

Curriculum vitae

Dr.Harsharan Singh

Personal Details

Address:School of Life Science, Department of Plant Sciences Plant Sciences,
Central University of Himachal Pradesh, India

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Citizenship India

Professional Qualifications

M.Sc (HonS) in Botany, Ph.D

Employment History

Associate Professor, Central University of Himachal Pradesh from 21-09-2023 to till date.
Assistant Professor, Lyallpur Khalsa College, Jalandhar from 19-10-2007 to 20-09-2023.

Specialization

Ethnobotany, Plant Diversity, Phytochemical Extraction, Plant Molecular Biology, Functional Genomics, Metabolomics and Plant Metabolic Engineering.

Personal Distinctions

Appointed Editorial member: Emerging Environmental Contaminants in 2025 (ESA)

Appointed as Review member: Archives of Stem Cell and Therapy

Life member of HLSS society

Qualified CSIR JRF NET

Invited Seminars and Invited Conference Presentations (last 5 years)

Invited talk on topic Primer design in research and innovation. International workshop on Pioneering Techniques in Life Sciences: Tools for tomorrow's Discoveries organised by Career point University, Hamirpur (H.P). 176041 on 3rd to 4th October 2024.

Invited talk and training on topic Role of enzyme in Abiotic Stress. workshop on Enzyme Techniques in Plant organised by DAV College Amritsar on 22.02. 2024

Professional Contributions (last 5 years)

External Expert For RAC meeting of Phd scholar in Department of Research & Development, I K. Gujral Punjab Technical University, Jalandhar - Kapurthala Highway

As invited External Expert For M.Sc Dissertation meeting of PG scholar in Central university of Punjab, Bathinda

Teaching

Subject	Class/ Level
Fundamentals of Phycology and Mycology	M.Sc Subject
Fundamentals of Enzymology	
Plant Stress Biology	
Application of Artificial Intelligence in Plant Sciences	
Fundamentals of Literature Review	
Academic Writing	
Organic Farming and Natural Farming	Interdisciplinary Course
Research and Publication Ethics	Pre- Ph.D
Abiotic Stress Management in Plants	

Doctoral Thesis Supervision

05 Scholars in Progress

Departmental Administration

- Co-ordinator of Departmental Alumni Cell,
- Co-ordinator carrier guidance and counselling cell,
- Departmental Academic incharge
- Member of departmental Admission committee

Publications

Refereed Journal Articles

1. **Harsharan Singh**, KumkumSapehia, Jitender Kumar(2025). Electrokinetics Bioremediation: Concept, Application and Future Opportunities. *Environmental Science Archives*; ISSN: 2583-5092; Volume IV (1) (TPC2).
2. Jitender Kumar, KajalChoudhary, Shelja, Anukriti,**Harsharan Singh**, Ashwani Kumar, PankajBagga (2025). Molecular Approaches for Authentication and Identification of Medicinal.*Plant Molecular Biology Reporter*. <https://doi.org/10.1007/s11105-025-01557-7>.
3. SimranSarswat, **Harsharan Singh** (2025). Exploring the efficacy of medicinal plants in cosmeceuticals: a review of bioactive compounds and skin health .*Journal of Ethnopharmacology and Toxicology*, Volume 3, Issue 1: 1-15. Doi : 10.37446/jet/ra/3.1.2025.1-15
4. **Harsharan Singh** (2024). Bioengineering Providing Tailor-Made Products. *Archives of Stem Cell and Therapy* ; Volume 5(1):32-43
5. **Harsharan Singh***, ParulGahlan and Sanjay Kumar(2013).Cloning and expression analysis of ten genes associated with picroside biosynthesis in Picrorhizakurrooa, Gene 515 : 320–328 **Impact factor: 2.984**

6. Harsharan Singh*, ParulGahlan, SomDutt, Paramvir Singh Ahuja and Sanjay Kumar*(2011). Why uproot *Picrorhizakurrooa*, an endangered medicinal herb? Curr. Sci. 100: 1055-59. **Impact factor: 0.758**
7. Sanjay Ghawana, Asosii Paul, Hitesh Kumar, Arun Kumar, Harsharan Singh, Pardeep K Bhardwaj, Arti Rani, Ravi S Singh, JyotiRaizada, Kashmir Singh and Sanjay kumar1*(2011). An RNA isolation system for plant tissues rich in secondary metabolites. BMC Research Notes 2011 4:85. **Impact factor: 1.340**
8. Kawoosa, T., Singh, H., Kumar, A., Sharma, S.K., Devi, K., Dutt, S., Vats, S.K., Sharma, M., Ahuja, P.S., Kumar, S., 2010. Light and temperature regulated terpene biosynthesis: hepatoprotective monoterpenepicroside accumulation in *Picrorhizakurrooa*. Funct. Integr. Genomics. 10, 393-404. **Impact factor: 3.19**
9. Singh K, Raizada J, Bhardwaj P, Ghawana S, Rani A, Singh H, Kaul K, Kumar S (2004) 26S rRNA-based internal control gene primer pair for reverse transcription-polymerase chain reaction-based quantitative expression studies in diverse plant species. Anal Biochem 335:330–333. **Impact factor: 2.19 (2019)**
Patent
10. Co-inventor of patent entitling “ Method of cloning stable stress tolerant superoxide dismutase using degenerate primers” PCT/IN2009000211.
11. Harsharan Singh, Navleen Kaur Chopra (2014). Changes in morphology and catalase activity in response to various abiotic factors from brassica campestris., Research & Reviews In Biotechnology And Biosciences ISSN No. : 2321-8681 Volume 1 (2014)
12. Harsharan Singh (2016). Activity of catalase and peroxidase in *Oryza sativa* treated with CuSO₄ and SA. Research & Reviews In Biotechnology And Biosciences ISSN No. : 2321-8681 Volume 3 (2016)
13. Harman Kaur and Harsharan Singh#(2018) Heavy metal (Pb(NO₃)₂) and Salt stress (NaCl) Alter the shoot length and activity of Amylase enzyme in *Vigna radiata* Research & Reviews In Biotechnology And Biosciences ISSN No. : 2321-8681 . Volume: 5, Issue: 1&2, PP: 45-55

Book Chapters

1. Genome Editing: Opportunities and Challenges In “Genome Editing opportunities and Challenges”, ISBN: 979-888697-740-0 (Single author)
2. Enhancement of Plant Secondary Metabolites by Genetic Manipulation In “Genetic Manipulation of Secondary Metabolites in Medicinal Plant” ISBN: 978-981-99-4939-7 (Single author)
3. Bioengineering for Production of Biologically Active Compounds in Plants In “Biosynthesis of Natural Products in Plants”, ISBN 978-981-97-2165-8 ISBN 978-981-97-2166-5 (eBook) (Single author)

4. Genome Annotation and Analysis In Encyclopedia of Bioinformatics and Computational Biology, 2nd Edition 1 doi:10.1016/B978-0-323-95502-7.00190-1

Refereed Conference Publications

SimranSarswat, **Harsharan Singh** (2025).Quantifying Research Trends on Medicinal Plants in Cosmeceuticals: A Network Visualization and Bibliometric Study. In 8th International Conference: Cutting-edge Research Innovation in Sustainable Education, Environment, and Agriculture (CRISEA - 2025), 24 -26Februar, 2025 jointly organized by Goa University and the Agricultural Technology Development Society (ATDS).

Kumkumsapehia, **Harsharan Singh**, (2025). The Wonders of Seabuckthorn (Hippophaerhamnoides L.): A Deep Dive into its Therapeutic Benefits. In 8th International Conference: Cutting-edge Research Innovation in Sustainable Education, Environment, and Agriculture (CRISEA - 2025), 24 -26Februar, 2025 jointly organized by Goa University and the Agricultural Technology Development Society (ATDS).