Jena School for Microbial Communication
Graduate School of Excellence

Garima Kalakoti

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Institute of Biodiversity
Exzellenzcluster Balance of the Microverse
Mechanisms of Microbial Metabolic Interactions
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Title PhD Project: Conceptualize and predict microbial life history traits and estimate their impact on hosts and environments

Main Research Interests

- Computational approaches to predict Microbial Life Histories strategies
- Constraint-based metabolic modeling of microbes and communities
- Metatranscriptomics/Metagenomics to analyze microbial communities

Methodological Experiences

- Next-Generation Sequencing (NGS) Data Analysis: Genomics, Transcriptomics
- Programming Proficiency: Python, R, HTML/CSS
- Workflow Management: Snakemake workflow management system

Curriculum Vitae

Academic History

- **2024 – Present:** PhD Candidate, Dr. Zimmerman Group, Excellence Cluster Balance of the Microverse, Mechanisms of Microbial Metabolic Interactions, Friedrich-Schiller Universität, Jena, Germany
- **2020–2022:** M.Sc. in Bioinformatics, Savitribai Phule Pune University, Pune, Maharashtra, India
- **2017–2020:** B.Sc. in Life Sciences, Acharya Narendra Dev College, University of Delhi, New Delhi, India

Research Experience

- **Aug 2022 - Sept 2024:** Project Associate under Dr. Shailesh Kumar at the National Institute of Plant Genome Research, New Delhi, India
- **Jan 2022 - June 2022:** Determining Genome-wide binding pattern of AP-1 transcription factor during Adipogenesis under the guidance of Dr Abhijeet Kulkarni, Assistant Professor, Department of Bioinformatics, Bioinformatics Centre, SPPU, Pune, Maharashtra, India
- **April 2022 - May 2022:** Subtractive Genome Analysis to Prioritize Drug Targets from FDA Approved Drugs Against Streptococcus pneumonia under Dr Manali Joshi,

Assistant Professor, Department of Bioinformatics, Bioinformatics Centre, SPPU, Pune, Maharashtra, India

- **2019-2020:** Isolation and characterization of the model organism Caenorhabditis elegans from native soil under Dr Sarita Kumar, Associate Professor, Department of Zoology, Think lab, CUBE, AND College, DU, New Delhi, India
- **2019-2020:** Hands-on experience working with model organisms like fruit flies (*Drosophila melanogaster*), nematodes (*Caenorhabditis elegans*), rotifers, Moina, earthworm, and Cardamine under Dr Sarita Kumar, Associate Professor, Department of Zoology, Think lab, CUBE, AND College, DU, New Delhi, India
- **June 2019 - Aug 2019:** Characterization and isolation of novel Mycobacteriophages from collected soil samples under Dr Urmi Bajpai, Associate Professor, Department of Biomedical Sciences, AND College, DU, New Delhi, India

Publications

- Bose GS, **Kalakoti G**, Kulkarni AP, Mittal S. AP-1/C-FOS and AP-1/FRA2 differentially regulate early and late adipogenic differentiation of mesenchymal stem cells. J Cell Biochem. 2024 Mar 5. doi: 10.1002/jcb.30543. Epub ahead of print. PMID:38440920. Mar 5, 2024
- **Kalakoti, G**., Vivek, A., Kamboj, A., Singh, A., Chakraborty, S., & Kumar, S. (2024). Comprehensive profiling of rRNA-derived small RNAs in Arabidopsis thaliana using rsRNAfinder pipeline. MethodsX, 12, 102494. Nov 25, 2023