

Name : Dr. M. Rajalakshmi
Staff ID : RCAS02201
Designation : Assistant Professor
Department : Microbiology
Experience : Research 7 Yrs, Industry 1yrs and Teaching 9 yrs
Qualification : M.Sc., Post M.Sc. (ADMD), PhD.,
Specialization : Microbial Biotechnology
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ACADEMICS

Degree	Branch	Institution / University	Year of Completion
Ph.D.	Microbial Biotechnology	Department of Microbial Biotechnology, Bharathiar University, Coimbatore.	2011-2016
Post M.Sc. (ADMD)	Biotechnology	Department of Biotechnology, Alagappa University, Karaikudi.	2010 - 2011
M.Sc.	Microbiology	Srimati Indra Gandhi College of Arts and Science, Trichy. (Bharathidasan University)	2008-2010
B.Sc.	Microbiology	Srimati Indra Gandhi College of Arts and Science, Trichy. (Bharathidasan University)	2005-2008

Diploma / Certification	Specialization	Institution / University / Agency Name	Year of Completion
UGC Certificate Course	Bioinformatics	Bharathidasan University	2005 to 2006
Post M.Sc. (Advance Diploma in Molecular Diagnostics)	Molecular Diagnostics	Alagappa University	2010 to 2011

RESEARCH AND PUBLICATIONS

GRANTS

Title	Agency	Amount	Year	Status
Young Scientist Award 2023	Tamil Nadu State Council for Science and Technology (TNSCST)	21400/-	2023	Completed

SEED MONEY

Title	Institution	Amount	Year	Status
Production of Napthoquinone from the native isolate <i>Fusarium Sp.</i>	Rathinam College of Arts and Science, Coimbatore-21.	75000/-	2024 to 2025	Completed

GUIDANCE

Program	No. of Scholars	
	Completed	Pursuing
Ph. D.	-	2

Journal Publications

1. Srinivasan, P., Khan, A., Perumal, R. U., Kumar, V. R., Suganya, K., & **Rajalakshmi, M.** (2012). In vitro antibacterial activity of *Lactobacillus plantarum* isolated from soy milk. *International Journal of Pharma and Bio Sciences*, 3(3), 209–219.
2. Srinivasan, P., **Rajalakshmi, M.**, Kumar, R. V., & Khan, A. (2013). Proteomic studies in *Caenorhabditis elegans* infected with *Salmonella typhi* and *Cronobacter sakazakii* ATCC BAA-894. *Online Journal of Bioinformatics*, 4(2), 179–200.
3. **Rajalakshmi, M.**, Raaghavi, J., Poffe, M. F., Srinivasan, P., & Priyadarsini, V. B. (2014). Effect of crude fatty acid extract of *Streptomyces* spp. on biofilm-forming *Candida albicans* MTCC 3017. *Research Journal of Recent Sciences*, 3, 283–290.
4. **Rajalakshmi, M.**, Srinivasan, P., Poffe, M. F., Suresh, R., & Priyadarsini, V. B. (2014). Crude fatty acid extracts of *Streptomyces* spp. inhibit the biofilm-forming *Streptococcus pyogenes* ATCC 19615. *Journal of Biochemical Technology*, 5(2), 679–684.
5. Poffe, M. F., **Rajalakshmi, M.**, Rajendran, S., & Priyadarsini, V. B. (2014). Studies on the antibacterial activity of the actinomycetes isolated from the fish cultivating reservoirs of Tamil Nadu. *Acta Biologica Indica*, 3(1), 556–560.
6. Poffe, M. F., **Rajalakshmi, M.**, & Priyadarsini, V. B. (2014). Crude protein extract of Actinobacteria exhibits antibacterial activity against *Salmonella typhi*. *International Journal of Current Microbiology and Applied Sciences*, 3(7), 319–326.
7. Suresh, R., Saravanakumar, M., Suganyadevi, P., **Rajalakshmi, M.**, & Poffe, M. F. (2015). Anti-proliferative properties of anthocyanin from Indian cassava (*Manihot esculenta* Crantz) on Hep-2 and MCF-7 cell lines. *American Journal of PharmTech Research*, 5(3), 1–11.
8. Kumar, D. S., Srinivasan, P., **Rajalakshmi, M.**, Raj, R. G., & Sathyamurthy, K. (2017). Eco-friendly larvicide source from *Acacia auriculiformis* and its antimicrobial activity against clinical pathogens. *International Journal of Phytomedicine*, 9, 60–71.
9. Srinivasan, P., **Rajalakshmi, M.**, & Kumar, D. S. (2018). Anti-quorum sensing potential of *Limonia acidissima* against *Vibrio harveyi* KUMB-VA4. *Asian Journal of Pharmaceutical and Clinical Research*, 11(3), 1–9.
10. Srinivasan, P., **Rajalakshmi, M.**, Jerimon, P. J., Sandhya, S., Sachin, M., Aravind, M., & Kulandhaivel, M. (2018). COVID-19: A threat to human health and its therapeutic approach using Indian herbs. *International Journal of Advance Research in Engineering and Technology*, 10(5), 209–213. <https://doi.org/10.34218/IJARET.10.6.2019.045>
11. Krishna, B. B., Pandeewari, P., Maheswari, D. U., Srinivasan, P., & **Rajalakshmi, M.** (2019). Green synthesis of silver nanoparticles from *Ocimum sanctum* (Tulsi) and its antimicrobial properties. *International Journal of Advance Research in Engineering and Technology*, 10(5), 209–213.
12. Priyadarshini, K., Sankareswaran, M., Anbalagan, S., Srinivasan, P., & **Rajalakshmi, M.** (2021). Screening of antibacterial and phytochemical characters of *Vitex negundo* Linn against clinical pathogens. *Jijnasa*, 38(6), 161–165.
13. Anwar, R. T. P., Kulandhaivel, M., Srither, D., **Rajalakshmi, M.**, & Srinivasan, P. (2021). Ameliorating effect of *Piper nigrum* (L.) extract against drug-resistant *Staphylococcus aureus* and *E. coli*. *Anvesak*, 51(1), 108–122.
14. Greeshma, M., Appiah, F. M., Srinivasan, P., **Rajalakshmi, M.**, Hariharan, R., Beulah, S. V., & Ragunathan, R. (2022). Isolation and molecular analysis of biosurfactant-producing bacteria isolated from rhizosphere soil. *Bulletin of Environmental Pharmacology and Life Sciences*, 11(9), 61–66.
15. Ruban, P. P., Reddy, L. J. S. J., **Rajalakshmi, M.**, Rathinam, R., Ali, S. M., Rajkumar, S., Sharma, S., Sudhakara, P., & Eldin, E. M. T. (2023). Green synthesis, characterizations, and antibacterial activity of silver nanoparticles from *Themeda quadrivalvis* in conjugation with macrolide antibiotics against respiratory pathogens. *Reviews on Advanced Materials Science*, 62(1), Article 20220301. <https://doi.org/10.1515/rams-2022-0301>

16. Hridhya, K. V., Kulandhaivel, M., Srinivasan, P., & **Rajalakshmi, M.** (2023). Identification of bioactive compounds in *Sesamum alatum* Thonn by qualitative phytochemical analysis and GC-MS. *Biochemical and Cellular Archives*. <https://doi.org/10.51470/bca.2023.23.1.000>
17. Bharathi, V., Jamila, P., Sureshkumar, B. T., Srinivasan, P., & **Rajalakshmi, M.** (2023). In silico analysis of rpoB protein with actinomycin D compound isolated from *Streptomyces parvulus* SDMRI 3 – Novel strain identified from Punnakayal mangrove. *Journal of Data Acquisition and Processing*. ISSN: 1004-9037.
18. Srinivasan, P., **Rajalakshmi, M.**, Hariharan, R., & Bharathi, V. (2023). *Fusarium* sp. isolated from agro-waste modulates the phytohormones and enhances the growth of *Brassica juncea*. *Advances in Bioresearch*. ISSN: 0976-4585.
19. Gobbu, M., Srinivasan, P., **Rajalakshmi, M.**, & Jaganathan, D. B. (2023). Influence of *Tylophora indica* against biofilm-forming *Streptococcus pyogenes* isolated from pharyngitis patients. *European Chemical Bulletin*. ISSN: 2063-5346.
20. Beaulah, S. V., **Rajalakshmi, M.**, Srinivasan, P., Greeshma, M., Abirami, V., Sivabarathi, U., Ragunathan, R., Johny, J., & Bharathi, V. (2023). In vitro antioxidant and antimicrobial effect of *Ganoderma lucidum* from wood. *Advances in Bioresearch*. ISSN: 0976-4585.
21. Kavya, R., Hridhya, K. V., **Rajalakshmi, M.**, Kowsik, S., Bharathi, V., Suresh, S. N., & Srinivasan, P. (2023). Extraction of flavouring compound from *Actinomycetes*. *Chelonian Conservation and Biology*. ISSN: 1071-8443.
22. Hridhya, K. V., Srinivasan, P., **Rajalakshmi, M.**, Dharshini, K., Kavya, R., Suresh, S. N., Bharathi, V., & Dharshini, D. S. (2024). Histopathological analysis of *Danio rerio* fed with *Artemia nauplii* bio-enriched with *Streptomyces coelicolor* AP-09 secondary metabolite. *The Bioscan*. ISSN: 0973-7049.
23. Prabha, N., **Rajalakshmi, M.**, Srinivasan, P., & Manimekalai, K. (2025). Ag-Cu nanoparticle functionalized with *Ricinus communis* leaf extract against diabetic foot ulcer. *African Journal of Biomedical Research*. ISSN: 1119-5096.

Book Chapters

1. Hridhya, K. V., Srinivasan, P., **Rajalakshmi, M.**, Abarna, K., & Suresh, S. N. (2023). Antibiotic alternatives. In *Recent Developments in Basic and Applied Sciences* (pp. 221–237).
2. Kavya, R., Hridhya, K. V., **Rajalakshmi, M.**, Abarna, K., Srinivasan, P., & Suresh, S. N. (2023). Synthetic biology and microbes. In *Recent Developments in Basic and Applied Sciences* (pp. 211–220).
3. Hridhya, K. V., Srinivasan, P., Kulandhaivel, M., **Rajalakshmi, M.**, & Kavya, R. (2024). Ethnopharmacology: Bridging traditional knowledge with modern medicine. In *Medicinal Phytochemicals: Exploring Nature's Pharmacy* (pp. 18–32).
4. Srinivasan, P., & **Rajalakshmi, M.** (2025). Microbiome research: Unlocking the secrets of gut health. In *Innovating Tomorrow: Biotechnology and Biosciences Role in Shaping the Future* (Vol. 1, pp. 74–87).
5. **Rajalakshmi, M.**, & Srinivasan, P. (2025). Bioremediation: Cleaning up the planet with bioscience. In *Innovating Tomorrow: Biotechnology and Biosciences Role in Shaping the Future* (Vol. 1, pp. 167–182).
6. **Rajalakshmi, M.**, & Srinivasan, P. (n.d.). (2025) ARCHAEA – The mysterious powerhouses of microbial life and AI's role in unveiling their secrets for a greener tomorrow. In *Genetic engineering of Archaea: Opportunities and challenges* (Vol. 1, pp. 56–75). Chrisam Publication.
7. Srinivasan, P., & **Rajalakshmi, M.** (n.d.). (2025) ARCHAEA: The mysterious powerhouses of microbial life and AI's role in unveiling their secrets for a greener tomorrow. In *Soil health and the role of Archaea* (Vol. II, pp. 18–34). Chrisam Publication.

Books

1. Srinivasan, P., & **Rajalakshmi, M.** (2012). *C. elegans and innate immunity: A proteomic approach*. Lap Lambert Publication. <https://www.worldcat.org/isbn/9783847300465>

2. **Rajalakshmi, M.**, Anandhi, S., Juby, T. R., & Dinesh Kumar, S. (2024). The biology of biodiversity. Saliha Publications.
3. **Rajalakshmi, M.**, Bharathi, V., & Nisy, S. (2024). Introduction to microbiology. Saliha Publications.

Proceedings

1. Srinivasan, P., Hridhya, K. V., Kavya, R., **Rajalakshmi, M.**, Shalini, S. J., & Meenatchi, B. (2024, May 25). *A bioprospective insight into poly herbal handwash infused with indigenous medicinal flora: Evaluation and analysis*. In Artificial intelligence in science, technology, commerce, management, healthcare and education. CIIT Publication. ISBN 978-93-61261-90-9.
2. **Rajalakshmi, M.**, Srinivasan, P., Hridhya, K. V., Kavya, R., Suhail, M. A., & Elackiya, R. (2024, May 25). *Formulation of an effective microbial consortium to accelerate the organic waste composting process*. In Artificial intelligence in science, technology, commerce, management, healthcare and education. CIIT Publication. ISBN 978-93-61261-90-9.
3. **Rajalakshmi, M.**, & Srinivasan, P. (2024, May 25). *Combating antimicrobial resistance through community education: A behavioural change model*. In Proceedings of the International Conference on Expression of Culture through Literature, Media and Fashion. CIIT Publication. ISBN 978-93-61261-90-9.
4. Srinivasan, P., & **Rajalakshmi, M.** (2024, May 25). *A visual pedagogy module for enhancing public understanding of microbial infections*. In Proceedings of the International Conference on Expression of Culture through Literature, Media and Fashion. CIIT Publication. ISBN 978-93-61261-90-9.

Patents Filed / Published

1. Srinivasan P., **Rajalakshmi M.**, Palaniswamy M. Developing Herbal Plant Enriched Artemia as Dietary Supplements for Enhancing Growth, Hematopoiesis, and Immunity in Carps (CBR No. 18634).
2. Srinivasan P., **Rajalakshmi M.**, Manickam R. Development of Microbial Metabolite from *Streptomyces coelicolor* BUCBT23 as an Antifungal Drug against *Candida spp.* (CBR No. 5281/CHE/2021) – Published.
3. Sabareesh K.P.V., Kalaivani T., Srinivasan P., **Rajalakshmi M.**, Suresh S.N., Muralidharan R., Manickam R. Common Salt as Biomarkers for Bacterium Detection (CBR No. 14130/CHE/2021) – Published.
4. Srinivasan P., **Rajalakshmi M.**, Hariharan R., Kulandhaivel M., Dinesh Babu J., Manickam R. Medicinal Plant Enriched Artemia for Enhancing Growth, Hematopoiesis, and Immunity of Catla catla (CBR No. 35882/CHE/2021, dated 25.09.2021) – Published.
5. Gurusamy Chelladurai, **Manickam Rajalakshmi**, Govindachari Nagarajan. Implantable Device for Automated Insulin Pump. Registered under the Canadian Intellectual Property Office (Registration No. 1229010, Dec 2024). – Copyright Published.

PRESENTATIONS

	State Level	National	International
Conference	10	2	1
Seminar	5	3	-

PARTICIPATION

	State Level	National	International
Conference	15	5	1
Seminar	10	5	-
Workshop	15	7	-1
Orientation	5	3	-
FDP/PDP	10	5	3

CONSULTANCY

Nature of Consultancy	Client	Amount	Status
Organic Waste Degradation – Consortium Preparation	IRTC, Kerala.	15000/-	Ongoing

EVENTS ORGANIZED

Seminar

1. National Symposium – Modern Biological Science, SNMV College, Feb 2018
2. HIV-AIDS Awareness Programme, SNMV College, Dec 2019
3. Power Seminar – Secrets of Living a Healthy Life, Rathinam College, Apr 2022
4. Seminar – Research in Human Anatomy and Related Terms, Rathinam College, Oct 2022
5. Seminar – Genres of IPR, Rathinam College, Nov 2022
6. Orientation Seminar – Exploring Nutritional Balance through a Healthy Diet, Rathinam College, Jan 2024.
7. Life Skill Orientation Seminar – Achieving Optimal Health through Hygiene, Fitness and Exercise, Rathinam College, Feb 2024
8. Life Skill Orientation Seminar – Mastering Well-being through Mental Hygiene, Rathinam College, Feb 2024
9. Life Skill Orientation Seminar – Essential Personal Hygiene Habits for Health and Well-being, Rathinam College, Feb 2024
10. IKS Seminar – Integrating Traditional Knowledge in Stem Cell and Organ Transplantation, Rathinam College, Feb 2024
11. NDLI Orientation Seminar – Open Educational Resources (OER), Rathinam College, Feb 2024
12. Seminar – Basic Approach towards Attending Competitive Exam, Rathinam College, Oct 2023
13. Seminar – The Power of Effective Communication: Building Stronger Connections and Success, Rathinam College, Nov 2023
14. Orientation Seminar – Leading Corporate with an Influence of Language, Rathinam College, Jan 2025
15. Seminar – Research Basics for Graduates, Rathinam College, Mar 2025
16. Seminar – Leveraging IPR for Sustainable Growth in Entrepreneurship, Rathinam College, Mar 2025.

Workshop

1. Lecture Workshop – Key Skills for attaining Professionalism, Rathinam College, Dec 2021
2. Lecture Workshop – Problem Solving and Ideation Techniques, Rathinam College, Nov 2022
3. Workshop – Water Quality Analysis and Management, Rathinam College, Mar 2022
4. Workshop – Design Thinking to Create Solutions that are Both Practical and Effective, Rathinam College, Dec 2023
5. Workshop – AI in Science: Important View for Beginners, Rathinam College, Feb 2024
6. Workshop – Regenerative Agriculture, Rathinam College, Mar 2024
7. Workshop – Practical Lab Mastery: Best Practices, Rathinam College, Jul 2024
8. Workshop – IPR & Its Genres, Rathinam College, Jul 2024
9. Hands-on Training – Microscope for School Students (Govt. High School, Periyakuyili), Rathinam College, Sep 2024
10. Hands-on Training – Basic Techniques in Biology and Life Science, Rathinam College, Sep 2024.

Conference

1. National Conference – Modern Biological Science, SNMV College, Jan 2019
2. International Virtual Conference – Environments Agriculture Chemical and Biological Sciences (ICEACBS 2022), Jan 2022

3. Indo-Singapore Virtual International Conference – Sciences, Engineering, Agriculture and Management, Rathinam College, Sep 2022
4. International Conference – Current Trends in Basic and Applied Sciences, Rathinam College, Oct 2023
5. International Conference – Recent Trends in Inter-Disciplinary Innovations Bridging Computer Science and Life Sciences (RTIICSM-2024), Rathinam College, Mar 2024
6. International Conference – Innovations and Challenges in Contemporary Agriculture, Science, and Engineering (ICCASE-2024), Rathinam College, Oct 2024.

Invited Speaker / Session Chair- Conference / Seminar / Workshop

1. Media Workshop – Climate Change Awareness Program, organized by the Department of Visual Communication and Rathinavani Community Radio 90.8, RCAS (18.12.2024).
2. Guest Lecture – Awareness Programme on Health and Hygiene, Department of Commerce (09.01.2025).
3. Guest Lecture – Awareness Programme on Health and Hygiene, Department of Visual Communication (21.04.2025).

Members in BoS/ Editorials/ Professional Bodies

Journal reviewer

1. International journal of medicine and medical sciences (IJMMS)
2. Bioprocess and Biosystems Engineering (Springer)
3. The American Association for Science and Technology (AASCIT)
4. The international journal of Pharma and Biosciences.

AWARDS, HONORS AND RECOGNITION

Awards / Honors /Recognition	Agency / Institution	Year of Award
DBT-Purse Fellowship	DBT - PURSE	2010 -2011
Women Researcher Award	VDGOOD Professional Association, Chennai	2020
Best Contributor – R&D For Patent Filing	Rathinam College of Arts and Science, Coimbatore.	2021
Best Young Researcher in Microbiology Award	Pearl Foundation Educational Excellence, Madurai.	2021
Best Teacher Award	Rathinam College of Arts and Science, Coimbatore.	2022
Young Scientist Award	Tamil Nadu State Council for Science and Technology (TNSCST)	2023
Excellent contribution to Extension Activity Award	Rotary Club, Coimbatore.	2023
Best Contributor – Institutional Innovation Council	Rathinam College of Arts and Science, Coimbatore.	2024