



## Immadi Siva Ratnakar

Curious researcher with a passion for exploring the molecular world, and a drive to contribute to scientific advancements.



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## Education

\* Graduation, Sri Sathya Sai Institute of Higher Learning, 2020-2022

Masters in Bioscience, cGPA: 8.4

\* Under graduation, Sri Sathya Sai Institute of Higher Learning, 2017-2020

B.Sc. Hons. in Bioscience, Minors in Chemistry, cGPA: 7.9

\*High Schooling, St. Andrews School, 2015-2017

Biology, Physics, Chemistry, Informatics, 92% marks

## Experience

### Junior Research Fellow, Indian Institute of Science

(June 2022-Sep 2023) Structural and Inhibition Studies on Mycobacterial Topoisomerase and DNA Gyrase.

Techniques: Cloning, Protein purification, Protein characterization assays, Immuno-pulldown, Mass spectroscopy, Cryo-EM

### Masters projects at Sri Sathya Sai Institute of Higher Learning

(Apr 2021-May 2022) Genomic analysis of Fosfomycin resistance-conferring genes in Escherichia coli

Techniques: Screening clinical isolates for antibiotic resistance, Genome annotation and characterization, PCR, in silico Protein docking.

(Jun 2020-Feb 2021) Identification of therapeutics from fungal

metabolites for their application in combinatorial antibiotic therapy

Techniques: Building ligand library, Homology modelling, Molecular docking and Molecular dynamic simulation.

### Traineeship at Acclin Path labs

(Mar 2020-May 2020) Screening clinical isolates for various disease markers including SARS-Cov2, HIV

Technique: ELISA

### Bachelors projects at Sri Sathya Sai Institute of Higher Learning

Role of ADA in Osteoclast differentiation

Techniques: Animal Cell Culture, qPCR

A preliminary report on the Avifauna of the Brindavan Campus

Bird watching and species identification to make a checklist of the bird species and prepare a book on the diversity of the campus.

## Publications

Santoshi et al., 2023. Identification and characterization of a new HNH restriction endonuclease with unusual properties. Applied Microbiology and Biotechnology, pp.1-13.

Ratnakar, I.S., 2022. Phage Therapy: Challenges and Opportunities. Fine Focus, 8(1), pp.12-35.

## Awards

\* Qualified CSIR-NET JRF examination, 2022 with an All-India Rank of 142.

\* Gold Medal from the Sri Sathya Sai Institute of Higher Learning for academic excellence in the Master's program.

\* Qualified the Graduate Aptitude Test in Engineering, 2022, 2023.