

CURRICULUM VITAE

Dr. Reena Thakur

M. Sc., M. Phil., Ph. D (Biotechnology)



CORRESPONDENCE

W/O Dr. B. S. Thakur

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PROFESSIONAL QUALIFICATION

- **Ph.D.**, Biotechnology, H. P. University, Shimla, India (2025).
- **SET and ICAR-NET** qualified in 2014
- **M. Phil.**, Microbiology, Chaudhary Devi Lal University, Sirsa, India (2007).
- **M.Sc., Microbiology** (69%), Barkatullah University Bhopal, India (2006).
- **B.Sc., Biotech** (68 %), H. P. University, Shimla (2001)
- 12th, Biology, Chemistry, Physics, English (70 %), HP Board, Dharamshala (1998)
- Matric (75 %) HP Board, Dharamshala (1996)

RESEARCH EXPERIENCES

Ph. D Thesis Title

- *“Isolation, screening and characterization of lactic acid bacteria from primate feces for postbiotic application”*

Student Mentoring

- *Mentored B.Sc (Hons) Microbiology students in the successful completion of Minor in-house projects during the session every year*

Academic Counselor

- *As academic counselor, 10 M.Sc (DFSM) students enrolled under IGNOU completed their dissertation under my supervision*

WORK EXPERIENCE

- Working as Assistant professor in Department of Microbiology and Biotechnology at **St Bede's College, Shimla** since June 11, 2011 to till date
- Working as **Academic Counselor** at Indira Gandhi National Open University and Teaching Food safety and Microbiology and Principles of Food Science courses to Students of M. Sc (DFSM) since last 10 years
- Remained NSS incharge for six years
- Part of two successful NAAC accreditation cycle
- Performed duties as In-charge/member of different clubs, societies and Ships
- Actively participated in organizing different major functions of the college
- As a part of organizing committee organized **Two Days Workshop on 'Skill Development for Young Budding Entrepreneurs'** in St. Bede's College in collaboration with Biotechnology Incubation Center, HPU, Shimla on 4 - 5 October, 2024 at St. Bede's College
- As a part of organizing committee organized **Two-Day National Conference on 'Novel Progressions in Science and Technology-2022'** from November 28-29, 2022 in St. Bede's College

SKILLS KNOWN :

Techniques	Expertise
Microbiological	Isolation of microorganisms from soil and other sources, Screening of microbes for metabolite production and their biomedical application, preservation of cultures (lyophilization, glycerol stocks, nutrient agar slants)
Biochemistry	Quantitative and qualitative estimation of biomolecules
Molecular Biology	DNA isolation from bacteria and sequence analysis
Nanotechnology	Fabrication and structural characterization of nanomaterials
Bioprocess Technology	Assay of various bacterial metabolites, Optimization of culture conditions for production of metabolites.
Instrumentation	Centrifugation, Electrophoresis, Lyophilization, Spectrophotometer, Laboratory Shakers for shake flask culture, Gel Documentation System, Sonicator
Food fermentation	Various food fermentation techniques
Computer skills	MS word, MS excel, MS Access, Power point, Internet

GenBank Submissions:

Submitted 16s rRNA sequences of *L. Plantarum* LG138 and *S. clausii* to NCBI and accession numbers were obtained.

Research Publications:

- **Reena Kumari**, Prem Lata, Kiran Bala Sharma, Shailja Rangra, and Savitri (2023).Statistical optimization of fermentation media for postbiotic metabolite production from *Lactobacillus plantarum* LG 138 of primate origin. Mapana Journal of Sciences. 22: 41–68.
- **Reena Kumari** and Savitri (2023).Microbial Metabolites as Postbiotics: A Review. International Journal of Innovative Science and Research Technology.8 (12): 966–970.
- **Reena Kumari** and Savitri (2023).Biomedical application of biopolymer fabricated nanomaterials: A Review. World Journal of Pharmacy and Pharmaceutical Sciences (accepted).
- **Reena Kumari** and Savitri (2024).Probiotic Characterization of Primate Origin *Lactiplantibacillus plantarum* LG138. Current Trends in Biotechnology and Pharmacy 152. 18 (Supplementary Issue 4A) 152 – 165.
- **Reena Kumari** and Savitri. (2024).Characterization and assessment of primate origin *Shouchella clausii* MS 208 (formerly *Bacillus clausii*) for its probiotic potential (communicated).
- **Reena Kumari** and Savitri.(2025).Health Benefits of Exopolysaccharide as Postbiotics : A Review. The Bede Athenaeum. 16(1): 15-22.
- Prem Lata, **Reena Kumari**, Kiran Bala Sharma, Shailja Rangra and Savitri (2022).In vitro evaluation of probiotic potential and enzymatic profiling of *Pichia kudriavzevii* Y33 isolated from traditional home-made mango pickle. 20:132
- Prem Lata, Kiran Bala Sharma, Shailja Rangra, **Reena Kumari** and Savitri (2023). Probiotic characterization of *Saccharomyces cerevisiae* Y196 and Y197 isolated from rice *chhang*- a fermented beverage of Lahaul Spiti. Journal of Microbiology Biotechnology and Food Science. 12 (5): e5817.
- Kiran Bala Sharma, Prem Lata, **Reena Kumari**, Shailja Rangra and Savitri (2023). Quadratic model analysis of β -galactosidase from *Kluyveromyces marxianus* isolated from indigenous fermented dairy product. Trends in Carbohydrate Research. 15(2) : 22-35.
- Shailja Rangra, Prem Lata, Kiran Bala Sharma, **Reena Kumari** and Savitri (2023).Cloning, expression and characterization of a novel α -amylase from hot springs of North- western Himalayas. Journal of Biotechnology and Bioinformatics Research. 5(3): 1–8.
- Shailja Rangra, Prem Lata, Kiran Bala Sharma, **Reena Kumari** and Savitri (2023).NGS-based metagenomics depicting taxonomic and functional insights into North-Western Himalayan hot springs.Indian Journal of Microbiology.<https://doi.org/10.1007/s12088-024-01248-z>

Webinars/Workshops/FDPs attended

- Attended Six Days **Faculty Development Programme on ‘Enhancing Quality Assurance at HEI: Insights in to NEP 2020 and NAAC Binary Accreditation Framework’** organized by IQAC St. Bede’s College, Shimla from 16-21 Dec,2024.
- Attended a webinar on **‘Building a culture of responsibility: Professional ethics in the workplace’** organized by Internal quality assurance cell, St Bedes college, Shimla on December,26,2024
- Participated in the Pre-conference webinar entitled **“Manufacturing Wonders of Biomaterials”**organized by Centre for Research Impact and Outcome, Chitkara University, Punjab, India on 25th November, 2024.
- Successfully completed the Faculty Development Program (FDP) on **“Emerging advancements in the field of Computational Biology”** from January 23-29, 2024 at Satyabhama Institute of Science and Technology, Tamilnadu (India).
- Successfully completed and fulfilled all the requirements of Faculty Development Program for **“Academic Writing and Research Methodology: Multi-Disciplinary Approach”** held at St. Bede’s College, Shimla and was conducted from December 26–30, 2023 in association with Technoledge Eduresearch Pvt.Ltd, New Delhi under the supervision of Astu Global Tech Pvt. Ltd,Noida.
- Attended a Webinar on **“CMAI-CSAI-IHRO Cyber Warrior Mission: A Pathway Towards Employability”**organised by Department of Computer Science, St. Bede’s College, Shimla on November 22, 2024.
- Attended a Value Added Workshop on **‘Smart Nanotechnology for Societal Applications’** on June 27 –30, 2022, organized by Amity Institute of Nanotechnology, Amity University Uttar Pradesh, Noida, U.P., India.
- Attended a workshop on **Research Project Writing and Data Analysis** from Feb 21 – 28, 2022 at Amity University, Uttar Pradesh Noida.
- Participated in the Faculty Development Program (online) on **“Design and Development of MOOCs”** from January 1–5, 2022.
- Attended a workshop on **‘How to start the lab work under aseptic Conditions’** of Consortium Biotech Digital Workshop held on June 1–2, 2020 on Google Meet organized by School of Biotechnology, Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal.
- Participated in two days Faculty Development Program on **‘Online Teaching Tools’** organised by Department of Computer Science, St. Bede’s College on August 4 – 5, 2020.
- Attended a one day workshop on **“Identification for Medically important Fungi by conventional and molecular methods”** held on December 16, 2019 at PGIMER Chandigarh.
- Attended a workshop on **“Significance of calibration of measuring and its impact in research”** held on 12–13 June, 2019 jointly organized by National Research & Technology Consortium and Department of Biotechnology, H.P. University Shimla.

- Attended a one day workshop in collaboration with Jaypee University, Waknaghat to celebrate Science Day on the theme “Science for the people and people for Science” on February, 28, 2019.
- Attended Workshop on “**Translational R&D Funding and Entrepreneurship**” in HPU, Shimla organized by Biotechnology Workshop on “Application of Bioinformatics in Teaching and Research” on October 25–26, 2018 organized by Sub distributed Bioinformatics Centre, HPU.

Conferences/ Symposium/Webinar attended

- Participated in Webinar On “**Career and job opportunities for Microbiology graduates**” held on July 18, 2023 organized by Jaypee University of Information Technology, Waknaghat, Solan, H.P.
- Attended a webinar on ‘**Recent Trends in Microbial Technology**’ organized by the “Sathyabama IEI Student Branch” in association with the Institution of Engineers (India) on December 23, 2021.
- Attended a talk session on “**NEP-2020 and the Directions of Change in Higher Education**” by Prof. N.V. Varghese, Vice Chancellor, NIEPA, New Delhi, organized by the Internal Quality Assurance Cell of St. Bede’s College, Shimla on September 16, 2021.
- Attended a webinar conducted on the occasion of “World Environment Day” on June 4, 2020 by HP ENVIS HUB, HIMCOSTE, Shimla.
- Attended a **3-day International Symposium on “Understanding the Corona Pandemic and its Implications**” organized by Faculty of Applied Sciences and Biotechnology at Shoolini University from May 23–25, 2020.
- Attended an International Webinar on “**Present Pandemic and Bioinformatics**” organised by Janta Vedic College Baraut, UP on May 22, 2020.
- Attended a webinar on “**Molecular Taxonomy and DNA Barcoding: Concepts, Methods and Applications**” organized by R.D and S.H. National College and S.W.A. Science College, Mumbai on May 20, 2020.
- Attended a National Webinar series on “**Patent Mining: IPR Strategy and Patent Filing**” organized by Raja Balwan Singh Engineering Technical Campus, Agra on June 15 and 20, 2020.
- Attended a National Seminar on “**Current Trends and Future Advancement in Bioprocess Development**” held on March 26–27, 2019 in the Department of Biotechnology, H.P. University Shimla.
- Participated in 3rd Himachal Science Congress, 2018 on “**Rural upliftment through science and technology interventions**” at IIT, Mandi organized by HIMCOSTE Shimla in collaboration with IIT, Mandi on October 22–23, 2018.
- Participated in one day National Seminar entitled ‘**Celebrating Indian Science: From Past to Future**’ on September 13, 2018 at St. Bede’s College in collaboration with Indian Science Congress Association (ISCA) Shimla Chapter
- Attended a **Faculty Development Programme** organized by M.R. Pai Foundation jointly with the Forum of Free Enterprise in St Bede’s College, Shimla on Aug 27–28, 2015

- Attended a Faculty Development Programme on **Research Methodology** held at St Bedes College, Shimla on April 2015
- Attended a four day workshop on ‘**Mammalian cell culture Techniques**’ held in Himachal Pradesh university, Shimla on 7-8 May 2015.
- Attended a three day workshop on *FPLC*: Protein Purification and Tools for Proteomics held in the HPU, Shimla, Nov 20-21 2014
- Ten days training on ‘**Identification of microbial contaminants in plant tissue culture and orientation of microbiology instrument and techniques**’ held at Advanced Centre of Hill Bioresources and Biotechnology, CSK HP Agricultural University, Palampur (HP) - 176062 India.
- Seven Days training programme on ‘**Biofertilizers Production**’ organized and conducted by Agricultural Business and Development Cooperative Ltd. Bhopal in 2006.

Papers/Posters presented:

- Presented a paper entitled “**Synthesis and characterization of biopolymer based trimetallic nanocomposite for antimicrobial application**” in the International Conference on Frontiers in material science and technology: Energy, environment and sustainable development organized by the Department of Physics, SRM TRP, Engineering college, Tiruchillapalli Tamilnadu, India held on 5-6 Dec, 2024.
- Presented a poster (Online) entitled “**Probiotic characterization of primate origin *Lactiplantibacillus plantarum* LG138**” in the three days National Conference on ‘Transforming Healthcare: Advances in Bioinformatics and Biological Sciences’ (ABBS - 2024) organized by the Department of Bioinformatics, Sathyabama Institute of Science and Technology (Deemed to be University) Tamilnadu, India held on February 13–15, 2024.
- Presented a paper (Online) entitled “**Characterization of lactic acid bacteria from primate feces for potential probiotic properties**” in the two days International Conference on Biotechnological Emergence in Science and Technology (ICBEST – 2022) organized by the Department of Biotechnology, College of Science and Humanities, SRM Institute of Science and Technology, Ramapuram Campus, Chennai - 600 089 held on December 22 –23, 2022.
- Presented an Oral presentation entitled “**Statistical optimization of exopolysaccharide production from *Lactobacillus plantarum* LG138 of primate origin**” in the International e-Conference on Bioengineering for Health & Environment (ICBHE 2021) organized by Sathyabama Institute of Science and Technology, India and MAHSA University, Malaysia held on December 16 – 17 , 2021.
- Presented an oral presentation entitled as “**Optimization of production parameters for exopolysaccharide production from probiotic isolate *Lactobacillus plantarum* LG 138**” in a National Seminar on “Microbial Biotechnology: A new era of sustainable development” held on December 4, 2019 organized by the Department of Biotechnology, H.P. University Shimla.

- Presented an oral presentation entitled as '**Screening of lactic acid bacteria from primate feces for their use as probiotics**' in a National Seminar on "Current Trends and Future Advancement in Bioprocess Development" held on March 26–27, 2019 in the Department of Biotechnology, H.P. University Shimla
- Presented a paper entitled as '**Probiotics in Animal Health**' in 3rd Himachal Science Congress, 2018 on "Rural upliftment through science and technology interventions" at IIT, Mandi organized by HIMCOSTE Shimla in collaboration with IIT, Mandi on October 22–23, 2018.