VIVEK THIRUNELLAI RADHAKRISHNAN

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EDUCATION

JOHNS HOPKINS UNIVERSITY | Baltimore, USA **May 2026**

MSE - Biomedical Engineering

Relevant Coursework: Cell and Tissue Engineering Lab, Microphysiological Systems, Cellular Engineering, Tissue Engineering, Molecular Immunoengineering and Immunomodulatory Biomaterials

RAMAIAH INSTITUTE OF TECHNOLOGY | Bengaluru, India **June 2024**

BE Biotechnology | GPA 9.60/10 |Third Rank Holder 2024

Relevant Coursework: Biochemistry, Cell and Molecular Biology, Immunology, Bioanalytical Techniques, Drug design and development, Bioreaction Engineering and Kinetics.

RESEARCH EXPERIENCE

Graduate Research Intern in Hackam Lab **September 2024 - Present**

Johns Hopkins University School of Medicine | Baltimore, MD

- Implemented growth and propagation of intestinal stem cells onto a customized intestinal scaffold bearing the properties of human intestine.

Development of Nanoscaffold for Diabetic Foot Ulcer **November 2023 - June 2024**

M S Ramaiah University of Applied Sciences | Bengaluru, India

- Awarded best project of the year by alumni association.
- Conducted various characterization studies, In-Vitro and In-Vivo Diabetes induced Albino rat model studies.
- Concluded with displaying improved wound healing time and skin regeneration in comparison to marketed formulation.

IASc-INSA-NASI Summer Research Fellow **June 2023 - August 2023**

All India Institute of Medical Sciences, Department of Gastroenterology | New Delhi, India

- Collaborated closely with clinicians to conceive and validate a kinetic test for the quantitative estimation of Bile acids from stool samples, contributing to advanced diagnostic methodologies.
- Conducted diverse molecular biology techniques such as Western blot and Flow Cytometry on blood samples from patients with recurrent pancreatitis, significantly contributing to the understanding of pancreatitis and advancing diagnostic capabilities.

Identification of Pharmacologically Active Plant Secondary Metabolites against *S. pneumoniae* Meningitis

Ramaiah Institute of Technology | Bengaluru, India **January 2023 - May 2023**

- Led a team of four and spearheaded the screening of 125 flavonoids utilizing AutoDock Vina, identifying and proposing ten promising molecules.
- Established a Structure-Activity Relationship and determined the IC50 of top ten molecules, contributing valuable insights to the project's pharmacological investigation.

TECHNICAL SKILLS

- **Lab Techniques:** Organoid culture, R21 grant writing, Animal Handling, Cell Cultures, Western Blot, Flow Cytometry, RT-PCR, ELISA, FTIR, CRISPR Cas 9 genome editing, Design and Implementation of Cell culture assays.
- **Software:** AutoDock, BIOVIA, SuperPro® Designer, Python, MATLAB®.
- **Certifications:** Best Practices in Mammalian Cell Culture, In-Silico Drug Discovery.

PRESENTATION AND PUBLICATIONS

"Therapeutic potential of Silkworm Sericin in Wound Healing Applications" **August 2024**

- Review paper on potential uses of sericin for chronic wound healing. **https://doi.org/10.1111/wrr.13216.**

"Handle with Care! Microplastics Everywhere." | Ramaiah Institute of Technology **September 2023**

- Awarded the 3rd prize for presentation on conceptualization and cost analysis of developing a double concentric sphered laundry ball utilizing okra polysaccharides and titanium dioxide to capture and treat microplastics at the household source.

LEADERSHIP AND AWARDS

- Awarded the IASc-INSA-NASI Summer Research Fellowship at A.I.I.M.S, New Delhi in April 2023.
- Organized financial literacy sessions and managed club activities as Head of Finance Club at Ramaiah Institute of Technology.
- Led the publicity and logistics for a successful blood donation camp as a Blood Donation Camp Organizer with NSS, RIT.
- Initiated and implemented a garbage disposal system in Khazimakan Government School, Bangalore as a volunteer.