


Curriculum Vitae

Full Name:	DR. GOPAL KRISHNA JOSHI			
Designation:	Professor			
Department:	Biotechnology			
Campus:	Birla/Chauras			
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Education Qualification:	M.Sc. in Biotechnology from Himachal Pradesh University, Shimla, 1999 Ph.D. Kumaun University, Nainital, 2007			
Teaching Experience:	22 Years	Research Experience:	21 Years	
Research Interest and Fields of Specialization				
Microbial Biotechnology and Metagenomics, Molecular Biology and Genetic engineering, Plant-Microbe interactions				
Honours & Awards				
DBT studentship for M.Sc. in Biotechnology DST-FAST TRACK Young Scientist				
Membership of Scientific Organizations				
Association of Microbiologists of India (Life Membership)				
Research Supervision (No. of Ph.D. Degree Awarded/Submitted/Registered)				
Post Doc-1				
PhD; Awarded-10, Registered-1				
Patent : Granted:1				
Research Projects				
<ol style="list-style-type: none"> 1. Prospecting for novel biocatalysts in a hot spring metagenome, DST, Govt. of India, Rs.18.74 lakh (completed) 2. <i>Characterization of psychrophilic bacterial diversity of Himalayan region in Uttarakhand</i>, Uttarakhand State Biotechnology Board, Govt. of Uttarakhand, India, Rs. 9.30 lakh (completed) 3. <i>Physicochemical and microbiological assessment of some selected water springs of central Himalayan region</i>, GBPIHED, Kosi, Katarmal, Rs. 14.63 lakh (completed) 4. Nutritional and Microbiological characterization of honey produced in Jaunsar-bawar tribal region of Uttarakhand, UCOST Rs. 4 lakh (Sanctioned) 				
Training Projects				
<ol style="list-style-type: none"> 1. DBT/UCOST sponsored Skill Vigyan Program for 3 months training on QC Chemist Microbiology 				
Administrative Experience				
<ol style="list-style-type: none"> 1. Head, Department of Biotechnology, HNB Garhwal University since 25-02-2023 2. Nodal Officer & Coordinator of DBT/UCOST funded Skill Vigyan Program, HNB Garhwal University 3. Assistant Director, FDC (PMMMNMST), HNBSGU for 6 months 4. Programme Officer, NSS unit, HNBSGU for 3 years 				
Conference/Symposium/Workshop Attended (last 5 years)				
<ol style="list-style-type: none"> 1. Key note Speaker in the International Conference on Humanities, Science and Technology organised by Sant Gahira Guru University Sarguja, Ambikapur, C.G. during September 21-23, 2023 2. Participated as an expert in the brainstorming session on Biotechnology Skill Vigyan Program in Uttarakhand State Science and Technology Congress organized during June 22-24, 2022 at Dehradun. 3. Attended Biotech Startup Expo-2022 during June 9-10, 2022 				

4. As a resource person presented a lecture on Metagenomics in Online Multidisciplinary Refresher Course in Biotechnology organized by HRDC-PRSU, Raipur Chhattisgarh during 13-28 December, 2021
5. Delivered expert lecture in a five day online Short-Term course on 'Technological Advancements in Bioprocessing organized by BTKIT, Dwarahat during September 23-27, 2020
6. Paper presented in National Conference on Environment Resources and Development of the Indian Himalaya', held at HNBGU during October 25-27,2018
7. Paper presented in national seminar on 'Professional Ethics in Higher Education' organized by FDC, HNBGU during April 06-08,2018
8. Invited talk as a resource person in 'Workshop on Microbial Technologies' organized by B.T. Kumaun Institute of Technology, Dwarahat, during March 26-28, 2018.

Key Publications

1. Rana, B., Chandola, R., Sanwal, P., **Joshi, G K**. Microbial community structure and functional gene analysis of *Keem* (a starter culture) native to Jaunsari tribe of Uttarakhand, India. *Scientific Reports*. <https://doi.org/10.21203/rs.3.rs-2143423/v1> (Accepted).
2. Rana B and **Joshi GK** (2023). Electrophoresis: Basic Principle, Types and Applications. In: Basic Biotechniques for Bioprocess and Bioentrepreneurship, Eds. Arvind Kumar Bhatt, Ravi Kant Bhatia, Tek Chand Bhalla. Academic Press 183-193.
3. Rana, B., Chandola, R., Rawat, V., & **Joshi, G. K.** (2022) A Comprehensive Overview of Ethnic Food and Beverages of Jaunsar-Bawar Tribal Region, Uttarakhand, India. **Journal of Mountain Research** 17(2)235- 242.
4. Goel D, Kumar S, **Joshi GK**, Rai P, Bhatnagar R. (2022). Crp/fnr family protein binds to promoters of atxA and sodmn genes that regulate the expression of exotoxins in *Bacillus anthracis*. **Protein Expression and Purification** 193, 106059
5. Rana B, Bhattacharyya A, Patni B, Arya M and **Joshi GK**. (2021) The Realm of microbial pigments in the food color market. **Frontiers in Sustainable Food Systems** 5, 54.
6. Kumar A, Panwar AS, Rana B, **Joshi GK**. (2020). Bacterial community structure analysis of soil treated with *Parthenium hysterophorus* L. derived green medium. **Plant Science Today**. 7(2): 281–287
7. Panwar AS, Molpa D, **Joshi GK**. (2019).Biotechnological Potential of Some Cold-Adapted bacteria isolated from north western Himalaya. **Microbiology**. 88 (3): 343-352
8. Rawat A and **Joshi GK** (2019). Physicochemical and microbiological assessment of spring water in central Himalayan region. **Environmental Monitoring and Assessment**. (1&2), 145-150
9. Rawat N and **Joshi GK** (2018). Bacterial community structure analysis of a hot spring soil by Next Generation Sequencing of Ribosomal RNA. **Genomics**. 111: 1053-1058.
10. Rawat N, Shankar A, Joshi GK (2018). Bioinformatics analysis of a novel Glutaredoxin gene segment from a hot spring metagenomic DNA library. **Meta Gene**. 18: 107-111.
11. Rawat N, Kumari P and **Joshi GK** (2018). Functional metagenomics and microbial community structure analysis of Indian hot springs (2018) **Environment Conservation Journal**. 19(1&2):145-150.
12. Patni B, Panwar AS, Negi P and **Joshi GK** (2018) Plant growth promoting traits of psychrotolerant bacteria: A boon for agriculture in hilly terrains. **Plant Science Today**. 5(1): 1-5.
13. Kumar A, Rawat N, Rawat A and Joshi GK (2018). Bacterial Diversity of Important Freshwater ecosystems in Uttarakhand. In: **Water Biology**. Eds: Khanna DR and Bhutiani R. Discovery Publishing House, New Delhi pp.121-129.
14. Jugran J, **Joshi GK**, Bhatt JP and Shankar A (2016) Production and partial characterization of extracellular protease from *Bacillus* sp. GJP2 isolated from a hot spring. **Proceedings of the National Academy of Sciences, India. Biological Science section**. 86(1):171–178
15. Rawat N and **Joshi GK** (2015). Prospecting for industrial enzymes in a hot spring metagenome. **Journal of Pure and Applied Microbiology** 9(2): 1257-1261.
16. Arya M, **Joshi GK**, Gupta AK, Kumar A and Raturi A (2014). Isolation and characterization of thermophilic bacterial strains from Soldhar (Tapovan) hot spring in central Himalayan region, India. **Annals of Microbiology**. 65 (3): 1457-1464
17. Joshi PK, **Joshi GK**, Mishra PK, Bisht JK & Bhatt JC (2014) Diversity of Cold Tolerant Phosphate Solubilizing Microorganisms from North Western Himalayas. In **Bacterial Diversity in Sustainable Agriculture** (pp. 227-264). Springer International Publishing.
18. Bisht SC, **Joshi GK**, Mishra PK (2014). CspA encodes a major cold shock protein in Himalayan Psychrotolerant *Pseudomonas* strains. **Interdisciplinary Sciences: Computational Life Sciences** 6(2): 140-148.
19. **Joshi GK**, Jugran J and Bhatt JP (2014) Metagenomics: The exploration of unculturable microbial world. In: **Advances in Biotechnology** (Ravi et al. eds.) Springer pp. 105-115
20. Bisht SC, **Joshi GK** and Mishra PK (2013) Cryotolerance strategies of *Pseudomonas*

- isolated from the rhizosphere of Himalayan plants. **SpringerPlus**. 2: 667.
20. Gupta AK, Joshi GK, Seneviratne JM, Pandey D and Kumar A (2013). Cloning, *in silico* characterization and induction of TiKpp2 MAP kinase in *Tilletia indica* under the influence of host factor (s) from wheat spikes. **Molecular Biology Reports**. 40:4967-4978.
 21. Bisht SC, Mishra PK and Joshi GK (2013). Genetic and functional diversity among root associated psychrotrophic *Pseudomonad*'s isolated from the Himalayan plants. **Archives of Microbiology** 195: 605-615.
 22. Selvakumar G, Joshi P, Suyal P, Mishra PK, **Joshi GK**, Venugopalan R, Bisht JK, Bhatt JC and Gupta HS (2013). Rock Phosphate solubilization by psychrotolerant *Pseudomonas* spp. and their effect on lentil growth and nutrient uptake under polyhouse conditions. **Annals of Microbiology**. 63: 1353-1362
 23. Panwar AS, Jugran J and **Joshi GK** (2013) Microbial production of biofuels. In: **Biofuels production** (Babu V, Thapliyal A and Patel GK; eds.). Wiley publication pp. 147-166.
 24. Mishra PK, Bisht SC, Ruwari P, **Joshi GK**, Bisht JK, Bhatt JC and Gupta HS. (2011). Alleviation of cold stress in inoculated wheat (*Triticum aestivum* L.) seedlings with psychrotolerant *Pseudomonads* from NW Himalayas **Archives of Microbiology** 193(7):497-513
 25. Mishra PK, Bisht SC, Ruwari P, **Joshi GK**, Singh G and Bhatt JC (2011). Bioassociative effect of cold tolerant *Pseudomonas* spp. and *Rhizobium 4 leguminosarum-PR1* on iron acquisition, nutrient uptake and growth of lentil 5 (*Lens culinaris* L.) **European Journal of Soil Biology**. 47: 35-43.
 26. Selvakumar G, Joshi P, Suyal P, Mishra PK, **Joshi GK**, Bisht JK, Bhatt JC and Gupta HS (2010). *Pseudomonas lurida* M2RH3 (MTCC 9245), a psychrotolerant bacterium from the Uttarakhand Himalayas, solubilizes phosphate and promotes wheat seedling growth. **World Journal of Microbiology and Biotechnology**. 27:1129-1135.
 27. **Joshi GK**, Kumar S and Sharma Vinay (2007) Production of moderately halotolerant, SDS stable alkaline protease from *Bacillus cereus* MTCC 6840 isolated from lake Nainital, Uttaranchal state, India. **Brazilian Journal of Microbiology** 38: 773-779.
 28. **Joshi GK** and Sharma Vinay (2007) Bacterial Lipases: Classification, Properties and Applications in Biotechnology. **Research Journal of Biotechnology**. 2: 50-56.
 29. **Joshi GK**, Kumar S, Tripathi BN and Sharma V (2006) Production of alkaline lipase by *Corynebacterium paurometabolum*, MTCC 6841 isolated from lake Naukuchiatal, Uttaranchal state, India. **Current Microbiology** 52: 354-358.
 30. Kanwar SS, Ghazi IA, Chimni SS, **Joshi GK**, Rao GV, Kaushal RK, Gupta R, Punj V (2006) Purification and properties of a novel extra-cellular thermotolerant metalloproteinase of *Bacillus coagulans* MTCC-6375 isolate. **Protein Expression and Purification**. 46(2): 421-8.
 31. Kanwar SS, Srivastava M, Chimni SS, Ghazi IA, Kaushal R and **Joshi GK**. (2004) Properties of an immobilized lipase of *Bacillus coagulans* BTS-1. **ACTA Microbiologica et Immunologica Hungarica**. 51 (1-2): 57-73.
 32. Gupta V, Kumar A, **Joshi GK**, Agarawal VK and Garg GK (2003) Detergent washing techniques for the efficient extraction of teliospores of *T. Indica* from contaminated wheat seeds. **Seed Science and Technology**. 31 (1): 95-101.

Total Number of Research Publications: More than 50 (Including Book Chapter)