

CURRICULUM VITAE

Dr. S. RAJAKUMAR

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Department of Marine Biotechnology
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Academic Background

- ◆ **Ph. D. Environmental Sciences**, Bharathiar University, Coimbatore – 641046, India (2006)
- ◆ **M. Sc., Environmental Sciences**, Bharathiar University, Coimbatore – 641046, India (2001)
- ◆ **B. Sc., Zoology**, Pachaiyappa's College, Chennai – 600030, Tamil Nadu, India (1997)
- ◆ **Hr. Sec. S.B.K. H.S.S**, Kallurani – 626105, Virudhunagar (Dt.) Tamil Nadu, India (1993)
- ◆ **S.S.L.C. S.B.K. H.S.S**, Kallurani – 626105, Virudhunagar (Dt.) Tamil Nadu, India (1991)

Teaching & Research Experience

S. No	Designation	University/ Institute	From	To	Nature of Job
1	Assistant Professor (Stage III)	Department of Marine Biotechnology Bharathidasan University, Tiruchirappalli – 620 024. India	26.02.2020	Till date	Teaching & Research
2	Assistant Professor (Stage II)	Department of Marine Biotechnology Bharathidasan University, Tiruchirappalli – 620 024. India	26.02.2015	25.02.2020	Teaching & Research
3.	Assistant Professor (Stage I)	Department of Marine Biotechnology Bharathidasan University, Tiruchirappalli – 620 024. India	25.02.2011	25.02.2015	Teaching & Research
4.	Guest Faculty	Department of Environmental Management, Bharathidasan University, Tiruchirappalli – 620 024. India	01.07.2010	25.02.2011	Teaching & Research
5.	Guest Faculty	Department of Environmental Management, Bharathidasan University, Tiruchirappalli – 620 024. India	06.07.2009	30.04.2010	Teaching & Research
6.	Post Doctoral Researcher	Division of Civil and Environmental Engineering, Korea Maritime University, Busan 606 791, S. Korea	18.07.2007	18.03.2009	Teaching & Research
7.	Lecturer	Department of Microbiology Nehru Arts & Science College, Coimbatore 641 104. India	05.06.2006	14.06.2007	Teaching & Research

Administrative Experience

- ◆ Co-ordinator, Clean Green Initiative, Bharathidasan University, Tiruchirappalli.
- ◆ Co-ordinator, First Online Faculty Induction Programme, UGC-HRDC, BDU, Tiruchirappalli.
- ◆ Camp Officer, Central Valuation, Bharathidasan University, Tiruchirappalli.
- ◆ Co-ordinator (Exams), Department of Marine Biotechnology, Bharathidasan University, Tiruchirappalli.
- ◆ Member, National Institutional Ranking Framework (NIRF), Bharathidasan University, Tiruchirappalli.
- ◆ Member, National Assessment and Accreditation Council (NAAC), Bharathidasan University, Tiruchirappalli.

Area of Specialization

- ◆ Marine Microbiology, Environmental Microbiology, Bioremediation and Coastal Zone Management, Aquaculture

Post Doctoral Work

- ◆ Online monitoring and controlling of anaerobic digester for co-digestion of food waste and sewage sludge

Doctoral Work

- ◆ Prevalence of nitrate reducing heterotrophic bacteria in Ooty, Kodaikanal and Yercaud lakes and the efficiency of *Pseudomonas* sp. (KW1) and *Bacillus* sp. (YW4) in nitrate removal.

Project under taken

S. No	Project Title	Funding Agency	Duration	Amount (Rs.)
1	Development of Integrated Recirculating marine aquaponics system for the sustained Aqua-Agriculture production : A new avenue to enhance the rural livelihood (Co-Principal Investigator)	TANSCH Govt. of Tamil Nadu	3 years (2021-2024)	65,31,000
2	Improve of Polyhydroxyalkanoates (Biopolymers) production with source of Seaweed Associated bacteria and to standardizing the applications (Co-Principal Investigator).	TANSCH Govt. of Tamil Nadu	3 years (2021-2024)	47,70,500
3	Impact of Microplastic pollution in commercial important marine Crustaceans (Principal Investigator)	RUSA 2.0	2 Years (2021-2023)	-
4	Outdoor mass cultivation of marine microalgae for biodiesel production with improved solar conversion efficiencies (Co-Principal Investigator).	DBT, New Delhi	3 years (2019-2022)	79,33,143/-
5	Development of amphiphilic titanium oxide - silicon oxide coatings for anti-biofouling applications (Co-Principal Investigator)	DRDO, New Delhi	3 years (2018-2021)	21,16,550/-
6	Biomethanation and bioconversion of marine weeds (<i>Ulva</i> sp. and <i>Laminaria</i> sp.) under natural and halophilic condition (Principal Investigator)	DBT, New Delhi	3 years (2013 -2016)	23,66,200/-
7	Detoxification of Benzene, Toluene, Ethyl benzene and Xylene (BTEX) and its derivatives from ground water and soil through bioreactor designing (Principal Investigator)	DST, New Delhi	3 years (2012 -2015)	19,35,000/-
8	Detoxification of arsenic and iron from ground water and soil through a bioreactor designing and differing treatment columns (Co-investigator)	CSIR, New Delhi	3 years (2012 -2015)	15,93,600/-

9	Assessing drinking water quality in schools of Tiruchirappalli region and mapping of common flu and diarrhoea among school children (Co-investigator)	UGC, New Delhi	3 years (2009 –2012)	07,07,300/-
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Academic achievements / Awards

- **Young Scientist Award**, DST , New Delhi for the project “Detoxification of Benzene, Toluene, Ethyl Benzene and Xylene (BTEX) and its derivatives from groundwater and soil through bioreactor designing
- **Best Paper Award** in “The 1st EIT International Conference on Water Resources Engineering” organized by The Engineering Institute of Thailand, Bangkok (18–19th August, 2011)
- **University Research Fellowship** (2004 to 2006) by Bharathiar University, Coimbatore

Guidance of research students

Ph.D. Research Scholars

S. No	Name	Research work	Status	Year
1	Mr. S. Ashok	Bioremediation of Benzene, Toluene, Ethyl benzene and Xylene (BTEX) from petroleum polluted soil and water	Completed	2012–17
2	Ms. S. Umadevi	Bioinformatic approach to identify drug leads from marine metabolites against retinal angiogenesis in proliferative diabetic retinopathy	Completed	2012–17
3	Ms. V. Akila	Biomethanation and bioconversion of marine weed (<i>Ulva</i> sp.) from gulf of manner coastal region	Completed	2014–19
4	Ms. D. Sahaya Sukeetha	Exploration of nitrifying bacteria from mangrove ecosystem and its application in aquaculture ponds	Completed	2014–19
5	Mr. T.S. Kumar	Production of multi high value added products from the biomass of marine microalgae <i>Chlorella vulgaris</i>	On going	-
6	Mr. A. Manikandan	Exploration of Biocarrier for Bioremediation of Crude Oil Polluted Environment – A Sustainable Approach.	Completed 19.02.2021	2016–21
7	Mrs. Sreevidya Prakash	Water pollution and assessment of River Kallayi, Kerala	On going	-

M.Sc. Project Work

S. No	Name	Research work	Status	Year
1	Ms. S. Abinaya	A Bioinformatic Approach for Estimation of Toxicity and Biodegradation of Aromatic Hydrocarbons	Completed	2013
2	Ms. M. Arunya	Biodegradation of ethyl benzene by bacteria isolated from petroleum polluted soil	Completed	2014
3	Ms. R. Meena	Effects of carbon, temperature and pH on xylene degradation by bacterial consortium	Completed	2014
4	Ms. C. Abinaya	Biodegradation of toluene	Completed	2014

5	Mr. S. Aalfin Emmanuel	A statistical based experimental approach for biodegradation and optimization of heavy metals	Completed	2015
6	Ms. U. Sangeetha	Synthesis and extraction of biosurfactant by bacteria isolated from petroleum polluted soil	Completed	2015
7	Ms. S. Rohini	Biochemical characterization and antibacterial activity of marine weed (<i>Ulva</i> sp.) against human pathogens	Completed	2015
8	Mr. A. Manikandan	Seaweeds as a biofertilizer	Completed	2016
9	Ms. R. Ilakkiya	Biodegradation of crude oil	Completed	2017
10	Mr. S. Jegan	Isolation and screening of potential probiotic bacteria from the commercially important marine fishes	Completed	2017
11	Ms. R. Janani	Isolation of multidrug resistant bacteria from marine fishes <i>Lates calcalifer</i> and <i>Sphyrneae jello</i>	Completed	2017
12	Mr. P. Mathavan	Exploration of biocarrier material by potent bacterial consortium for crude oil contamination in marine environment	Completed	2019
13	Ms. B. Suruthi,	Isolation and cloning of phytoene desaturase and calcium dependent protein kinase for cucumber plant	Completed	2019
14	Ms. Swathi,	Potential of <i>Agaricus biosporus</i> synthesized nano particles and microextract against biofilm forming agent	Completed	2019
15	Ms. M. Mythili Divya	Study of Biofouling on different materials and antifouling	Completed	2020
16	Mr. U. Prasannakumar	Isolation, identification and adhesion study of biofilm forming bacteria from stainless steel sample	Completed	2021
17	Ms. R. Hema,	Isolation and Identification of multi drug resistant bacteria from marine sea water and antibiotic susceptibility efficiency of MDR Bacteria	Completed	2021

Orientation / Refresher course / Training program completed

- Faculty Development program on Research Methodology: Data Analysis, Reporting & Publication Perspectives, (20.07.2020 to 26.07.2020) Bharathiar School of Management and Entrepreneur Development (BSMED), Bharathiar University, Coimbatore 641046.
- Two weeks Faculty Development programme on Advanced Concepts for Developing MOOCS (02.07.2020 to 17.07.2020). Teaching and learning Centre, Ramanujam College, University of Delhi, Delhi.
- Faculty Development Programme on Enhancing learning outcomes through effective teaching, IQAC and UGC-HRDC, Bharathidasan University, Tiruchirappalli (28.11.2018).
- International Training Workshop on Hybrid Rice Technology (05.10.2017 to 25.10.2017), Hunan Rice Research Institute, Changsha, China.
- Hands on Training programme on Taxonomic Identification of Coastal and Oceanic Copepods (TICOC-2017) (12.07.2017 to 14.07.2017), Department of Marine Science, Bharathidasan University, Tiruchirappalli.
- **Refresher courses** in life sciences, Academic Staff College, Bharathidasan University, Tiruchirappalli-620 023 (03.03.2016 – 23.03.2016)

- **Refresher courses** in life sciences, Academic Staff College, Bharathidasan University, Tiruchirappalli-620 023 (18.07.2014 – 07.08.2014)
- 77th UGC sponsored **Orientation programme**, Academic Staff College, Bharathidasan University, Tiruchirappalli-620 023 (15.11.2012 – 12.12.2012).
- Training workshop on Microbial transformations in rice soil ecosystem (01.10.2004 to 21.10.2004), Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India

Conferences/ Workshop organized

- International conference on “Biodiversity and Biotechnology”, Bharathidasan University, 25–27 February, 2016 (Co-Convener).
- National Workshop on “High Performance Liquid Phase Separation Technique”, Bharathidasan University, 23rd January, 2015 (Convener)
- International Conference on “Advances in Biotechnology and Patenting”, Bharathidasan University, 18–21st January, 2013 (Coordinator)
- National Seminar on “Advances in Genomics and Proteomics”, Bharathidasan University, 5th November, 2012 (Coordinator)
- International conference on “Biomolecules and their prospects”, 8th July, 2016. Selvam College of Arts and Science, Namakkal (Member of advisory committee)

Member ship

- Life Member – Association of Microbiologist of India (from October, 2012), Marine Biological Association of India (from March, 2018) , Indian Science Congress Association (from March, 2018).

Editor (Book)

- Prashanthi Devi, M., **S. Rajakumar**, J. Aravind and K. Thamaraiselvi, 2021. Bioremediation and Green Technologies, Springer International Publishing, AG, Cham, ISBN:978-3-030-64121-4 (Hardcover), 978-3-030-64121-4 (eBook).
- Aravind, J., K. Kamaraj, M. Prashanthi Devi and S. Rajakumar, 2021. Strategies and Tools for Pollutant Mitigation. Springer International Publishing, AG, Cham, ISBN :978-3-030-63574-9 (Hardcover), 978-3-030-63575-6 (eBook).
- Umadevi, S. and **S. Rajakumar**, 2019. Diabetic retinopathy under BIOinformaticScope. Lambert Academic Publishing, ISBN: 978-613-5-85701-6.
- Prashanthi Devi, M., **S. Rajakumar**, J. Aravind and K. Thamaraiselvi, 2017. Bioremediation and sustainable technology for cleaner environment, Springer International Publishing, AG, Cham, ISBN:978-3-319-48438-9 (Hardcover), 978-3-319-48439-6 (eBook).
- Prashanthi Devi, M. and **S. Rajakumar**, 2016. Integrated Waste Management in India – Status and Future Prospects for Environmental Sustainability, Springer, ISBN: 978-3-319-27228-3 (e-Book), 978-3-319-27226-9 (Hard cover).

Reviewer in Journals

African Journal of Microbiology Research, Biochemical Engineering Journal, Bioresource Technology, Chemosphere, Ecotoxicology and Environmental Safety, Environmental Science & Policy, Food Research International, International Journal of Hydrogen Energy, Journal of Environmental Management, Journal of Computational Science, Journal of Taibah University for Science, Marine Pollution Bulletin, Process Safety and Environmental Protection, Science of the Total Environment, BioMed Research International, Biotechnology and Food Sciences, Brazilian Journal of Microbiology, Chemical Product and Process Modeling, Current Microbiology, Current World Environment, Ecological Indicators, Ecotoxicology and Environmental Safety, Exposure and Health, Food Research International, Foodborne Pathogens and Disease, Free Radicals and Antioxidants, Frontiers Marine Science, Indian Journal of Experimental Biology, International Journal of Bioinformatics Research, International Journal of Biotechnology Applications, International Journal of Energy Research, International Journal of Environmental Science and Technology, Journal of Basic Microbiology, Journal of Biosciences and Medicines, Journal of Ecology and Environmental Sciences, Journal of the Energy Institute, Journal of Environmental Biology, Journal of Microbiology, Marine Pollution Bulletin, Microscopy Research and Technique, Research and Reviews, Water Quality, Waste Management.

Paper publications in Journals (National / International)

UGC Listed Journal

1. Menagaa, D., Pattanathu K.S.M. Rahman, **S. Rajakumar** and P.M. Ayyasamy (2021). Antioxidant and Cytotoxic Activities of A Novel Isomeric Molecule (PF5) Obtained from Methanolic Extract of *Pleurotus florida* Mushroom. *Journal of Bioresources and Bioproducts* (In Press).
2. Annadurai Sakthi Thesai, Govindan Nagarajan, **Sundaram Rajakumar**, Arivalagan Pugazhendhi, Pudukadu Munusamy Ayyasamy, 2021. Bioaccumulation of fluoride from aqueous system and genotoxicity study on *Allium cepa* using *Bacillus licheniformis*. *Journal of Hazardous Materials* 407 (2021) 124367. (IF. 9.038)
3. Kumar, T.S., A. Josephine, D. Swathi, I. Lawrance, K. Thirupathi, G. Dharani, R. Kirubakaran and **S. Rajakumar**, 2021. Effect of different light/dark cycle on the growth of *Chlorella vulgaris* under phototrophic and mixotrophic conditions, *Indian Hydrobiology*, 19(1&2): 159–170 (ISSN 0971–6548).
4. Manikandan, A., V. Rajeshkannan, P.M. Ayyasamy and **S. Rajakumar**, 2020. Optimization of potential bacterial consortium for bioremediation in crude oil contaminated sites. *Indian Journal of Natural Sciences*, 10:61–27583–27592. (ISSN 0976–0997).
5. Manikandan, A., V. Akila, K. Kannan, R. Ramya, V. Rajeshkannan, P.M. Ayyasamy and **S. Rajakumar**, 2020. Antimicrobial Activity of Green Seaweed *Ulva* sp against pathogenic microorganisms. *Indian Journal of Natural Sciences*, 10:61–27600–27606. (ISSN 0976–0997)
6. Kumar, T.S., A. Josephine, T. Sreelatha, V.N. Azger Dusthacker, B. Mahzaveni, G. Dharani, R. Kirubakaran, **S. Rajakumar**, 2020. Fatty acids–carotenoid complex: An effective anti-TB agent from the *Chlorella* growth factor–extracted spent biomass of *Chlorella vulgaris*. *J. of Ethnopharmacology*. 249:112392. (IF–3.690)
7. Sahaya sukeetha, D., S. Dineshkumar, A. manikandan, V. Akila, P. Santhanam, 2019. Effect of Immobilized nitrifying bacterial consortium on ammonia biodegradation in aquaculture pond and enhanced growth of *Labeo rohita* : An in vitro and In Vivo studies. *Arabian Journal for Science and Engineering*. ISSN:1319–8025 (IF–1.5)
8. Vanitha, G., S. Rajakumar and P.M. Ayyasamy, 2019. Synergistic of bacterial consortium on the biodegradation of nitroglycerin in aqueous medium through laboratory scale bioreactor process. *Bioremediation Journal*, 10.1080/10889868.2019.1638340. ISSN: 1547–6529. (IF–1.098)

9. Akila, V., A. Manikandan, D. Sahaya Sukeetha, S. Balakrishnan. P.M. Ayyasamy and S. Rajakumar, 2019. Biogas and biofertilizer production of marine macro algae : An effective anaerobic digestion of *Ulva* sp. and Biocatalysis Agricultural Biotechnology, 18. ISSN:1878–8181. (IF:0.862)
10. Sakthi Desai, A., A. Pugazhendhi, S. Rajakumar, M.Rajan, P.M. Ayyasamy, 2019. Batch and column approach on biosorption of fluoride from aqueous medium using live, dead and various pretreated *Aspergillus niger* (FS18). Surfaces and Interfaces. 15:60–69. ISSN: 2468–0230. (IF–0.94)
11. R. Seenivasagam, R. Kasimani, O. Babalola, A. Karthika and S. Rajakumar, 2017. Effect of various carbon source, temperature and pH on nitrate reduction efficiency in mineral salt medium enriched with *Bacillus weinstephensis* (DS45). Groundwater for Sustainable Development, 5: 21–27. ISSN:2352–801X. (IF–1.076)
12. Rajeswari, M., R. Seenivasagan, P. Prabhakaran, S. Rajakumar, PM. Ayyasamy, 2017. Lab scale process on the removal of nitrate in ground water enriched with denitrifying bacterium and starch as a sole carbon source Journal of Water Process Engineering 13, 189–195. ISSN:2214–7144. (IF–3.173)
13. Seenivasagan, S., R. Kasimani, S. Rajakumar, R. Kalidoss, PM. Ayyasamy, 2016. Comparative modelling and molecular docking of nitrate reductase from *Bacillus weihenstephanensis* (DS45) Journal of Taibah University for Science 10 (4), 621–630. ISSN: 1658–3655. (IF–1.640)
14. Umadevi, S., K. Premkumar, S. Valarmathi, P.M. Ayyasamy and S. Rajakumar, 2016. Identification of novel genes related to diabetic retinopathy using protein–protein interaction network and gene ontologies. Journal of Biological Systems, 24(1): 117–127, ISSN: 1793–6470. (IF–0.839)
15. Meenakshi Sundaram, K., S. Umadevi, P. Manivannan, S. Rajakumar, G. Muralidharan and M. Sundararaman, 2015. In Silico Discovery of Seaweed Molecules against Matrixmetalloproteinase–26. Journal of Advanced Bioinformatics Applications and Research, 6(2): 52–6, ISSN 0976 2604. (IF – 4.84)
16. Umadevi, S., S. Ashok, P. M. Ayyasamy and S. Rajakumar, 2014. An *in silico* approach towards the prediction of drug likeness properties of inhibitors of plasminogen activator inhibitor1. Advances in bioinformatics, 2014, Article ID: 385418. ISSN: 1687–8035. (IF–1.33)
17. Silambuselvi, M., D. Malini, S. Rajakumar and P. Malliga, 2014. Study on bacterial and fungal growth expending the supernatant and pellet released during the degradation of coir pith by Cyanobacterium (*Oscillatoria annae*). International journal of advanced biotechnology and research, 5(4): 619–627, ISSN 2278–599X.
18. Seenivasagan, R., S. Rajakumar, R. Kasimani and P.M. Ayyasamy, 2014. Screening of assimilatory and dissimilatory denitrifying microbes isolated from nitrate contaminated water and soil. Preparative Biochemistry and Biotechnology, 44(6): 586–597. ISSN 1532–2297. (IF–1.117)
19. Palanivelan, R.A., S. Rajakumar, S.S. Suresh, C. Raja and P.M. Ayyasamy (2014). Optimization of prime parameters for textile dye decolorization by design of experiments (DOEs) using *Lysinibacillus Fusiformis* M1. Desalination and Water Treatment, 1–13. ISSN 1944–3986. (IF–1.234)
20. Menaga, D., S. Rajakumar and P.M. Ayyasamy, 2013. Free radical scavenging activity of methanolic extract of *Pleurotus florida* mushroom. International Journal of Pharmacy and Pharmaceutical Sciences, 5(4):601–606. ISSN 0975–1491.
21. Abinaya, S., S. Umadevi, S. Ashok, S.P. Anusha and S. Rajakumar, 2013. In silico prediction of toxicity in aquatic biota and biodegradation rate of aromatic hydrocarbons. Research and Reviews: Journal of Computational Biology, 2(2): 6–13. ISSN 2319–3433. (IF–2.029)

22. Palani Velan, R., **S. Rajakumar** and P.M. Ayyasamy, 2012. Exploration of promising dye decolorizing bacterial strains obtained from Erode and Tiruppur Textile wastes. *International Journal of Environmental Sciences*, 2(4): 2470–2481. ISSN 0976–4402.
23. Ayyasamy, P.M., **S. Rajakumar**, M. Sathishkumar, K. Swaminathan, K. Shanthi, S. Lee and P. Lakshmanaperumalsamy, 2009. Nitrate removal from synthetic medium and groundwater with aquatic macrophytes. *Desalination*, 242(1–3): 286–296. ISSN 0011–9164. (IF–6.035)
24. Ayyasamy, P.M., R. Yasodha, **S. Rajakumar**, P. Lakshmanaperumalsamy, S. Lee and P.K.S.M. Rahman, 2008. Impact of sugar factory effluent on growth and biochemical characteristics of terrestrial and aquatic plants. *Bulletin of Environmental Contamination and Toxicology*, 81(5):449–454. ISSN 1432–0800. (IF–1.650)
25. Ayyasamy, P.M., R. Banuregha, G. Vivekanandhan, **S. Rajakumar**, R. Yasodha, S. Lee and P. Lakshmanaperumalsamy. 2008. Bioremediation of Sago industry effluent and its impact on seed germination (Green gram and Maize). *World Journal of Microbiology and Biotechnology*, 24(11): 2677–2684. ISSN 1573–0972. (IF–2.652)
26. **Rajakumar, S.**, P.M. Ayyasamy, K. Shanthi, P. Thavamani, P. Velmurugan, Y.C. Song and P. Lakshmanaperumalsamy, 2008. Nitrate removal efficiency of bacterial consortium (*Pseudomonas* sp. KW1 and *Bacillus* sp. YW4) in synthetic nitrate–rich water. *Journal of Hazardous Materials*, 157(2–3): 553–563. ISSN 0304–3894. IF–7.650
27. **Rajakumar, S.**, K. Shanthi, P.M. Ayyasamy, P. Velmurugan and P. Lakshmanaperumalsamy, 2006. Limnological studies of Kodaikanal lake in Tamil Nadu, India. *Nature Environment and Pollution Technology*, 5: 533–544. ISSN:0972–6268.
28. **Rajakumar, S.**, P. Velmurugan, K. Shanthi, P.M. Ayyasamy and P. Lakshmanaperumalsamy, 2006. Prevalence of Coliform Bacteria in Kodaikanal and Yercaud Lake, Tamil Nadu, South India. *Research Journal of Microbiology*, 1: 527–233. ISSN 1816–4935 (IF – 0.5)
29. Shanthi, K., P. M. Ayyasamy, **S. Rajakumar**, K. Ramasamy and P. Lakshmanaperumalsamy, 2005. Influence of various carbon sources on nitrate reduction with sludges. *Asian Journal of Microbiology, Biotechnology and Environmental Science*, 7: 431–438. ISSN 0972–3005. (IF–0.2)

Non–UGC listed Journal

1. Sahayasukeetha, D., V. Akila, S. Ashok, A. Manikandan, P. Santhanam and S. Rajakumar, 2019. Enrichment and isolation of nitrifying bacteria and molecular characterization of optimized nitrifiers from mangrove soil, *Res. J. Life Sci. Bio. Phar. Chem. Sci.*, 5: 712–724
2. Akila, V., A. Manikandan, V. Rajeshkannan and S. Rajakumar, 2019. Exclusion of seed sprouts Salmonella pathogens through bacteriophages. *Research & Reviews: A Journal of Life Sciences*, 9 : 1–8.
3. Akila, V., D. Sahaya Sukeetha, A. Manikandan, P.M. Ayyasamy and S. Rajakumar, 2019. A foliar spray application of seaweed liquid fertilizer (SLF) on the growth and biochemical constituents of *Vigna radiata* (L.) from marine macro algae *Ulva* sp. *Int. J. Scientific Research and Review*, 8:344–353.
4. Umadevi, S., K. Meenakshi Sundaram, M. Sundararaman, P. M. Ayyasamy and **S. Rajakumar**, 2018. Marine algal secondary metabolites promising anti–angiogenesis factor against retinal neovascularization in CAM model. *Research and Reviews : A Journal of Life Sciences*, 8 : 19–25.

5. Umadevi, S., P. M. Ayyasamy and **S. Rajakumar**, 2018, *In silico* based identification of potential therapeutic marine metabolites against the ocular pathogen *Chlamydia trachomatis*. Journal of Systems Biology Research.1 (1): 1–7.
6. Lakshmanaprabhu. A. Umamaheswari, **S. Rajakumar**, PL. Bhuvaneshwari and S, Muthupetchu, 2017. Development and evaluation of gel incorporated with synthesized silver nanoparticle from *Ocimum gratissimum* for the treatment of *Acne Vulgaris*. American Journal of Advanced Drug Delivery (<http://www.imedpub.com/advanced-drug-delivery>)
7. Umadevi, S., P. M. Ayyasamy and **S. Rajakumar**, 2017. Computational Simulation of Retinal Angiogenesis Pathway towards the Identification of Effective Therapeutic Target and Screening of Drug Leads from Marine Metabolites. Journal of applied bioinformatics and computational biology, 6: 1, ISSN 2329–9533
8. Rajeswari, M., **S. Rajakumar** and P.M. Ayyasamy, 2015. Evaluation of nitrate removal in aquatic system: A general view. International Journal of Emerging Research in Management and Technology, 4(12): 186–194. ISSN: 2278–9359.
9. Umadevi, S., S.E. Aalfin, P. M. Ayyasamy and **S. Rajakumar**, 2015. Computational approaches in waste management: Special emphasis in microbial degradation. Research and reviews: Journal of Ecology and Environmental Sciences, p 22–27. ISSN 2347–7822.
10. Vidyalakshmi, R., B. Brindha, **S. Rajakumar** and M. Prashanthi Devi, 2015. Modeling of water contamination in peri urban locations of Thiruchirappalli region, Tamil Nadu, India, International Journal of Advanced Multidisciplinary Research, 2(3): 42–52. ISSN 2393–8870.
11. Lakshmi, K., **S. Rajakumar** and P. Malliga, 2015. Bioremediation of tannery effluent using *Lyngbya* Sp. with coir pith. International Journal of Science and Research, 4(1): 2736–43, ISSN 2319–7064.
12. Umadevi, S., P. M. Ayyasamy and **S. Rajakumar**, 2014. Phylogenetic analysis of antigenic variability in *Klebsiella pneumoniae* against antibacterial ocular drugs. Research and Reviews: Journal of Computational Biology, 3(3), ISSN 2319–3433.
13. Bela, B., **S. Rajakumar** and P. Malliga, 2014. Augmentation of *Arachis hypogaeae* L. seeds germination using cyanobacterial treated effluent. Chemical science reviews and letters, 3(12): 784–790. ISSN 2278–6783.
14. Somasundari, G., S. Jenny, **S. Rajakumar** and P. Malliga, 2014. Comprehensive analysis of different particle sizes of organic manure. International journal of agriculture innovations and research, 3(2). ISSN 2319–1473.
15. Umadevi, S., and **S. Rajakumar**, 2015. Network topology and functional analysis of genes in ocular disorders. Journal of applied bioinformatics and computational biology, 3:2, ISSN: 2329–9533.
16. Prabhakaran, P., A. Sureshbabu, **S. Rajakumar** and P.M. Ayyasamy, 2014. Bioremediation of crude oil in synthetic mineral salts medium enriched with aerobic bacterial consortium. International Journal of Innovative Research in Science, Engineering and Technology, 3(2): 9236–9242. ISSN 2319–8753.
17. Baby, V., **S. Rajakumar** and P.M. Ayyasamy, 2013. Reduction of ferric iron in synthetic medium amended with acetate as a sole carbon source. International Journal of Current Microbiology and Applied Sciecne, 2(12): 501–513. ISSN 2319–7706.
18. Seenivasagan, R., **S. Rajakumar** and P.M. Ayyasamy, 2013. Optimization of carbon sources, temperature and pH for nitrate removal in synthetic nitrate rich medium using *Bacillus* sp. (SW–59). International Journal of Innovative Research in Science, Engineering and Technology, 2(11):6315–6320. ISSN 2319–8753.

19. Menaga, D., P.M. Ayyasamy, **S.Rajakumar**, A. Sureshababu and G. Ribalakshmi, 2013. Phytochemical studies, antioxidant activities and identification of active compounds using GC-MS of *Pleurotus florida* mushroom. Indo American Journal of Pharmaceutical Research, 3(7):5141-5149. ISSN 2231-6876.
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34. Palanivelan, R., **S. Rajakumar** and P. M. Ayyasamy, 2014. Studies on decolorization of remazol golden yellow dye in aqueous solution using salt tolerant bacteria. National conference on Ecotechnologies for wastewater treatment: Present challenges and future horizons, Bharathiyar University, Coimbatore, 21–22 January, 2014. pp 84.
35. Priyadharshini, U., **S. Rajakumar** and P. M. Ayyasamy, 2014. Isolation and screening for arsenic resistant bacteria from industrial sites in Ranipet and Salem. National conference on Ecotechnologies for wastewater treatment: Present challenges and future horizons, Bharathiyar University, Coimbatore, 21–22 January, 2014. pp 100.
36. Umadevi, S., S. Ashok, S. P. Anusha and **S. Rajakumar**, 2013. A bioinformatic approach to identify potential therapeutic targets in ocular pathogen *Chlamydia trachomatis*, National conference on New opportunities and challenges in microbial research, organized by Dept. of Microbiology, Bharathidasan university, Tiruchirappalli, held during 5–6 September, 2013. pp.110.
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40. Lakshmanaperumalsamy, P., P. Velmurugan, **S. Rajakumar** and K. Shanthi, 2004. Biocolours – Biotechnological approach. National seminar on "Biodegradation and bioremediation", Sourashtra college, Madurai, September 17–18, 2004. Pp. 4.
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44. **Rajakumar, S.**, K. Usharani, P. M. Ayyasamy, P. Sundaramoorthy and P. Lakshmanaperumalsamy, 2003. Microbiological quality of lake Kodaikanal. 44th Annual Conference of AMI, Microbes and Human sustenance. UAS, Dharwad. Nov 12–14, 2003. pp. 112.
45. Nithya Priya, P.M., **S. Rajakumar**, P.M. Ayyasamy and P. Lakshmanaperumalsamy, 2002. Impact of dyeing effluent on lake water. 2nd National Seminar on "Environmental awareness, education and management for sustainable rural development". Sri Venkateswara University, Tirupati, August 26–28, 2002. Pp. 39.
46. Usha Rani, k., P.M. Ayyasamy, **S. Rajakumar**, K. Shanthi and P. Lakshmanaperumalsamy, 2002. Impact of Noyyal river water on the quality of ground water and effect of ground water on the germination of seeds (*Dolichos* – bean). 2nd National Seminar on "Environmental awareness, education and management for sustainable rural development". Sri Venkateswara University, Tirupati, August 26–28, 2002. Pp. 40.
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48. **Rajakumar, S.** and P. Lakshmanaperumalsamy, 2001. "Recovery of *Aeromonas hydrophilla* from Retail Lamb, Meat, Chick, Egg and Control". Ninth Seminar cum Exhibition on Student Projects Scheme (TNSCST) – 2000–2001. Noorul Islam College of Engineering, Kumaracoil. 629 180, Tukkalay, Kanyakumari. pp. 84–85.
49. **Rajakumar, S.**, G. Vivekanandhan and P. Lakshmanaperumalsamy, 2001. *Aeromonas hydrophilla*–a new emerging pathogen State level collegiate student's seminar on Modern Approaches in Life Sciences January 6, 2001. FLORA. Pp.15

Seminars / Conference / Workshops participated:

1. Exhibition cum plenary lectures on Immunology and Immunotechnology. 12–13 March 2019, Department of Marine Biotechnology, Bharathidasan University, Tiruchirappalli–620 024.
2. Hands on Training programme on Taxonomic Identification of Coastal and oceanic copepods (TICOC–2018). 25–28th September, Department of Marine Science, Bharathidasan University, Tiruchirappalli.
3. Science academies lecture workshop on Biodiversity for Human Welfare : Current and Future trends. 24–25th September, 2018. Department of Botany, Bharathidasan University, Tiruchirappalli.
4. National Seminar on Emerging trends in Cancer and Stem Cell Biology, 20th March 2018. Department of Biomedical Science, Bharathidasan University, Tiruchirappalli.
5. National Seminar on Technologies and prospects of fisheries and aquaculture, 19th March 2018. Department of Animal Science, Bharathidasan University, Tiruchirappalli.
6. National conference on Impact of climate change on public health (ICCPH 2018), 6–7, March, 2018. Centre for Climate Change Research, Department of Environmental Biotechnology, Bharathidasan University, Tiruchirappalli–620024.
7. Special workshop on memory enhancement, , 28, February , 2018. Department of Microbiology, Bharathidasan University, Tiruchirappalli–620 024.
8. Two day national seminar on Recent advances in Microbial Technology for Renewable Energy, Bioremediation, Health and sustainable Agriculture. 24–25, January, 2018, Department of Microbiology, Periyar University, Salem.
9. Special workshop on “Memory Enhancement”, 20th February, 2018. Department of Microbiology, Bharathidasan University, Tiruchirappalli.
10. One day national workshop on “Utilizing Internet Resource in class Room Instruction” . 12 January 2018, Department of Education, Bharathidasan University, Tiruchirappalli–620 024.
11. Eye and General Health Awareness camp, 14th March, 2017. NFMC, Bharathidasan University Constituent Arts & Science College, Trichy.
12. Science Academies’ Lecture Workshop on ‘Plant Diversity and Phytoremediation’, 6–7th February, 2017. Dept. of Environmental Science, Periyar University, Salem.
13. National seminar on Management of urban biodiversity – Issues, Challenges and solutions. 1–2, September, 2014. Christ University, Bangalore.
14. Work shop for research supervisor on Quality research report writing. 28 February, 2014. Curriculum Development cell, Bharathidasan University, Tiruchirappalli.
15. National conference on Eco technologies for wastewater treatment: Present challenges and future horizons, 21–22 January, 2014. Department of Environmental Sciences, Bharathiar University, Coimbatore.
16. National workshop on Drug Discovery and Development. 2–3, November, 2011. Department of Marine Biotechnology, Bharathidasan University, Tiruchirappalli.

17. Post seminar workshop on Spatial techniques for environmental sustainability, February 17–18, 2011. Department of Environmental Management, Bharathidasan University, Tiruchirappalli.
18. National Conference on Biological Wastewater Treatment towards Green Environment, 28–29 January, 2011. Department of Chemical Engineering, National Institute of Technology, Calicut, Kerala
19. National Seminar on Environmental Bioremediation Technologies, 5–6 November, 2009. Department of Environmental Management, Bharathidasan University, Tiruchirappalli–620 024.
20. National seminar on New trends in Bioinformatics. 12 February, 2007. Department of Bioinformatics, Bharathiar University, Coimbatore – 641 046.
21. International conference on Biomarkers in health and Environmental Management. 10–12 January, 2007. Department of Environmental Science, PSG College of Arts and Science, Coimbatore.
22. Training of Environmental Management in the river basins. 10–11 February, 2005. Public Works Department, Water Resources Organisation, Coimbatore.
23. National seminar on Biodegradation and Bioremediation, 17–18th September, 2004. Sourashtra College, Madurai.
24. National Seminar on Environmental Management, Mar 27, 2003. Dept of Environmental Sciences, Bharathiar University, Coimbatore – 641 046.
25. National conference on Recent trends in insect control. 22–24, January, 2003. Department of Zoology, Bharathiar University, Coimbatore.
26. National conference on Microbes in peace and war. 21–22, February, 2002. Sengunthar Institute of post graduate study and research in microbiology, Tiruchengode.
27. 42nd Annual Conference of Association of Microbiologists of India, 9–11 November, 2001. Department of Microbiology, Gulbarga University, Gulbarga – 585 106, Karnataka
28. National Symposium on Male Reproduction. 10–12 November, 2000. Department of Zoology, Bharathiar University, Coimbatore – 641 046.
29. National Conference on Eco Friendly Technologies for Sustainable Development. 27– 29 March, 2000. P.S.G. College of Arts and Sciences, Coimbatore – 14.
30. National Workshop on Environmental Awareness on Quality Management of Irrigation Water, February 2000, Dept. of Environmental Sciences, Bharathiar University, Coimbatore– 641 046.

Resource person / Invited Lecture

- Lecture on Marine Bioresources, status and constrains, UKF College of Engineering, Kollam, Kerala (16.02.2019).
- Lecture on “Seaweed and its application”. Department of Botany, PSGR Krishnammal College for Women, Peelamedu, Coimbatore (24.08.2018).
- Lecture on “Integrated farming”. National Facility for Marine Cyanobacteria, Bharathidasan University, Tiruchirappalli (16.11.2017).

- Lecture on “Hidden resources in microbes” Department of Microbiology, Selvamm College of Arts and Science, Namakkal (06.04.2016 – 07.04.2016).
- Lecture on “Non Renewable Energy in Human Welfare”. Department of Environment and Herbal Sciences, Tamil University, Tanjore (28.09.2012).
- Lecture on “Wild life management and environmental geo sciences” JSS University, Mysore (05.12.2011–07.12.2011)
- Lecture on “Role of molecular biology on environmental samples” Department of Marine Biotechnology, Bharathidasan University, QUEST, 2011(18.09.2011).
- Lecture on “Bioremediation – An integrated approach on removal of nitrate in drinking water”. PG. & Research Department of Zoology, Periyar EVR College, Tiruchirappalli (30.09.2011).