

# Parvathi D Bhat

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📍 Bengaluru, India

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## PROFILE

A passionate biotechnologist with interests in cell and molecular biology, genetics, gene editing, immunology, drug discovery, and space biology, committed to contributing to therapies and products that enhance global health. Experienced in interdisciplinary projects with a focus on translational research and innovation in healthcare. Looking forward to opportunities in developing scientific solutions that contribute to global health and therapeutic advancement.

## EDUCATION

**R V College of Engineering, Bengaluru** 2021-2025

*B.E. in Biotechnology*

- CGPA: 9.23
- Activities: Team Antariksh, Rotaract Club, NSS

**KLE Society's Independent PU College, Rajajinagar, Bengaluru** 2019-2021

*Pre-University: PCMB - Physics, Chemistry, Mathematics, Biology*

- Percentage: 100 (Rank Holder)
- KCET Rank: 3727

**Widia Poorna Prajna School, Bengaluru** 2009-2019

- Percentage: 97.12
- Activities: Member of Vijnanaprajana (Science club); Head of Vidyarthi Hongirana, the school magazine

## EXPERIENCE

**Quality Control Intern** Nov 2023 - Dec 2023

*Karnataka Antibiotics and Pharmaceuticals Pvt. Ltd.*

*Peenya Industrial Area, Bengaluru*

- Worked on quality control of cephalosporin-related pharmaceutical products in both Chemical and Microbiology sections.
  - Chemical Section - Hands-on (Karl Fischer Titration, pH meter, UV-Visible Spectrophotometer, Clarity check after reconstitution) and Observation-based (GC-MS, HPLC, FTIR, TOC Analyzer).
  - Microbiology Section - Hands-on (Bacterial Endotoxin Test (BET), Media Preparation, Colony Counting, Gram Staining, Endospore Staining) and Observation-based (Microbial identifier system, Operation of Industry-Scale Autoclave).
- Followed SOPs and adhered to GLP for pharmaceutical product testing and contamination control, while maintaining proper documentation.

**Microbiology Chief Subsystem Engineer** Jun 2022 – Jan 2025

*Team Antariksh*

*R V College of Engineering, Bengaluru*

- Subsystem Head, RVSAT-1 Project – Led a subsystem involving the microbiological payload RVSAT-1, launched aboard POEM-4/PSLV C-60 under ISRO's SPADEX Mission (99th launch, 2024).
- Conducted lab-scale experiments on *Bacteroides thetaiotaomicron* to study growth kinetics (viable count, CFU, filter efficiency, OD) for both ground-based trials and a custom-developed microfluidic-optical setup for the flight model.

**Research and Project Intern** Oct 2024 – Dec 2024

*BioEdge Solutions*

*Peenya Industrial Area, Bengaluru*

- Studied the antioxidant potential of *Cissus quadrangularis* (velvet grapes). Explored various tools and techniques like GC-MS, Gel Electrophoresis, PCR, Sanger sequencing, and Bioinformatics tools, combining both *in-vitro* and *in-silico* studies.

**Research Intern** Nov 2022 – Dec 2022

*Centre of Excellence – Computational Genomics*

*R V College of Engineering, Bengaluru*

- Conducted a QSAR-based ML project to predict safe insecticide bioactives targeting human GABA receptors, gaining experience in data curation and molecular docking under PhD mentorship.

## PROJECTS

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- **Biodegradable Transdermal Patch** – Designed and optimized a multilayered patch using natural polymers for fungal infections and inflammation; Lab-Scale testing with an initial efficiency of approximately 70% (FTIR, Anti-Fungal, Anti-inflammatory, Swelling Index, *In-Vitro* Drug Diffusion Studies).
- **Meta-Analysis of Nutraceutical data in Prediabetes Management** – Analyzed RCT data (FPG, HbA1c, OGTT) using statistical tools (box plots, forest plots) to assess nutraceutical efficacy of different samples.
- **Water Quality Monitoring System** – Developed Arduino-based system integrating manual filtration and sensors; used Python for visualization and analysis.
- **CAR-T Cell Modeling for Alzheimer's Disease** – Built and validated a hypothetical mathematical model simulating protein concentration dynamics using CAR T-cell therapy.

## HONORS & AWARDS

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- **R V Merit Award 2025** – In recognition of the launch of RVSAT-1, by R V College of Engineering.
- **Silver Award, FCMS Ace of Innovations (AoI) 2025, Shivamogga** – Recognized for final year B.E. project on fabrication, optimization, and testing of a novel biodegradable transdermal patch for fungal infections and inflammation.
- **Best Paper Award, IChE CHEMCON 2023, Kolkata** – For the project "Wastewater Management: Sensor Integration with Manual Filtration and Multi-parameter Monitoring for Testing Water Quality".
- **Paper Presentation, IEEE AMATHE 2025** – Presented "Mathematical Modeling of Protein Concentration Dynamics using CAR T-Cell Therapy on Alzheimer's Disease".
- **Paper Presentation, ICMSMT 2025** – Presented "Sustainable Transdermal Drug Delivery with Innovation in Material Design and Formulations: A Comprehensive Review".
- **Merit Scholarships** – Awarded **FFE Scholarship** and **NSP Pragati Scholarship** for academic excellence.
- **Outstanding Mentee, Foundation for Excellence (FFE)** – Completed a 6-month mentoring program focused on soft skill development.

## CERTIFICATIONS AND SKILLS

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- **Certifications:**
  - The Science of Stem Cells from The American Museum of Natural History
  - Cancer Biology from IISC
  - Computer-Aided Drug Design from IIT Madras (NPTEL)
  - Bioengineering - An Interface with Biology and Medicine from IIT Bombay (NPTEL)
  - Basics of Genome Editing by CRISPR from BDG Life Sciences
  - RNA sequence Data Analysis and Biological Interpretation from OmicsLogic Inc
- **Skills:**
  - Soft Skills: Time Management, Teamwork, Technical Leadership, Ideation, Problem-Solving.
  - Technical Skills: MS Office (Word, PowerPoint, Excel, Power BI), Documentation, Wet lab techniques (Gel Electrophoresis, TLC, Soxhlet Extraction, Distillation, Biochemical Assays, GC-MS profiling), Dry lab Techniques (Bioinformatics tools – Python (basics), NCBI-BLAST, CLUSTAL OMEGA, CHOPCHOP, CRISPRDB, ADMET profiling, PyRx, and AutoDock).

## EXTRACURRICULAR ACTIVITIES

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- Graphic Designer and Content Curator, Team Antariksh - Managing social media, designing, and content related to the activities of the team.
- Student Volunteer at Rotaract Club and NSS - Community Work and Social Services
- Teaching Volunteer for 6<sup>th</sup> Standard students of the Government Higher Secondary School, Kengeri – Taught Mathematics, English, General Science for 6 months.

## LANGUAGES

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English, Hindi, Kannada