

MONISHA V

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SUMMARY:

Highly motivated, innovative and hardworking Microbiologist with 2 years of research experience with specialization in Molecular biology and food microbiology. I have expertise in genetic engineering, recombinant protein purification, nanoencapsulation, prebiotic substances such as functional oligosaccharides and human milk oligosaccharides. Passionate to learn new scientific skills. Experience in managing multiple projects simultaneously, excellent team player and possess leadership qualities. Self-motivated, well organized, multi-tasking and good communication skills.

PROFESSIONAL SKILLS:

- Gene Cloning, PCR techniques
- Protein overexpression in Bacteria (*E.coli*) and Yeast (*Pichia pastoris*)
- Site directed Mutagenesis
- Python for Data analysis
- Bioinformatics tools for data analysis
- Mammalian cell culture
 - Transfection, MTT assay
 - Scratch wound assay
- Animal studies
 - mice model handling and dissection, excisional wound
- Microscopy techniques
- Antimicrobial and antibiofilm assays
- Western blotting, ELISA.
- Freeze drying, Lyophilization.
- HPLC handling and analysis, TLC and Affinity chromatography
- Carbohydrate estimation and protein estimation studies
- Specific enzyme activity analysis
- Handling and maintenance of aerobic and anaerobic microbial cultures
- SOPs, Good laboratory practices (GLP), Scientific writing, Lab reports
- Strong Communication skills and presentation skills

EXPERIENCE:

Project Associate Level I, CSIR - CFTRI, Mysore (Jun 2022 – Mar 2023)

- Worked on a project that involves Extraction of oligosaccharides from plants and determining their prebiotic activity and potential to act as functional mimics of Human Milk oligosaccharide.
- Performed experiments such as microbial culturing, serial dilution and plating, antimicrobial activity assays, media optimization, DNA isolation, TLC and HPLC.

Guest Faculty, SBRR Mahajana First Grade College, Mysore (Dec 2021 – Jun 2022)

- Handled Microbiology subject for BSc Students (all three years)
 - both theory and practical classes.

Junior Research Fellow, CSIR – CFTRI, Mysore (Mar 2020 – Nov 2021)

- Worked on project that involves preparation of nano formulations from edible plant sources encapsulated with recombinant protein for treatment of diabetic ulcers.

- Performed experiments on gene cloning, production and purification of recombinant protein, isolation and encapsulation of nanovesicles, Mutagenesis, Transfection, determination of wound healing activity in human cell lines and in mice models with excisional wounds.

EDUCATION:

M.Sc. - Applied Microbiology (June 2016 - June 2018)

VIT University Vellore - CGPA – 8.3

- Worked on project entitled “Preparation and characterization of metallic hydrogels incorporated with nanoparticles for wound healing applications” at South India Textile Research Association (SITRA), Coimbatore.

B.Sc. Microbiology (June 2013 - May 2016)

P.S.G College of Arts and Science, Coimbatore - CGPA – 8.11

INTERSHIPS AND CERTIFICATIONS:

- **Plant tissue culture Techniques and its Applications** under Green Skill Development Programme (GSDP) at Institute of Forest Genetics and Tree Breeding, Coimbatore, 2019
- **CRISPR technology**, (online course) - Biotechnika info labs Pvt Ltd., 2020
- **Bioinformatics Global Research Online Hand-On** - Biotechnika info labs., 2023
- **Cancer Immunology National Workshop** - Biotechnika info labs., 2023
- **Coding for Biologist** - Biotechnika info labs., 2023

ACHEIVEMENTS:

Publications:

- A site-specific phosphorylation in FSTL1 determines its promigratory role in wound healing, *Biochimie*, Volume 225,2024,106-113,ISSN 0300-9084.
<https://doi.org/10.1016/j.biochi.2024.05.016>
- Screening for Streptokinase producing *Streptococcus* sp. From food and soil samples. *Research Journal of Pharmacy & Technology*, 2018, 11(7): 2845-2847.
<https://doi.org/10.5958/0974-360X.2018.00524.3>

Paper presentations in Conferences:

- Presented a paper entitled 'Isolation and Characterization of Streptokinase producing *Streptococcus* sp.' in **13th International Conference on 'Science, Engineering and Technology (ICSET 2016)**' organized by School of Biological Sciences and Technology, VIT University, Vellore.
- Presented a paper entitled 'Optimization and Production of Streptokinase from *Streptococcus* sp.' in **14th International Conference on 'Science, Engineering and Technology (ICSET 2017)**' organized by School of BioSciences and Technology, VIT University, Vellore.

DECLARATION:

I hereby declare that all the information mentioned above are true to my knowledge.

- Monisha V