

K V RAGHAV KRISHNAN

Post-graduate Student in Biotechnology

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OBJECTIVE

Biotechnology postgraduate with strong interdisciplinary expertise in bioinformatics, molecular modeling, and in vitro experimental techniques. Proven track record in developing high-accuracy predictive models using Python and designing novel multi-epitope vaccines to combat antimicrobial resistance. Certified in AutoCAD and bioprocess engineering, with a focused interest in applying computational drug discovery and network pharmacology to advance medical technology and patient care in a professional R&D setting

SKILLS

- Programming & Data Analysis: • Python • BioPython Bioinformatics & Computational Biology: • Molecular Docking
- Protein Structure Prediction • Immunoinformatics • Genomic Data Analysis Molecular & Laboratory Techniques:
- In vitro Assays • Molecular Biology • Chromatography Industry & Professional Skills: • Drug Discovery
- Experimental Design • Scientific Communication • Data Interpretation

EDUCATION

M.Tech in Biotechnology | CGPA - 7.2 📅 May 2027
Vellore Institute of Technology 📍 Vellore

B.Tech in Biotechnology | GPA - 6.9 📅 Apr 2025
Mepco Schlenk Engineering College 📍 Sivakasi

HSC | Percent - 85 📅 Jan 2021
GV HR Sec School 📍 Mettur

SSLC | Percent - 80 📅 Jan 2019
Malco Vidyalaya Matric HR Sec School 📍 Mettur

PUBLICATIONS

Raghav Krishnan K V, Roy, A., Roy, S., Velavan, J. S. A., Amudala, R., Adhikari, D. J. D., S.V., K., Ramaiah, S., & Anbarasu, A. (2026). A comprehensive review of resistome profiles in ocular pathogens: Insights into Pseudomonas aeruginosa and emerging resistance trends. *Journal of Infection and Public Health*, 19, 103183.

CERTIFICATIONS AND TRAINING

- **International Certificate** - AutoCAD (Autodesk)
- **Industrial Training in Bioprocess Engineering** | BIOZEEN
- **Certificate for Paper Presentation** | St. Peter's College of Engineering and Technology | Feb 14, 2025
 - Presented: *Extraction and Purification of Bio-Active Compound from Adhatoda vasica for Anti-Diabetes*
 - National Conference on Biotechnology Innovations for Drug Discovery
- **Bioinformatics for Biologists: Analysing and Interpreting Genomics Datasets** | FutureLearn
- **NPTEL Certification: RNA Biology** | NPTEL
- **Hands-On Genomics Evolution in Biotechnology** | Genomac Hub
- **Virtual Internship in Bioinformatics** | Genomac Hub
- **Workshop on Chromatography Techniques**

PROJECT EXPERIENCE

In Silico Design of a Multi-Epitope Vaccine Targeting PhuR for Pseudomonas aeruginosa

- Engineered a novel multi-epitope vaccine targeting the PhuR iron-uptake protein using computational tools to identify conserved CTL, HTL, and B-cell epitopes. Utilized in silico modeling and molecular docking to validate vaccine-receptor interactions, aiming to block essential heme-acquisition pathways in multidrug-resistant strains.

Protein Secondary Structure Prediction using Artificial Neural Networks

- Developed an ANN model in Python achieving 95% accuracy in predicting secondary structures from primary sequences. Integrated PyRosetta for structure alignment and verified accuracy against reference structures from global protein databases.

In-Silico Identification & In-Vitro Analysis of Diabetic Compounds using Adhatoda vasica

- Extracted bioactive compounds using organic and green solvent combinations. Validated therapeutic efficacy through in vitro studies and performed network pharmacological analysis to clarify molecular mechanisms and therapeutic pathways.

LANGUAGES

English, Tamil