

DEPARTMENT OF BIOTECHNOLOGY
FACULTY JOURNAL PUBLICATIONS (2020 – 2025)

2025

- ❖ Chiranth, C.R., Kumkum, S., Gururaja Yellapur, S., Desai, V.P., Reddy, A.H.M., Manokaran, S. (2025). A review on pharmacogenomics of anticancer drugs in targeted therapy. Proceedings of the National Academy of Sciences, India Section B: Biological Sciences, Springer, 1–11.
- ❖ A. Bharatish, Akshay Kumar, K.S. Siddhanth, V. Manikant, Pratika Jagdish, Ashwani Sharma, Sivakumar Solaiachari. On optimizing wettability, surface roughness and swelling behaviour of laser-polished 3D-printed PETG polymer for bio-medical implants, Polymer 330 (2025) 128482

2024

- ❖ Akshay Uttarkar, Vibha Rao, Dhrithi Bhat & Vidya Niranjana, Disaggregation of amyloid-beta fibrils via natural metabolites using long timescale replica exchange molecular dynamics simulation studies. J Mol Model 30, 61 (2024). [View article](#)
- ❖ Chandrashekar Karunakaran, Vidya Niranjana, Anagha S Setlur, Dhanya Pradeep and Jitendra Kumar, “Exploring the Role of Non-synonymous and Deleterious Variants Identified in Colorectal Cancer: A Multi-dimensional Computational Scrutiny of Exomes”, 2024, Current Genomics (Accepted) [View article](#)
- ❖ Chandrashekar K, Vidya Niranjana, Adarsh Vishal and Anagha S Setlur, “Integration of Artificial Intelligence, Machine Learning and Deep Learning Techniques in Genomics: Review on Computational Perspectives for NGS Analysis of DNA and RNA Seq Data”, 2024, Current Bioinformatics (Accepted) [View article](#)
- ❖ Yogesh Dashrath Naik, Chuanzhi Zhao, Sonal Channale, Spurthi N. Nayak, Karma L. Bhutia, Ashish Gautam, Rakesh Kumar, Vidya Niranjana, Trushar M. Shah, Richard Mott, Somashekhar Punhuri, Manish K. Pandey, Xingjun Wang, Rajeev K. Varshney & Mahendar Thudi (2024) Bioinformatics for Plant Genetics and Breeding Research. In: Pandey, M.K., Bentley, A., Desmae, H., Roorkiwal, M., Varshney, R.K. (eds) Frontier Technologies for Crop Improvement. Sustainability Sciences in Asia and Africa(). Springer, Singapore. [View article](#)
- ❖ Vidya Niranjana, Pooja Sureshkumar, Likitha Shankara, Gulab Khedkar and Jitendra Kumar (2024) Insights on Mechanism of Plant Related Bacteria Producing Phytohormones, New Insights Into Phytohormones, Intechopen. [View article](#)
- ❖ Akshay Uttarkar, Vidya Niranjana (2024) A comparative insight into peptide folding with quantum CVaR-VQE algorithm, MD simulations and structural alphabet analysis. Quantum Inf Process 23, 48 (2024). [View article](#)
- ❖ Priyanka R., **Manjunatha Reddy AH**, Sumathra Manokaran and Raje Siddiraju Upendra. 2024. Antiproliferative effects of C.aromatica Extracts and Essential oils in MDA-MB231 as a Breast Cancer Cell Line. Research Journal of Pharmacy and Technology. 17(3): 1352 – 1355. **(Q2)**
- ❖ Koyal Yogendran, Rishika Raju, Sumathra Manokaran and **Manjunatha A.H. Reddy**. 2024. *Acinetobacter baumannii* BT RVCE Bangalore, submitted to NCBI. Accession no. GenBank: PP976931.1 <https://www.ncbi.nlm.nih.gov/nuccore/PP976931.1/>

❖	A.H. Manjunatha Reddy , K.N. Subramanya, A. Jagadish, Prarthana A, Sumathra Manokaran. 2024. Computational Modelling of Lifestyle Driven Mental Health Disorders: Gender-Based Insights. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	Shreya Lal, Shweta Bathija, Rishika Mohan V, Nagashree B, A.H. Manjunatha Reddy , Sumathra Manokaran. 2024. An attempt to reduce carbon footprint by enhancing the synthesis of biofuels with <i>Pichia pastoris</i> . 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	Amith B, Harshitha KN, Vijay R, Yogeesh A S, A.H. Manjunatha Reddy , Sumathra Manokaran. 2024. Fungal assisted carbon capture: A comparative analysis of fungal strains in plastic degradation for carbon utilization. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	R Sindhu, A H Manjunatha Reddy , Sumathra Manokaran. 2024. In Silico Docking Studies of Phytochemicals from <i>Oxalis corniculata</i> for anti-inflammatory effects targeting COX-4. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	Snigdha Tutika, Vineeth Kiran, Sumathra Manokaran, KN Subramanya, AH Manjunatha Reddy . 2024. Prevalence of life style factors on quality of life and mental well being. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	Anika, Niranjana S, Prerna Kriti, Vishal H, A H Manjunatha Reddy , Sumathra Manokaran. 2024. Fluorescent Nucleic acid Biosensors: A Comparative Study of DNA and RNA Based Sensing Platforms. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	Aisiri H U V, Anusha Mysore Keerthi, Manjunatha Reddy A H , Maanas R Rao, Shweta Sudam Kallapur, Sumathra Manokaran. 2024. In Silico Target Tracking: Molecular docking and pharmacokinetic studies of naturally occurring flavonoid glycosides and their activity against COVID-19 viral proteins. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	Sumathra M, Abhik Dutta, Anirban Roy, Shradha Anand Mulimani, Manjunatha Reddy . 2024. Kinetic Analysis of Immobilized Carbonic Anhydrase for Effective Environmental CO ₂ Capture and Sequestration. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	Kashyapa V Sharma, Rohan Jay Basavaraja, Chirag S Reddy, Rakshitha B R, Sumathra M, KN Subramanya, AH Manjunatha Reddy . 2024. Analytical review of Carbon Footprinting at RV College of Engineering. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖	A.H. Manjunatha Reddy , K.N. Subramanya, A. Jagadish, Prarthana A, Sumathra Manokaran. 2024. Computational Modelling of Lifestyle Driven Mental Health Disorders: Gender-Based Insights. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.

❖ Shreya Lal, Shweta Bathija, Rishika Mohan V, Nagashree B, A.H. Manjunatha Reddy , Sumathra Manokaran. 2024. An attempt to reduce carbon footprint by enhancing the synthesis of biofuels with <i>Pichia pastoris</i> . 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
❖ Amith B, Harshitha KN, Vijay R, Yogeesh A S, A.H. Manjunatha Reddy , Sumathra Manokaran. 2024. Fungal assisted carbon capture: A comparative analysis of fungal strains in plastic degradation for carbon utilization. 8 th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions, Conference Record #64042, held between 7-9 November 2024 at RV College of Engineering, Bangalore 59.
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❖ Niranjan V, Rao P, Uttarkar A, Kumar J Protocol for the development of coarse-grained structures for macromolecular simulation using GROMACS. Plos One 2023 J18(8): e0288264.
❖ Niranjan V, Setlur AS, Chandrashekar K, Uttarkar A, Skariyachan S. Deciphering the scope of in silico screening of novel natural lead molecules against putative molecular targets of multidrug-resistant bacterial pathogens. Nanotechnology and In Silico Tools 2024 Jan 1 (pp. 269-284). Elsevier.
❖ Sumeer Ahmed, Ummer Muhammed Rafi, Raju Senthil Kumar, Ajmal Rashid Bhat, Malika Berredjem, Vidya Niranjana, Lavanya C. & Aziz Kalilur Rahiman (2023) Theoretical, antioxidant, antidiabetic and in silico molecular docking and pharmacokinetics studies of heteroleptic oxovanadium(IV) complexes of thiosemicarbazone-based ligands and diclofenac. Journal of Biomolecular Structure and Dynamics
❖ Sara Grine, Faiza Taibi , Malika Berredjem*, Ali Dekir, Fouzia Benaliouche, Khadidja Otmane Rachedi, Anissa Acidi, Nasir Iqbal , Ajmal R. Bhat , Vidya Niranjana, Lavanya C, Nouredine Soltani (2023) Antifungal activity of the essential oil of Pelargonium graveolens. Molecular docking, molecular dynamics, DFT, and in silico ADMET studies of five derivatives. Journal of Molecular Structure Vol 1294 (2), 136546
❖ Niranjan V, Rao P, Uttarkar A, Kumar J Protocol for the development of coarse-grained structures for macromolecular simulation using GROMACS. Plos One 2023 J18 (8): e0288264. View article
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❖ Niranjan, V., Uttarkar, A., Kaul, A., Varghese, M. A Machine Learning-Based Approach Using Multi-omics Data to Predict Metabolic Pathways. In: Selvarajoo, K. (eds) Computational Biology and Machine Learning for Metabolic Engineering and Synthetic Biology. Methods in Molecular Biology, vol 2553. Humana, New York, NY. View article
❖ Vidya Niranjana, Sanjana Jayaprasad, Akshay Uttarkar, Raviraj Kusanur and Jitendra Kumar, (2023). Design of Novel Coumarin Derivatives as NUDT5 Antagonists That Act by Restricting ATP Synthesis in Breast Cancer Cells, Molecules,28(1):89 View article
❖ Niranjan, V.; Uttarkar, A.; Ramakrishnan, A.; Muralidharan, A.; Shashidhara, A.; Acharya, A.; Tarani, A.; Kumar, J(2023). Novo Design of Anti-COVID Drugs Using Machine Learning-Based Equivariant Diffusion Model Targeting the Spike Protein. Curr. Issues Mol. Biol. 45, 4261-4284. View article

❖	Kavya N, Prasannakumar MK, Venkateshbabu G, Niranjana V, Uttarkar A, Buella Parivallal P, Banakar SN, Mahesh HB, Devanna P, Manasa KG, Shivakumara TN. Insights on Novel Effectors and Characterization of Metacaspase (RS107_6) as a Potential Cell Death-Inducing Protein in <i>Rhizoctonia solani</i> . <i>Microorganisms</i> . 2023; 11(4):920 View article
❖	Skariyachan, S., Praveen, P.K.U., Uttarkar, A. and Niranjana, V. (2023), Computational design of prospective molecular targets for <i>Burkholderia cepacia</i> complex by molecular docking and dynamic simulation studies. <i>Proteins</i> . 2023; 1- 15 View article
❖	Niranjana Vidya, R Vibha, Philip Sarah, Uttarkar Akshay, Kusanur Raviraj and Kumar Jitendra (2023), Design of novel Imidazopyrazine derivative against breast cancer via targeted NPY1R antagonist, <i>Anti-Cancer Agents in Medicinal Chemistry</i> 2023; 23(-) View article
❖	C Lavanya, S Pooja, Kashyap AH, Rahaman A, Niranjana S, Niranjana V (2023), Novel Biomarker Prediction for Lung Cancer Using Random Forest Classifiers. <i>Cancer Informatics</i> ; 22 View article
❖	Rana S, Skariyachan S, Uttarkar A, Niranjana V. Carboxymuconolactone decarboxylase is a prospective molecular target for multi-drug resistant <i>Acinetobacter baumannii</i> -computational modeling, molecular docking and dynamic simulation studies. <i>Comput Biol Med</i> . 2023 Mar 16;157:106793. View article
❖	Chandrashekar K, Anagha S Setlur, Adithya Sabhapathi C, Satyam Suresh Raiker, Satyam, Singh and Vidya Niranjana, Decision support system and web-application using supervised machine learning algorithms for easy cancer classifications, <i>Cancer Informatics</i> , 2023. View article
❖	Anagha S Setlur, Chandrashekar K, Ritwija Bhattacharjee, Jitendra Kumar & Vidya Niranjana (2023) Deciphering the interaction mechanism of natural actives against larval proteins of <i>Aedes aegypti</i> to identify potential larvicides: a computational biology analysis, <i>Journal of Biomolecular Structure and Dynamics</i> View article
❖	Sujitha, D.; Kumar, H. G. J.; Thapliyal, G.; Pal, G.; Vanitha, P. A.; Uttarkar, A.; Patil, M.; Reddy, B. H. R.; Niranjana, V.; Rayalcheruvu, U.; Govind, G.; Udayakumar, M.; Vemanna, R. S., (2023) Transcription factors controlling the expression of oxidative stress associated genes in rice (<i>Oryza sativa</i> L.). <i>Plant Biotechnol Rep</i> View article
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❖	Sara Grine, Faiza Taibi , Malika Berredjem*, Ali Dekir, Fouzia Benaliouche, Khadidja Otmane Rachedi, Anissa Acidi, Nasir Iqbal , Ajmal R. Bhat , Vidya Niranjana , Lavanya C, Nouredine Soltani (2023) Antifungal activity of the essential oil of <i>Pelargonium graveolens</i> . Molecular docking, molecular dynamics, DFT, and in silico ADMET studies of five derivatives. <i>Journal of Molecular Structure</i> Vol 1294 (2), 136546 View article
❖	Madhushree, K.A., Poornima, Mahesh, R., Kusanur, R., Ashok Kumar, H.G. (2023) Synthesis of Silver Nanoparticles from <i>Oroxylum indicum</i> , 21(1), pp. 173–184

❖ Uchit Bhaskar, Nalina Narasimhaswamy, Manjunatha A.H. Reddy and Sumathra Manokaran . 2023. Abating Gliomas – A Brief Phytotherapeutic Perspective. Research Journal of Biotechnology. 18(3): 139-150.
❖ Chaudhuri Tanusree, Manokaran Sumathra and Manjunatha Reddy A.H. 2023. Role of human gene SNVs in Tuberculosis infection. Research Journal of Biotechnology. 18(5): 88-101.
❖ Pranshu Chaurasia, Rohan Antony Viji, Prabuddh M., Arunkumar P Chavan, A H Manjunatha Reddy and Preetham R. Symbolic and Flat Affect Humanoid Head Design for Modular Humanoid Robots. 2023. IEEE Explore, 1076-1084
❖ Neeta Shivakumar and Tejaswini R Green Synthesis of Silver Nanoparticles Using Millets, Its Characterization And Evaluation Of Antimicrobial Activity. In ternational jouranal of pharmaceutical sciences and research, IJPSR, 2023; Vol. 14(9): 1000-13.
❖ Neeta Shivakumar , Dhivyapriya R, Spoorti B R and Spoorti soratur, Reducing aluminium toxicity in food packaging using biopolymers, Journal of Metals, Foils and Fuels 2023.
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❖ Sindhu Rajendran, N. Ramavenkateswaran, Prashant Abbi, Khushi Arora, Praveen Kumar Gupta , Mayank Anand. Health Informatics System using Machine Learning Techniques in Taylor and Frachis 9781003373261. 2023
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❖ Manjula Ranganatha, Nagashree N Rao, P Giridhar, Ashwani Sharma. 2023. Micropropagation and in vitro flowering in Basella alba. Plant Cell, Tissue and Organ Culture (PCTOC), 154(1). 1-9
❖ Jemima Princillya, Bhavana Veerabhadrapppaa,, Nagashree N. Rao, and Madhu Dyavaiah. 2023. Cellular senescence in aging: Molecular basis, implications and therapeutic interventions. Advances in Protein Chemistry and Structural Biology. ISSN 1876-1623, https://doi.org/10.1016/bs.apcsb.2023.02.021 .