

Dr. SHIVANI GHAI
Assistant Professor
Department of Microbiology
GGDSD COLLEGE Chandigarh
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DOB: 7th November 1976



Educational Qualifications

Ph.D. in Microbiology

Department of Botany & Microbiology, Gurukul Kangri University, Haridwar, India (2003) Ph.D. Thesis: *Biological control of Sclerotium rolfsii causing collar rot of sunflower (Helianthus annuus L.) through pseudomonads*, Ph.D. Supervisor: Prof. R.C. Dubey

Qualified GATE 2000

M.Sc. (Microbiology) from Kanya Gurukul Mahavidyalaya, Gurukul Kangri University, Haridwar, India (1997-1999)

B.Sc. (Microbiology) from Guru Nanak Khalsa College, Yamuna Nagar, Kurukshetra University, India (1994-1997)

B.Ed. (Life Sciences) from Bhagat Singh College of Education for Women Yamuna Nagar Kurukshetra University, India (2012-2013)

Teaching/Research Experience

- 7 June 2024 – till date
Assistant Professor (Contractual) in Department of Microbiology, GGDSD College, Chandigarh Teaching Environmental and agricultural Microbiology in B.Sc. Industrial Microbiology (Elective), Introduction to Biotechnology in B.Sc. Biotechnology (Hons.) and Microbial Diversity and metabolism in M.Sc. Biotechnology.
- 20 July 2017 to 30 Apr 2024 **Assistant Professor (Contractual)** in Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh, in the Department of Microbiology. Taught Biotechnology, Industrial Microbiology, Medical Lab Technology and Food Processing and Preservation
- 30 July 2009 to 25 April 2017
Assistant Professor (Adhoc) in Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh, in the Department of Microbiology. Taught B.Sc. and M.Sc. Hons. Biotechnology, B.Sc. Industrial Microbiology and Biotechnology (Elective), Medical Lab Technology (1 year Diploma Course) and Food Processing and Preservation (B.Voc.)
- 1 September 2004 –31 December 2005
Post-Doctoral **Research Associate** at Institute of Microbial Technology (IMTECH), Chandigarh

Areas of Interest

Publications (Journal/Book Chapters)

- Agricultural Microbiology

Journal Publications:

- Nandi, A; Kaur, A; **Ghai, S**; Singh, G and Tiwari, A (2024) Neuromicrobiology of Neurodegenerative Diseases: An Integrative and Unifying Approach to Study the Influence of Gut Microbiota in Neurodegeneration Science Open Preprints DOI: 10.14293/PR2199.000546.v2 (ISSN 2199-1006)

- **Ghai, S;** Sharma, M; Khehra, T; Pradhan, N; Shobhita and Ayushi (2023) Comparative Study of lactase producing bacteria from various animal and plant sources. *International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)* 12(8): 3846-3866. ISSN: 2277-4998
- **Ghai, S.,** Goel, S, Mittal, H, Katoch, S. and Vashisht, S. (2018) Antibacterial activity of fruit peels against bacterial isolates. *Global Journal of Bio-Science and Biotechnology (GJBB)* Vol.7 (4): 570-574. ISSN 2278 – 9103
- **Ghai, S.** and Kaur, J. (2018). Antimicrobial activity of clove (*Syzygium aromaticum*) oil against food borne microorganisms. *International Journal of Science and Nature*. Vol.9 (1): 101-104. ISSN 2229 – 6441
- Singh, O.V.; **Ghai, S.;** Paul, D. and Jain, R.K. (2006). Genetically modified crops: success, safety assessment, and public concern. *Appl Microbiol Biotechnol.* **71**: 598-607. ISSN 0175-7598
- **Bhatia, S.,** Dubey, R.C. and Maheshwari, D.K. (2005). Enhancement of plant growth and suppression of collar rot of sunflower caused by *Sclerotium rolfsii* by fluorescent *Pseudomonas*. *Indian Phytopath.* **58** (1): 17-24. ISSN 0367973X
- **Bhatia, S.,** Bhatia, S., Dubey, R.C. and Maheshwari, D. K. (2003). Antagonistic effect of fluorescent pseudomonads against *Macrophomina phaseolina* that causes charcoal rot of groundnut. *Indian Journal of Experimental Biology*. **41**: 1442-1446. ISSN 0019-5189
- **Bhatia, S.,** Bhatia, S., Dubey, R.C. and Maheshwari, D. K. (2003). Antagonistic effect of fluorescent *Pseudomonas* PS I and PS II against *Sclerotium rolfsii* causing collar rot of sunflower. *Proceedings Biosciences: Advances, Impact and Relevance*. 117-124.

Book Chapters:

- **Ghai, S.** and Kaur, A. (2022) Interaction of nanoparticles to soil pollutants pp.309-331 in the Book: The role of nanoparticles in plant nutrition under soil pollution. **Springer** ISBN: 978-3-030-97388-9
- **Bhatia, S;** Dubey, R.C. and Maheshwari, D.K. (2005). Biological control of soil-borne sclerotial pathogens using fluorescent pseudomonads. In *Microbial biotechnology in Agriculture and Aquaculture*. Vol. I (ed. R.C. Ray), Science Publishers, Inc. Enfield New Hampshire, U.S.A. pp377-404. International Edition ISBN 978-1-57808-367-1

Seminars/ Conferences/Symposiums (Paper Presented)

- Presented Poster on “**Recent Applications and Health Benefits of Probiotics**” National Symposium on “Biotechnology: Trends and innovations. Thakur B; Rana, S; Sharma, H; Kaur, R; Sharma, S and **Ghai, S** (2020)
- Presented Poster on “**Sensitivity of UTI causing bacteria towards commonly prescribed antibiotics**”. **Ghai, S.** and Bajaj, S. (2009). National Conference on Advances in Pharmaceutical Technology & Drug Research. P 65
- Presented Poster on “**Isolation and characterization of fluorescent *Pseudomonas* to be used as plant growth promoting rhizobacteria**” **Bhatia, S.** and Dubey, R.C. (2000).

- National Symposium on Microbes and Human Welfare. P 40
- Presented paper on “Effect of fluorescent *Pseudomonas* on the sclerotia of *Sclerotium rolfsii* causing collar rot of sunflower”. **Bhatia, S.** and Dubey, R.C. (2002). **National Symposium on Biosciences: Advances, Impact and Relevance. P 4**
- Presented paper on “Biocontrol of *Sclerotium rolfsii* by fluorescent *Pseudomonas*” **Bhatia, S.** and Dubey, R.C. (2002). **National Seminar on Environmental Hazards and Future Generations. P 24**

**Refresher
Courses/Workshops/
Training Programmes**

- Online - NEP2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) from 16 February 2024 to 29 February 2024 organized by UGC-Malaviya Mission Teacher Training Centre (MMTTC), Panjab University, Chandigarh.
- On-site Flow Cytometry Workshop on Flow Cytometry and its Applications in Biosciences held on 10 th -12 th January 2024 organized by Goswami Ganesh Dharma Sanatan Dharma College, Chandigarh in Association with Flowcytometry Solutions Pvt. Ltd., India. Trust for Education and Training in Cytometry (TETC), India & Indian Science Congress Association Chandigarh Chapter.
- Attended One day workshop on process of innovation development and technology readiness (TRL) and commercialization of Lab Technology and Tech Transfer on 7 th March, 2024 organized by Department of Biotechnology in collaboration with Institution’s Innovation Council, Goswami Ganesh Dharma Sanatan Dharma College, Chandigarh.
- Short Term Course on Predictive Analytics using IBM SPSS Modeler from 19 December 2022 to 30 December 2022 organized by Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh and IBM
- Two days online MS-Excel workshop from 18 July 2020 to 19 July 2020 organized by Indian Youth Development Council, (IYDS) India.
- Six days online workshop on "Research Ethics and Quantitative Techniques for Research and Publication" from 25 April 2020 to 30 April 2020 organized by College Library, Goswami Ganesh Dutta S.D. College, Sector-32, Chandigarh.
- One week Faculty Development Programme Biological Data Analysis & Data Science from 27 February 2020 to 4 March 2020 organized by Department of Bioinformatics and Biochemistry. Goswami Ganesh Dutta S.D. College, Sector-32, Chandigarh under RUSA, UT Administration
- Lecture- cum- Workshop on Indian Research Information Network system (IRINS) on 1 December 2018 organized under the aegis of Rashtriya Uchchar Shiksha Abhiyan (RUSA
- Workshop & training programme on Automation System in education Sector, sponsored by Rashtriya Uchchar Shiksha Abhiyan (RUSA) on 18 February 2016 to 20 February 2016 organized by GGSD College, Chandigarh
- Faculty Development Programme on 8 September 2016 organized by Association of Microbiologist of India (AMI) and Department of Biotechnology Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh

- 16th Workshop on Scanning Electron Microscopy on 4 January to 6 January 2003 organized by Regional Sophisticated Instrumentation Centre, Panjab University, Chandigarh.

Invited Talks	NIL
Projects	NIL
MOOCS/Online Content	NIL
M. Phil Dissertation Supervised	N.A.

PhD Thesis	N.A.
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Administrative Experience	Actively involved in coordinating various departmental and college activities – organizing seminars, conferences and workshops
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Membership of Economic Associations	<ul style="list-style-type: none"> • Life Member of Indian Botanical Society. • Life Member of Association of Microbiologists of India.
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