



Faculty Profile : Dr. Richa Sharma
Department of Microbiology
Ram Lal Anand College, University of
Delhi



Title	Dr.	Name :	Richa Sharma	
Department	Microbiology			
Designation	Assistant Professor			
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Institutional Web page				
Google Scholar ID	1n94fYAAAAJ			
Research Gate ID	/profile/Richa-Sharma-157?ev=hdr_xprf			
ORCID ID	https://orcid.org/0000-0003-2773-5843			
Scopus ID	57212897514			
Researcher ID	QYR-2240-2026			
Vidwan ID	733812			
Educational Qualifications				
Degree	Institution			Year
Ph.D Microbiology	Department of Microbiology, University of Delhi			2013
M.Sc. Microbiology	Department of Microbiology, University of Delhi			2005-2007

B.Sc. (H) Microbiology	Ram Lal Anand College, University of Delhi	2002-2005			
Permanent/ Temporary/ Contractual/ Adhoc Teaching Experience					
Designation	Institution	Duration	From	To	Nature
Assistant Professor	Ram Lal Anand College, University of Delhi	1 month	04.08.26	Till Date	Permanent
Assistant Professor	Shaheed Rajguru College of Applied Sciences for Women, University of Delhi	8 years	July 2018	July 2026	Ad-hoc
Assistant Professor	Institute of Home Economics, University of Delhi	2 years 4 months	Jan 2016	May 2018	Ad-hoc
Assistant Professor	Gargi College, University of Delhi	1 year 9 months	August 2013	May 2015	Ad-hoc
Industry Experience (If any)					
Designation	Company	Duration	From	To	
Research Experience					
Designation	Institution	From	To		
Principal Investigator	University of Delhi Sanctioned by DST under the Fast Track Young Scientist Scheme	2013	2016		
Administrative Assignments					

Nodal officer – Green Action Plan of DHE 2024-25, 2025-26 Co-convenor – Eco-club, 2024-25, 2025-26 Co-convenor, NAAC criteria 7 Member of the following committees – Admission, Timetable, Examination, Purchase
Areas of Interest / Specialisation
1. Industrial microbiology 2. Enzymology 3. Mushroom cultivation and technology
Subjects Taught
Industrial Microbiology, Food and Dairy Microbiology, Virology, Immunology, Molecular Biology
Research Guidance (if any)
Guided 4 fourth year students of B.Sc. Microbiology for dissertation, 2025-26 Mentored a project entitled ‘Biochemical characterization of γ-glutamyl transpeptidase from <i>Bacillus</i> species’ under the Star College Scheme, DBT at Gargi College, 2014.
Research Projects (Major Grants/Research Collaboration)
Nil
Completed Projects : Bacterial γ-glutamyl transpeptidase: Characterization and application as debittering enzyme. Project sanctioned by DST under the Fast Track Young Scientist Scheme on September 2013 for a period of three years.
Publications

Total number of publications: 22

Citations: 917

h-index: 14

1. Bhadoriya, P., **Sharma, R.**, Mehrotra, R., Kaur, S., Srivastava, I. et al. (2023). A review on re-emerging bacteriophage therapy in the era of XDR. *Biocell*, 47(9), 1915–1930. <https://doi.org/10.32604/biocell.2023.029564>
2. Mago P., Kaur S., Srivastava I., Mehrotra R., Kaur K., **Sharma R.**, Yadav A. (2023) A review on unravelling the medicinal properties of magical mushrooms: *Cordyceps militaris* Biomedicine, 43(5): 1368-1375. <https://doi.org/10.51248/v43i5.3631>
3. Mago P., **Sharma R.**, Hafeez I., Nawaz I., Joshi M. and Mehrotra R. (2023)
4. Mushroom based cosmeceuticals: An upcoming Biotechnology Sector. Biosciences Biotechnology Research Asia (BBRA), June 2023. Vol. 20(2), p. 381-394. <http://dx.doi.org/10.13005/bbra/3097>
5. **Sharma R.**, Mehrotra R., Mago P. (2023) Microbial Keratinase: Then and Now, International Journal of Innovative Science and Research Technology, Volume 8, Issue 4. ISSN No:-2456-2165.
6. Mehrotra R., Khera K., **Sharma R.** (2023) Keratinase of *Bacillus subtilis* N-49: a novel strain of Indian origin possessing potential to enhance transungual drug delivery. International journal of Biology, Pharmacy and Allied Sciences. 12 (11). ISSN: 2277-4998. <https://doi.org/10.31032/IJBPAS/2023/12.11.7525>.
7. Rekha Mehrotra, **Richa Sharma** and Kohinoor Kaur (2022) Microbial Dyes for Textiles: A Sustainable Alternative to Synthetic Dyes. Journal of the Textile Association, 83/3 (157-161), (Sept-Oct'2022), <https://doi.org/10.17605/>
8. Kaur, K., **Sharma, R.**, Srivastava, I., Kaur, S. & Mehrotra, R. (2022). Edible Mushrooms: Nature's superfood for health and wellbeing. *International Journal of Innovation and Multidisciplinary Research (IJIAMR)*. Volume 1 Issue 1.
9. **Sharma, R.**, Gupta, D., Mehrotra, R., Mago P. (2021) Psychobiotics: The Next-Generation Probiotics for the Brain. *Curr Microbiol.* 78(2):449-463. doi: 10.1007/s00284-020-02289-5. Epub 2021 Jan 4. PMID: 33394083. <https://doi.org/10.1007/s00284-020-02289-5>.
10. **Sharma R.**, Gupta S, Gupta D and Kushwaha PK., Awareness and Knowledge about Probiotics among College Students, *J Pure Appl Microbiol.*, 2019; 13(4):2201-2208. <https://doi.org/10.22207/JPAM.13.4.33>
11. [Kashyap A](#), [Rani Gupta](#), [Sharma R](#), [Verma VV](#), [Gupta S](#) and [Pradeep Goyal](#) (2017) New Delhi Metallo Beta Lactamase: Menace and its Challenges, *J Mol Genet Med*, 11(4): 299.
12. Gupta R., Rajput R., **Sharma R.** and Gupta N. (2013) Biotechnological applications and prospective market of microbial keratinases. *Applied Microbiology and Biotechnology*, 97(23):9931-40
13. Gupta R., **Sharma R.** and Beg Q. (2012) Revisiting microbial keratinases: Next generation proteases for sustainable biotechnology. *Critical Reviews in Biotechnology* (DOI: 10.3109/07388551.2012.685051).
14. **Sharma R.**, Verma V.V. and Gupta R. (2013) Functional characterization of an extracellular keratinolytic protease, Ker AP from *Pseudomonas aeruginosa* KS-1: A putative aminopeptidase with PA domain. *Journal of Molecular Catalysis B: Enzymatic* 91: 8-16.
15. **Sharma R.** and Gupta R. (2012) Coupled action of γ -glutamyl transpeptidase-glutathione and keratinase effectively degrades feather keratin and surrogate prion protein, Sup 35NM. *Bioresource Technology* (<http://dx.doi.org/10.1016/j.biortech.2012.06.038>).
16. **Sharma R.**, Murty N.A.R. and Gupta R. (2011) Molecular Characterization of N-Terminal Pro-sequence of Keratinase Ker P from *Pseudomonas aeruginosa*: Identification of Region with Chaperone Activity. *Applied Biochemistry and Biotechnology* (DOI: 10.1007/s12010-011-9306-z).
17. **Sharma R.** and Gupta R. (2010) Extracellular expression of keratinase Ker P from *Pseudomonas aeruginosa* in *E. coli*. *Biotechnology Letters*, 32:1863-1868.
18. **Sharma R.** and Gupta R. (2010) Substrate specificity characterization of a thermostable keratinase from *Pseudomonas aeruginosa* KS-1. *Journal of Industrial Microbiology and Biotechnology*, 37:785–792.
19. **Sharma R.** and Gupta R. (2010) Thermostable, thiol activated keratinase from *Pseudomonas aeruginosa* KS-1 for prospective applications in prion decontamination. *Research Journal of Microbiology* 5 (10): 954-965.
20. Rajput R., Tiwary E., **Sharma R.** and Gupta R. (2012) Swapping of pro-sequences between keratinases of *Bacillus licheniformis* and *Bacillus pumilus*: Altered substrate specificity and thermostability. *Enzyme and Microbial Technology* 51: 131-138.
21. Murty N.A.R., Tiwary E., **Sharma R.**, Nair N. and Gupta R. (2012) γ -glutamyl transpeptidase from *Bacillus pumilus* KS 12: Decoupling autoprocessing from catalysis and molecular characterization of N-terminal region. *Enzyme and Microbial Technology* 50 159– 164.

22. Rajput R., **Sharma R.** and Gupta R. (2010) Cloning and characterization of a thermostable, detergent-compatible recombinant keratinase from *Bacillus pumilus* KS12. *Biotechnology and Applied Biochemistry* 58: 109-118.

Book Chapters

1. Prof. Payal Mago, Dr. Rekha Mehrotra, **Dr. Richa Sharma**, Ms. Tanusha Jain and Ms. Juhi Jham, Mushtales: The all natural mushroom cook book. BPI INDIA PVT. LTD. ISBN: 987-81-19441-87-7.
2. Yadav A., **Sharma R.** and Mehrotra R., Algal bioactive components – Sources, Health benefits and Sustainability (2022); Bioactive components: A sustainable system for good health & well-being; Springer Singapore, ISBN: 9789811923654.
3. Gupta R, Gupta N. and **Sharma R.**, ABC transporters and Group Translocation (2021); Fundamentals of Bacterial Physiology and Metabolism; Springer Science; DOI 10.1007/978-981-16-0723-3; ISBN 978-981-16-0722-6.
4. **Sharma R.** and Mehrotra R., Transformation and Transduction (2019); Microbial Genetics; 9789353387969; Vikas Publishing House.
5. Gupta R., Tiwary E., **Sharma R.**, Rajput R. and Nair N. (2013) Microbial keratinases: Diversity and Applications; Thermophilic Microbes in Environmental and Industrial Biotechnology: Biotechnology of Thermophiles, DOI 10.1007/978-94-007-5899-5_33, Springer Science.
6. **Sharma R.** (2013) Bacterial culturing techniques; Virtual learning environment; Institute of Life Long Learning (<http://vle.du.ac.in/mod/book/view.php?id=9251>).
7. **Sharma R.** (2015) Viral multiplication and Replication Strategies- I; Virtual learning environment; Institute of Life Long Learning.
8. **Sharma R.** (2015) Viral multiplication and Replication Strategies- II; Virtual learning environment; Institute of Life Long Learning.

POSTERS PRESENTED

1. Karuna Pundil, **Richa Sharma**, Rekha Mehrotra and Payal Mago (2026) Targetting onchomycosis using keratinase from *Cordyceps militaris* presented at UGREE 2026 organized by University of Delhi on 22-23 April 2026.
2. Karuna Pundil, **Richa Sharma**, Rekha Mehrotra and Payal Mago (2025) Exploring keratinase from *Cordyceps militaris* for application as Trans-ungual drug delivery enhancer, at the National Conference on *FUNGI for BHARAT* organized by Delhi University Botanical Society, Department of Botany, University of Delhi, held from 20–22 November 2025.
3. Imtshan Nawaz, **Richa Sharma** and Rekha Mehrotra (2022) Mushroom in packaging industry: A step towards sustainability presented at National conference on Vishva Guru Bharat: Exploring the Glorious Past, Promising Present and the Future Roadmap organized by Shaheed Rajguru College of Applied Sciences for Women on 23-24 March 2022 at New Delhi.
4. Khushi Khera, **Richa Sharma** and Rekha Mehrotra (2022) Keratinase of *Bacillus subtilis* N-49 – A novel strain of Indian Origin possessing potential to enhance transungual drug delivery presented at National conference on Vishva Guru Bharat: Exploring the Glorious Past, Promising Present and the Future Roadmap organized by Shaheed Rajguru College of Applied Sciences for Women on 23-24 March 2022 at New Delhi.
5. **Richa Sharma**, S. Suresh Kumar, Kashika Paliwal and Rani Gupta (2011) Characterization of Biosurfactant producing yeast isolates from petroleum sludge and production of a thermostable glycolipid from *Trichosporon asahii* MSR-54 presented at the Indo-Swedish International conference on Biotechnology for sustainable development held at National Chemical Laboratory, Pune.
6. **Richa Sharma** and Rani Gupta (2008) Keratinase from *Pseudomonas aeruginosa* KS-1: Structural and biochemical basis of feather degradation. The annual conference of All India Microbiologists of India held at New Delhi.
7. **Richa Sharma** and Rani Gupta (2011) Prion degrading keratinase Ker P from *Pseudomonas aeruginosa*: Molecular Characterisation of its N-terminal pro-sequence. 4th Congress of European Microbiologists organized by FEMS at Geneva, Switzerland.

Awards and Distinctions

1. Best poster presentation award for ‘Exploring keratinase from *Cordyceps militaris* for application as trans-ungual drug delivery enhancer’ in national conference on Fungi for Bharath held on 21st November 2025.
2. Best poster presentation award for poster entitled ‘Keratinase of *Bacillus subtilis* N49: A novel strain of Indian origin possessing potential to enhance trans-ungual drug delivery’ at the National Seminar organized by Shaheed Rajguru College of Applied Sciences for Women in association with ICSSR, SHoDH and COL (DU) held on 23rd - 24th March, 2022.
3. Awarded the “**Young Scientist Award**” for Environmental Microbiology by Association of Microbiologists of India in 2012.
4. Foreign Travel grants awarded by DST and CSIR in 2011.
5. Awarded UGC-NET JRF and SRF fellowship (2007-2012).
6. Qualified GATE-2007 with 95.9 percentile
7. Awarded the All India Post Graduate Scholarship by Delhi University, 2005-06.
8. Awarded Sonia Ashta Award for the Best student of Microbiology, 2003-2004.
9. Special Merit award for securing highest marks in BSc.(H) Microbiology, 2002-2003.
10. Merit Certificate for securing highest marks in Immunology, Medical Microbiology, Industrial Microbiology and Aggregate in B. Sc (H) Microbiology, 2004-2005.

Association With Professional Bodies

1. Association of Microbiologists of India – Life Member
2. Microbiologists Society of India – Life Member

Conferences/ Seminars attended

- Participated in one day orientation program on "Empowering Educators for Entrepreneurial Excellence - A Step Towards Viksit Bharat 2047", by Delhi School of Skill Enhancement & Entrepreneurship Development, University of Delhi, 6th August 2024.
- Attended three-day *Cordyceps militaris* cultivation and Saffron training from 6th from 8th July 2024 from Orange Herb Pvt. Ltd.
- Participated in two-day workshop on ‘Designing and Benchmarking Microbiology Courses to meet Higher Education Teaching-Learning Standards Under NEP – 2K20’ held on 15th and 16th February, 2025 at IIT Delhi, Sonapat Campus.
- Participated in a two day workshop On ‘Establishment of modalities for skill enhancement courses’ organized by skill Enhancement Course Committee, University of Delhi on 4-5th March 2024.

Conferences/ Workshops organized

- Resource person for Certificate Course and FDP on Mushroom Cultivation organized by Department of Microbiology, SRCASW from October 2024 - April 2025.
- Co-convenor of Skill, Start-up and Entrepreneurship Expo and India Mushroom Days '24, organized by Department of Microbiology SRCASW and School of Open Learning from 4th to 6th October 2024.
- Member of management committee of India Mushroom Summit organized by Department of Microbiology SRCASW and School of Open Learning in association with Milkyway Technologies Ltd. from 21st to 23rd November 2023.
- Delivered invited lecture on 'Mushrooms: Fungi with Diverse Applications' at Deen Dayal Upadhyay College, University of Delhi on 13.10.23.
- Delivered talk on 'Mushrooms- The ultimate superfood' organized by Indraprastha Horticulture Society on 7th December 2022.
- Resource person and technical assistant for Mushroom cultivation and faculty development program from September 10, 2021 to February 22, 2022 conducted by Enactus Shaheed Rajguru, an entrepreneurial society in collaboration with the Department of Microbiology, Shaheed Rajguru College of Applied Sciences for Women, University of Delhi.
- Organizing member of five day Entrepreneurship and Faculty Development Program on 'Edible mushrooms: From lab to Farm' from 15th to 19th February 2021.
- Organizing secretary and Resource person for workshop on Basic and Applied sciences for school students held at Shaheed Rajguru College of Applied Sciences for Women, 2019.

Other activities

- Selected as state coordinator Microbiologists Society, Delhi unit for the session 2023-24, 2024-25 and 2025-26.
- Assistant editor of Mushroom chronicles, bimonthly journal on mushrooms.
- Selected as Faculty coordinator, SPOC under the Blue Planet sustainability fellowship program.

Richa

Signature of Faculty Member