Scopus indexed**

Books Published

- **Devi S**, Rana K, Sankhyan N and Kaul R. 2023. *Advances and Applications in Microbial Physiology*. Cambridge Scholars Publishing, UK. ISBN (10): 1-5275-9224- 3; ISBN (13): 978-1-5275-9224-7. Pg: 1-125
- **Devi S**, Manorma K, Sharma M and Chand S. 2024. *Microbiology for ICAR NET: A Comprehensive Exam Preparation Guide*. BENTHAM SCIENCE PUBLISHERS LTD.

Book chapters:

- i. Manorma K, **Devi S**, Sharma M, Chand S, Kesta K and Tomar M. 2024. Chapter 20 - *Bacillus* antagonists: from rhizosphere to industry. Editor(s): Raghvendra Pratap Singh, Geetanjali Manchanda, Sreedevi Sarsan, Ajay Kumar, Hovik Panosyan. In: *Developments in Applied Microbiology and Biotechnology, Microbial Essentialism*, Academic Press, Pages 443-465, ISBN 9780443139321, <https://doi.org/10.1016/B978-0-443-13932-1.00018-0> .
- ii. Sharma M, **Devi S**, Manorma K, Kesta K, Chand S, Sharma R, Tomar M and Gupta M. 2024. Chapter 18 - Plant growth-promoting fungi: a tool for agriculturally important industrial production, Editor(s): Raghvendra Pratap Singh, Geetanjali Manchanda, Sreedevi Sarsan, Ajay Kumar, Hovik Panosyan. In: *Developments in Applied Microbiology and Biotechnology, Microbial Essentialism*, Academic Press, Pages 393-418, ISBN 9780443139321. <https://doi.org/10.1016/B978-0-443-13932-1.00016-7> .
- iii. Manorma K, **Devi S**, Sharma M, Chand S, Rana K, Kesta K and Sharma K. 2024. Chapter 14 -Microbial biostimulants in the amelioration of climate change. Editor(s): Puneet Singh Chauhan, Nikita Bisht, Renuka Agarwal. In: *Biostimulants and Protective Biochemical*

Agents, Microbial Biostimulants for Plant Growth and Abiotic Stress Amelioration, Elsevier, Pages 253-282, ISBN 9780443133183. <https://doi.org/10.1016/B978-0-443-13318-3.00006-9>.

- iv. Kaushal M, **Devi S**, Kumawat KC and Kumar A. 2023. Microbial Consortium: A Boon for a Sustainable Agriculture. In: Parray, J.A. (eds) Climate Change and Microbiome Dynamics. Climate Change Management. Springer, Cham. https://doi.org/10.1007/978-3-031-21079-2_2.
- v. Sood D, **Devi S**, Devi B and Arya P. (2022). Microbial Antioxidants in Food Products. In: Nadda, A.K., Goel, G. (eds) Microbes for Natural Food Additives. Microorganisms for Sustainability, vol 38. Springer, Singapore. https://doi.org/10.1007/978-981-19-5711-6_3.
- vi. Devi B, **Devi S**, Sood D and Arya P. (2022). Microbial Stabilizers in Food Processing. In: Nadda, A.K., Goel, G. (eds) Microbes for Natural Food Additives. Microorganisms for Sustainability, vol 38. Springer, Singapore. https://doi.org/10.1007/978-981-19-5711-6_6.
- vii. Thakur K, **Devi S** and Mahajan G. 2021. Bio-Plastic: A Potential Alternative to Conventional Plastics. In: Advances in Multidisciplinary Research and Development (ed. Thakur RS) Scripown Publications 2: 57-73 (ISBN: 978-93-90833-52-8).
- viii. Mahajan G, **Devi S** and Thakur K. 2022. Edible Vaccines: A New Frontier. In: Research in Microbiology (eds. Handa D. & Kumar A) AkiNik Publications, New Delhi. Pp: 1-22. (ISBN: 978-93-5570-158-9. DOI: <https://doi.org/10.22271/ed.book.1688>).
- ix. Soni R, **Devi S**. 2022. Chapter 12 - Composting process: Fundamental and molecular aspects. In: Relationship between Microbes and the Environment for Sustainable Ecosystem Services (eds: Samuel J, Kumar A & Singh J), Elsevier Inc., 1: 239-2659 ISBN 9780323899383). <https://doi.org/10.1016/B978-0-323-89938-3.00012-8>.
- x. **Devi S**. and Soni R. 2020. Relevance of Microbial Diversity in Implicating Soil Restoration and Health Management. In: Meena R. (eds) Soil Health Restoration and Management. Springer, Singapore. https://doi.org/10.1007/978-981-13-8570-4_5.
- xi. **Devi S**, Devi B and Verma S. 2016. "Practices in Bioleaching: A Review on Clean and Economic Alternative for Safe and Green Environment. In: Engineering Interventions in Agricultural Processing": Editors: Megh R. Goyal and Deepak Kumar Verma, Apple Academic Press, Inc. United States of America (USA)
- xii. **Devi S** and Thakur S. 2010. "*Deinococcus radiodurans*: A marvelous berry that withstands radiation". In: Applications of Microbiology. Aavishkar publishers (India), Jodhpur. pp 133-154
- xiii. Kanwar S.S. and **Devi S**. 2003. Biosensors and their applications. In: Advances in Microbiology. Scientific publishers (India), Jodhpur. Pp.15-22

Innovation

- Developed a novel and discernible plate assay method for the qualitative screening of bacterial keratinases

Awards & Recognitions

- Qualified National Eligibility Test (NET) conducted by Agricultural Scientists Recruitment Board (ASRB), ICAR in 2001 in the subject of Microbiology (Agriculture).
- Recipient of University Merit Scholarship during M.Sc.
- Received Certificate of Honour in M.Sc.
- Recipient of Rajiv Gandhi National Fellowship of UGC during Ph.D. Initially as JRF for two years and as SRF from 3rd year onwards
- Received “Kanwar Virender Singh Memorial All India Best Publication Award 2021” award for the book chapter - Devi S and Soni R 2020. Relevance of microbial diversity in implicating soil restoration and health management. In: Soil health restoration and management (RS Meena, ed), Springer Nature Singapore Pvt Ltd, pp 161-202, from Society for advancement of Human and Nature (SADHNA), Dr Y S Parmar University of Horticulture and Forestry, Nauni- Solan (HP).

Patents: Patents published: 03; Filed: 01