Name : **Dr. T. Pratheep**
Staff ID : **RCAS02976**
Designation : **Assistant Professor**
Department : **Biotechnology**
Experience : **10 years**
Qualification : **MSc., PhD**
Specialization : **Proteomics, Bioinformatics, Insect Molecular Biology**
Mail ID : **pratheep.bio@rathinam.in**

ACADEMICS

Degree	Branch	Institution / University	Year of Completion
B.Sc	Zoology	Madurai Kamaraj University	2005
M.Sc	Biotechnology	SRM University	2007
PhD	Environmental Biotechnology	Bharathidasan University	2014

RESEARCH AND PUBLICATIONS

GRANTS

Title	Agency	Amount	Year	Status
Evaluation of antimicrobial peptide of Silk gland: Activity against ocular pathogens	TNSCST	Rs.7500	2023-2024	Completed

SEED MONEY

Title	Institution	Amount	Year	Status
Screening and optimization of chitinolytic enzyme producing bacteria and analysing its insecticidal activity	Rathinam College of Arts and Science	Rs.1,53,000	2021-2022	Completed

GUIDANCE

Program	No. of Scholars	
	Completed	Pursuing
Ph. D.	**1**	2
M. Phil.	**1**	-

Journal Publications

Parvin, I. S., Banu, H. S., Gayathiri, E., Prakash, P., Chaudhari, S. Y., Pratheep, T., Priyadharshini, S. D., Pugalenthi, M., & Narmathasri, J. (2025). Molecular structure insights into antioxidant, anti-

inflammatory, and computational investigations: Molecular docking and dynamics studies on enzyme inhibitors. *Journal of Cellular Biochemistry, 126*(4), 1–14. https://doi.org/10.1002/jcb.70033

Sathish, V., Gayathiri, E., Pratheep, T., Prakash, P., & Umavathi, S. (2025). Metabolites profiling based antioxidant, anti-cancer cell proliferation activity and molecular docking and simulation studies of *Parthenium hysterophorus*. *The Microbe, 17*, 100238. https://doi.org/10.1016/j.microb.2025.100238

Pratheep, T., Gayathiri, E., Prakash, P., Dhivya, V., Mostafizur, R., Saravanan, P., Nagarajan, S., Rekha, A., & Rajakumar, G. (2024). Exploring the therapeutic potential of *Annona reticulata* L. extract: Molecular docking, dynamics, and ADMET properties for cancer treatment and anti-inflammatory activity. *Journal of Asian Natural Products Research*. https://doi.org/10.1080/10286020.2024.2435983

Gayathiri, E., Pratheep, T., Prakash, P., Chaudhari, S. Y., Priyadharshini, S. D., Mani, T., & Mahalakshmi, P. (2024). Insight into binding and interaction of docking, dynamics and network pharmacology to explore the target on cancer inhibitors. *Journal of Pharmaceutical Innovation, 19*(5), 1–3. https://doi.org/10.1007/s12247-024-09865-3

Gayathiri, E., Prakash, P., Pratheep, T., Chaudhari, S. Y., & Priyadharshini, S. D. (2024). Computational exploration of bioactive compounds from *Albizia procera*: Molecular docking, dynamics, and pharmacokinetics for AchE and BchE inhibition in Alzheimer's disease treatment. *The Microbe, 4*, 100150. https://doi.org/10.1016/j.microb.2024.100150

Gayathiri, E., Prakash, P., Selvam, K., Pratheep, T., Chaudhari, S. Y., & Priyadharshini, S. D. (2024). *In silico* elucidation for the identification of potential phytochemicals against ACE-II inhibitors. *Journal of Molecular Modeling, 30*, 78. https://doi.org/10.1007/s00894-024-05868-6

Banu, H. S., Parvin, I. S., Priyadharshini, S. D., Gayathiri, E., Prakash, P., & Pratheep, T. (2024). Molecular insights into the antioxidant and anticancer properties: A comprehensive analysis through molecular modeling, docking, and dynamics studies. *Journal of Cellular Biochemistry*, 1–13. https://doi.org/10.1002/jcb.30564

Sangiliyandi, G., Pratheep, T., & Kim, J. H. (2024). Postbiotics: Functional food materials and therapeutic agents for cancer, diabetes, and inflammatory diseases. *Foods, 13*, 89. https://doi.org/10.3390/foods13010089

Sangiliyandi, G., Pratheep, T., Wang, L., & Kim, J. H. (2024). Nanovaccines: An effective therapeutic approach for cancer therapy. *Biomedicine & Pharmacotherapy, 170*, 115992. https://doi.org/10.1016/j.biopha.2023.115992

Ravikumar, P. M., & Pratheep, T. (2024). Exploring phytochemicals and antibacterial properties of *Bougainvillea glabra*: A systematic review with *in silico* perspective. *Pharmacognosy Research, 16*(1), 1–13. https://doi.org/10.5530/pres.16.1.5

Gayathiri, E., Prakash, P., Pratheep, T., et al. (2024). Biosurfactants from lactic acid bacteria: An in-depth analysis of therapeutic properties and food formulation. *Critical Reviews in Food Science and Nutrition, 64*(30), 10925–10949. https://doi.org/10.1080/10408398.2023.2230491

Ravikumar, P. M., & Pratheep, T. (2024). Anti-bacterial attributes of phytochemicals from *Bougainvillea spectabilis*: Computational approach. *Pharmacognosy Research, 16*(2), 384–390. https://doi.org/10.5530/pres.16.2.48

Sangiliyandi, G., Pratheep, T., Das, J., & Kim, J. H. (2023). Antibacterial and antibiofilm effects of *Pseudomonas aeruginosa*-derived outer membrane vesicles against *Streptococcus mutans*. *Heliyon, 9*(12), e22606. https://doi.org/10.1016/j.heliyon.2023.e22606

Gayathiri, E., Prakash, P., Ahamed, M., Pandiaraj, S., Venkidasamy, B., Dayalan, H., Pratheep, T., et al. (2023). Multitargeted pharmacokinetics, molecular docking and network pharmacology based identification of effective phytocompounds from *Sauropus androgynus* for inflammation and cancer treatment. *Journal of Biomolecular Structure & Dynamics, 42*(15), 7883–7896. https://doi.org/10.1080/07391102.2023.2243335

Prakash, P., Gayathiri, E., Rahaman, M., Periyasami, G., Pandiaraj, S., Pratheep, T., et al. (2023). Exploring the potential of targeting IGF-1 through network pharmacology, molecular docking, molecular dynamics, and experimental validation of antioxidant and anti-inflammatory activities. *South African Journal of Botany, 162*, 707–718.

Gayathiri, E., Prakash, P., Selvam, K., Pratheep, T., Ravishankar, R., et al. (2023). Therapeutic potential of *Decalepis hamiltonii* root extract: Synthesis of gold nanoparticles and assessment of antimicrobial, antioxidant, and anti-proliferative activities. *Applied Nanoscience, 13*, 5967–5981. https://doi.org/10.1007/s13204-023-02858-7

Ravikumar, M., & Pratheep, T. (2023). Exploring the potential of nanoparticle mediate in cardiovascular disease treatment: A systematic review. *Journal of Pharmaceutical Negative Result, 13*(4), 1952–1959.

Gayathiria, E., Mahalakshmi, P., Pratheep, T., et al. (2022). *In silico* and *in vitro* approaches to evaluate the bioactivities of *Chaetomorpha linum*. *South African Journal of Botany, 151*, 581–590. https://doi.org/10.1016/j.sajb.2022.06.067

Prakash, P., Selvam, K., Gayathiri, E., Pratheep, T., et al. (2022). Plant-based natural bioactive compound 2,4-ditert-butylphenol as potential candidates against SARS-CoV-2019. *Energy Nexus, 6*, 100080. https://doi.org/10.1016/j.nexus.2022.100080

Pratheep, T., Krishnan, M., & Ravikumar, P. M. (2021). Lipophorin transport of hydrocarbon during early vitellogenesis in silkworm, *Bombyx mori*. *Journal of Asia-Pacific Entomology, 24*(2), 191–198. https://doi.org/10.1016/j.aspen.2021.02.010

Vamsi Krishna, J., Glory Theborl, K. H., & Pratheep, T. (2020). Gene expression analysis of EGFR and PI3K genes in A549 lung cancer cell line treated with *Withania somnifera* root extract. *Research Journal of Biotechnology, 15*(2), 71–75.

Pratheep, T., Rameshkumar, N., Kayalvizhi, N., Karthikeyan, S., & Krishnan, M. (2018). Interaction of azadirachtin with the lipid-binding domain: Suppression of lipid transportation in the silkworm, *Bombyx mori*. *Pesticide Biochemistry and Physiology, 152*, 62–68. https://doi.org/10.1016/j.pestbp.2018.09.001

Venkat Kumar, G., Sasikala, V., Pratheep, T., & Thulasidhasan, J. (2018). A study of finger printing pattern in Kanchipuram district inhabitants. *Journal of Emerging Technologies and Innovative Research, 8*, 499–502.

Pratheep, T., & Venkat Kumar, G. (2020). Spotlight of twenty first century betacoronaviruses. *Acta Scientific Microbiology, 3*(12), 109–115.

Pratheep, T., & Ravikumar, P. M. (2020). Water as an indicator for coronavirus dissemination. *Research Journal of Life Sciences, Bioinformatics, Pharmaceutical and Chemical Sciences, 6*, 69–75.

Pratheep, T., Rameshkumar, N., Kayalvizhi, N., Suganya, T., Karthikeyan, S., & Krishnan, M. (2017). Changes in lipophorin composition during late larval, pupal and adult stages of *Bombyx mori*. *Acta Entomologica Sinica, 60*(3), 247–253.

Pratheep, T., Rameshkumar, N., Kayalvizhi, N., & Krishnan, M. (2017). Lipophorin uptake into a developing follicle in the silkworm, *Bombyx mori*. *Journal of Insect Biotechnology and Sericology, 86*, 59–65. https://doi.org/10.11416/jibs.86.3_059

Anbalagan, S., Pratheep, T., Dinakaran, S., & Krishnan, M. (2012). Effects of two leaf litter species on the colonization of macroinvertebrates in a tropical stream of India. *The Bioscan, 7*(3), 533–538.

Pandiyarajan, J., Cathrin, B. P., Pratheep, T., & Krishnan, M. (2011). Defence role of cocoon in silkworm, *Bombyx mori*. *Rapid Communications in Mass Spectrometry, 25*(21), 3203–3206. https://doi.org/10.1002/rcm.5213

Book Chapters

Pratheep, T., Zeng, P., & Rajendran, M. (2025). Bioremediation of marine actinobacteria. In Marine actinomycetes: Rising star of biotechnology (Chapter 10). Springer

Books

Pratheep, T. (2023). A closer look at silkworms. Nova Science Publishers.

Aravindh, S., Kanagaraj, C., & Pratheep, T. (2025). Next-gen biotechnology: Tools, techniques & trends. Proceedings.

Proceedings

Nivetha, S., Aneesh, SA., Bharaneeshwaran, M., Pratheep, T. (2024). Exploring plastic-degrading microbes and enzymes found in the gut of Tenebrio molitor (mealworm) larvae. In Proceedings of NCRIBS-2024 (ISBN: 978-93-340-6381-3).

PRESENTATIONS

	State Level	National	International
Conference	4	5	9
Seminar	2	1	0

PARTICIPATION

	State Level	National	International
Conference	12	8	13
Seminar	4	4	7
Workshop	1	4	1
Orientation	0	1	0
FDP/PDP	3	4	2

Events Organized

National Symposium on Exploring Innovations in Biosciences, Rathinam College of Arts and Science (30th September 2022).

Indo-Singapore International Conference on Sciences, Agriculture, Engineering and Management, Rathinam College of Arts and Science (13th & 14th August 2022).

One-day Workshop on "Art of Research Paper Writing for Journal Publication" at Ponnaiyah Ramajayam Institute of Science and Technology, Chennai (30th March 2019).

One-day seminar on Recent Trends in Medical Biotechnology at Ponnaiyah Ramajayam Institute of Science and Technology, Chennai (27th April 2018).

"Writing an Effective Research Paper for Publication" at the Ponnaiyah Ramajayam Institute of Science and Technology, Chennai (24th March 2018).

National seminar on application of BioSciences for environmentally sustainable development at Prof. Dhanapalan College of Arts and Science, Chennai (14th February 2017).

Invited Speaker / Session Chair- Conference / Seminar / Workshop

Resource person, "State-Level Hands-On Workshop on Molecular Docking, Dynamics, ADMET, and Network Pharmacology", Guru Nanak College, Chennai (9 to 12-10-2023)

Chair, "International Conference on Advanced Chemical and Structural Biology", Ponnaiyah Ramajayam Institute of Science and Technology, Chennai (19 to 21-02-2019).

Members in BoS/ Editorials/ Professional Bodies

Editor: PLOS one (Academic Editor), International Journal of Nanobiotechnology, Journal of Nanoscience, Nano engineering & Applications

Reviewer: Frontiers in Microbiology, Food Frontiers, CyTA - Journal of Food, Journal of Food Biochemistry, Phytotherapy Research, International Journal of Phytoremediation, International Journal of Immunopathology and Pharmacology, Fitoterapia, International Journal of Tropical Insect Science, Iranian Journal of Public Health, Chemistry and Biodiversity, Results in Chemistry, Indian Journal of Pharmaceutical Education and Research

Member: International Union for Conservation of Nature, Canadian Society of Zoologists, Asian Federation of Biotechnology, Indian Initiative for Management of Antibiotic Resistance, Indian Science Congress

AWARDS, HONORS AND RECOGNITION

Awards / Honors /Recognition	Agency / Institution	Year of Award
Golden guru	GRT jewelers	2025
Postdoctoral Fellow	Federal University of Rio de janeiro, Brazil	2013
Project Fellow	Bharathidasan University	2009 – 2012