Dr. MAGESH R
ASSISTANT PROFESSOR (BIOTECHNOLOGY)
Faculty of Biomedical Sciences and Technology

ORCID: 0000-0002-9508-8097
Scopus ID: 55218150600
Google Scholar: MAGESH RAMASAMY
Email: magesh.r@sriramachandra.edu.in

PhD/Post Doc supervision slots available: 2

Personal Profile

Dr R Magesh is a Microbiologist with a Post Graduation in Biotechnology and a Doctorate in Computational Biology. His expertise in teaching includes Microbiology, Bioprocess Technology, environmental biotechnology and Molecular Biology. His area of research focuses on screening drugs from natural databases and plant sources to combat oral cancer, microbial drug resistance, and metabolic diseases through the application of in-silico and in-vitro study methods(cancer cell lines and Geno typing and gene expression studies . Furthermore, his research incorporates Multi-Omics (Transcriptomics, metagenomics, Metabolomics & Microbiomics) to unravel genetic variants, oncogenic signatures, and molecular pathways associated with complex diseases.

Throughout his time at SRIHER, Dr R Magesh has successfully published 33 high-impact international peer-reviewed research articles. Additionally, he has been awarded two ICMR projects (as Principal Investigator and Co-Principal Investigator), a SRIHER GATE project, and several publication awards. His research focuses on unraveling complex biological systems, and is dedicated to leveraging this understanding to create innovative therapies and interventions for improving human health.

Research Interests

Numerous academic publications highlight Dr. R. Magesh 's interests and achievements, and the significant number of citations signify his deep involvement in the field of research. An h-index of 10 and an i10-index of 11 reflect his academic significance and highlight the contributions to scientific literature.

Research Areas

Dr. Magesh is involved in the field of Computer-Aided Drug Design, which integrates computational techniques to facilitate the discovery and design of new therapeutic drugs. This area encompasses various methodologies for predicting the interactions between drugs and their biological targets, which is crucial for developing effective pharmaceuticals.

Computational Biology lab

Dr R Magesh and his lab focus on functional mutations of proteins, particularly those related to inflammatory disorders and utilize computational modeling to understand how mutations impact protein function. The goal is to use this information to develop new treatments for inflammatory diseases. Understanding the effects of protein mutations can help understand how diseases develop and how to treat them. They use computers to simulate the behavior of proteins with different mutations and see how these mutations affect protein function. This information can help identify key mutations that drive disease and develop targeted therapies that correct these mutations or mitigate their effects..

Lab Members

1) Ms.Madhana Priya N: Title- Computational Screening of Potent Natural Metabolites against Drug Resistant *Mycobacterium tuberculosis. (Synopsis - Completed)*

2) Ms. Priyanka K : Title- Characterizing the Mutational Landscape of Selected Lysosomal Storage Disorder using Computational Pipeline.(Synopsis Completed)
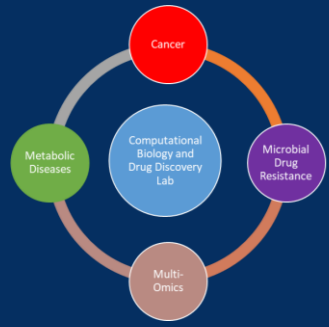
Selected Publications:

1. Priyanka. K, Priya N Madhana, Eswaramoorthy, Magesh R. A computational approach to analyzing the functional and structural impacts of Tripeptidyl-Peptidase 1 missense mutations in neuronal ceroid lipofuscinosis. Metab Brain Dis (2024).
2. N. Madhana Priya, N. Sidharth Kumar, S. Udhaya Kumar, G. Mohanraj, R. Magesh, Hatem Zayed, Karthick Vasudevan, George Priya Doss C. Exploring the effect of disease causing mutations in metal binding sites of human ARSA in metachromatic leukodystrophy. In Advances in Protein Chemistry and Structural Biology (Vol. 141, pp. 203–221). Academic Press. (2024).
3. Madhana Priya.N, George Priya Doss .C, Magesh .R. Exploring Natural Products Library to Identify Potential Inhibitors Targeting Isoniazid-Resistant Tuberculosis. Journal of Biomolecular Structure & Dynamics (2023).
4. Madhana Priya. N, Archana Pai. P, Thirumal Kumar, D. Gananasambandan, Magesh R.. Elucidating the functional impact of G137V and G144R variants in Maroteaux Lamy's Syndrome by Molecular Dynamics Simulation. Molecular Divers (2023)
5. Kannan. P, Hadeefa Begum A, N, Madhana Priya .N, D, Thirumal Kumar .D, Ramanathan.G, Eswaramoorthy. R, & Magesh R, Unraveling the Relacatib activity against the CTSK proteins causing pycnodysostosis: a molecular docking and dynamics approach. Journal of Biomolecular Structure & Dynamics (2023).
6. Madhana Priya N, Ambritha Balasundaram, Sidharth Kumar N, Udhaya Kumar. S,Thirumal Kumar. D, Magesh R, Hatem Zayed, George Priya Doss C. Controlling cell proliferation by targeting cyclin-dependent kinase 6 using drug repurposing approach. Advances in Protein Chemistry and Structural Biology (2023).

Link for google scholar: https://scholar.google.com/citations?user=NC1BC-8AAAAJ&hl=en&oi=ao