



**Dr. SURESH S. S. RAJA**

**Associate Professor in Microbiology**

### Contact

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**Academic Qualifications: M.Sc., M.Phil., Ph.D.,**

**Teaching Experience: 22 Years**

**Research Experience: 15 Years**

### Additional Responsibilities

1. Chairman and Passing Board Member, B.Sc., Microbiology Valuation Board, Bharathidasan University, India.
2. Purchase Committee Member (2009 to 2022), Department of Microbiology, Bharathidasan University College, Perambalur, India
3. Department Research Committee member (2013 to 2022), Department of Microbiology, Bharathidasan University College, Perambalur, India
4. Doctoral Committee Member, Periyar University, Salem and Bharathidasan University, Tiruchirappalli, India.
5. Selection Committee for the appointment of Assistant Professor, Cauvery College for women, Annamalai Nagar, Tiruchirappalli, India.

6. Member - Inspection Commission for granting continuous affiliation of course- Periyar University (2007-2008)
7. Member – Administrative and Academic Council, Bharathidasan University College, Perambalur (2009 – 2022)
8. Member – RUSA committee, Bharathidasan University College, Perambalur (2009 – 2022)
9. Member – Hostel Facilitation committee, Bharathidasan University College, Perambalur (2020 – 2022)
10. Member – RTI, Bharathidasan University College, Perambalur (2020 – 2022)

## Areas of Research

- ❖ Medical microbiology and Infectious disease biology
- ❖ Immunology
- ❖ Microbial diversity

## Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	PDF	00	00
	Ph.D.,	01	03
	M.Phil	00	00
M.Sc.,Project	PG	25	00

## Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
16	08	15	02	2/7/0/1

**Cumulative Impact Factor (as per JCR) :** 37.192

**H-index :** 08

**i10 index :** 06

**Total Citations :** 588

## Funded Research Projects

S.No	Title of the project	Name of the funding agency	Period of project	Year of completion
1.	Antileptospiral activity of callus derived secondary metabolites of <i>Azadiracta indica</i> A.Juss.	Tamil Nadu State Council for Science and Technology	2001-2002	2002
2.	Genotoxicity of river Cauvery at Pallipalayam due to tannery pollution and role of Microbial consortium in removal of mutagenic chromium.	Tamil Nadu State Council for Science and Technology	2004-2005	2005
3.	Chromosomal aberrations in heavy motor vehicle drivers occupationally exposed to air pollution.	Tamil Nadu State Council for Science and Technology	2005-2006	2006

## Distinctive Achievements / Awards

1. State Level Education Testing for Lecturership (SLET) – 1997
2. State Level Education Testing for Lecturership (SLET) – 2000

## Events organized in leading Roles

Number of Seminars / Conferences / Workshops / Events organized: 10

## Events Participated

### Conferences / Seminars / Workshops: 22

#### Participation

1. Workshop on Reform of Undergraduate and Postgraduate Curriculum for enhancing Employability organised by Curriculum Development Cell (for BoS members) at Bharathidasan University, Tiruchirappalli-24 on 22.03.2013
2. Regional Science Congress on science for shaping the future of India held at Kongunadu arts and science college, Coimbatore-29 on 15.12.2012 and 16.12.2012
3. National conference on Microbiological Research in 21 century held at Department of Microbiology, Bharathidasan University, Tiruchirappalli-24 on 27.02.2012 and 28.02.2012
4. Workshop on Communicative Competence held at K.S.R. College of arts and science, Tiruchengode, Namakkal on 29.01.2005
5. Quality improvement programme – a short course on Instructional Design and Delivery System held at K.S.R. College of arts and science, Tiruchengode from 20.06.2002 to 22.06.2002
6. Quality improvement programme – workshop on Guidance and Counseling held at K.S.R. College of arts and science, Tiruchengode from 20.10.2003 to 22.10.2003

#### Platform Presentations

1. Antibacterial activity of in vitro cultured plants against drug resistant respiratory pathogens; **Suresh.S.S.Raja**, K.Ponmurugan, S.T.Babusha and S.Sharadha in Regional Science Congress on science for shaping the future of India held at Kongunadu arts and science college, Coimbatore-29 on 15.12.2012 and 16.12.2012
2. Antibacterial activity of some common medicinal plants; K. Parimaladevi, B.Meyyanantham, K.V. Vrindha, Nitha Mary Kuriakose and **Suresh.S.S.Raja** in National Seminar on Current Environmental Issues organized by Department of Environmental Sciences, Bharathiar University, Coimbatore-46 held on 05.03.2003
3. Antimicrobial activity of some selected medicinal plants; Nitha Mary Kuriakose, B.Meyyanantham, K.V. Vrindha, K. Parimaladevi and **Suresh.S.S.Raja** in National Seminar on Current Environmental Issues organized by Department of Environmental Sciences, Bharathiar University, Coimbatore-46 held on 05.03.2003
4. Effect of NaCl salinity on morphological, physiological and biochemical aspects in two varieties of green gram (*Vigna radiata*) seedlings; K.V. Vrindha, B.Meyyanantham, K. Parimaladevi, Nitha Mary Kuriakose and **Suresh.S.S.Raja** in National Seminar on Current Environmental Issues organized by Department of Environmental Sciences, Bharathiar University, Coimbatore-46 held on 05.03.2003
5. Assessment of serovar status of pathogenic Leptospire isolated from agricultural workers of Namakkal, Erode and Salem Districts of Tamil Nadu and its susceptibility to plant

extracts; **Suresh. S.S. Raja**, R. Venkatesan, R. Girish Nair and R. Mathan kumar in ICMR sponsored national seminar on “Awareness on pathogen carriage, prevention personal health promotion among rural adolescent learner of higher education” on 28.07.2017 held at Research Department of Microbiology, M.R. Government Arts College, Mannargudi – 614 001, Tamilnadu.

6. Application of Foldscope as a modernized tool for the diversity of fungi and its tolerance against synthetic fertilizers in K.Karthika, **Suresh.S.S.Raja**, B.Bhuvaneshwari and R.Vijayakumar in International seminar on Recent Trends in Biological Sciences held at Dhanalakshmi Srinivasan College of Arts and Science (Autonomous), Perambalur on 15.02.2019
7. Climate and soil properties influence species diversity of soil *Bacillus* community in India Girish.R. Nair and **Suresh.S.S.Raja** in International seminar on Recent Trends in Biological Sciences held at Dhanalakshmi Srinivasan College of Arts and Science (Autonomous), Perambalur on 15.02.2019
8. Isolation of multiple drug resistant Staphylococci and Pseudomonas from Diabetic foot ulcer. Venkatesan R. and **Suresh.S.S.Raja** in International seminar on Recent Trends in Biological Sciences held at Dhanalakshmi Srinivasan College of Arts and Science (Autonomous), Perambalur on 15.02.2019

### **Training Programs**

1. **Training on Plant tissue culture** conducted at Centre for Biodiversity and Biotechnology, St.Xavier’s College, Palayankottai.
2. **Training workshop on Laboratory Diagnosis of Leptospirosis** conducted at Regional Medical Research Centre, Port Blair from 22-28 August 2001.
3. **International Training Course on Biotechnological Tools for Plant Improvement** held at K.S.R. College of arts and science, Tiruchengode from 07.07.2003 to 20.07.2003
4. **Orientation Course** at Academic Staff College, Pondicherry University, Pudcherry from 19.05.2011 to 14.06.2011
5. **Refresher Course in Life Sciences (ID)** at Academic Staff College, Pondicherry University, Pudcherry from 18.12.2012 to 08.01.2013
6. **DBT sponsored National Workshop on Molecular Techniques in diagnosis of infectious diseases, Autoimmune and Genetic Disorders** at Department of Biochemistry, VRR Institute of Biomedical Science, Chennai – 56 from 17.11.2014 to 30.11.2014
7. **Refresher Course in Life Sciences (ID)** conducted by UGC-Human Resource Development Centre (UGC-HRDC), Bharathidasan University, Tiruchirappalli from 08.11.2016 to 28.11.2016.
8. **Refresher Course in Biological Sciences (ID)** conducted by UGC-Human Resource Development Centre (UGC-HRDC), Bharathidasan University, Tiruchirappalli from 11.12.2020 to 24.12.2020

## Membership

### Professional Bodies

1. Life member in Indian technical teachers association
2. Annual membership in Indian Science Academy. Coimbatore chapter
3. Annual membership in Association of Microbiologists in India, South Zone.

### Academic Bodies

1. **Head**, Department of Microbiology, Bharathidasan University College (2009 to 2022)
2. **Member, Board of Studies**, Member, Board of Studies (UG), Microbiology, Vivekanandha College for Women, Tiruchengode (2011 – 2014); (UG and PG) Microbiology, Srimad Aandavar College, Trichy; (UG and PG) Microbiology, K.S.R College of Arts and Science Tiruchengode
3. **Doctoral Committee Member**, Periyar University, Salem and Bharathidasan University, Trichy

## Resource persons in various capacities

### Number of Invited / Special Lectures delivered: 18

1. Applications of Chromatographic Techniques in Two days workshop on **Bioinstrumentation** at Department of Biotechnology, Kongu arts and science college, Erode-107 on 22.09.2011
2. Immune Evasion Mechanisms by Pathogens invited lecture at Department of Biotechnology, Kongunadu arts and science college, Coimbatore-29 on 27.01.2012
3. Chromatography. Special lecture in the Valedictory function of Science Association at Sri Saradha College for Women, Perambalur-113 on 31.01.2013
4. Microbial Diversity in Extremes. Invited lecture – World Biodiversity Day held at Srinivasan College of Arts and Science, Perambalur – 621212 on 29.12.2015
5. ‘**செயல்பாட்டு நுட்பவியல்**’ special Address at NSS Special Camp, Bharathidasan University Model Arts and Science, Veppur on 18.03.2016
6. Resource Person - DBT Sponsored One Day Training Workshop on “**Assembly and Usage of Foldscope**” on 17.09.2018 held at Department of Microbiology, Bharathidasan University Constituent College, Perambalur, Tamilnadu.
7. Resource Person - DBT Sponsored One Day Training Workshop on “**Assembly and Usage of Foldscope**” and Twinning Programme with NER Partner on **30.01.2019** held at Department of Microbiology, Bharathidasan University Constituent College, Perambalur, TN
8. Resource Person - DBT Sponsored One Day Training Workshop on “**Assembly and Usage of Foldscope**” held at Government High School, Thambiranpatti, Perambalur – 621 104 on 09.02.2019.
9. Resource Person - DBT Sponsored One Day Training Workshop on “**Assembly and Usage of Foldscope**” held at Government Higher Secondary School, Kurumbalur, Perambalur – 621 107 on 04.12.2018
10. COVID-19: Disease and Diagnosis. Invited lecture in One Day e-Conference on “**COVID-19: VIEWS AND CHALLENGES OF GLOBAL DISEASE**” organized by Department of Zoology, Government Arts College for Men, Krishnagiri on 22.05.2020. Link: <https://www.youtube.com/watch?v=1S7faaBwtmw&t=7969s>

## Recent Publications (2008-2018)

1. K.Nataraja seenivasan, .Boopalan, K.Selvanayaki, **Suresh.S.S.Raja** and S.Ratnam. Leptospirosis among Rice Mill Workers of Salem, South India. Japanese Journal of Infectious Disease.2002. 55,170-173
2. K.Nataraja seenivasan,, **Suresh.S.S.Raja** and S.Ratnam. Evaluation of the cross reacting leptosprial Serovars by MAT, ELISA and MSAT in rabbit Hyper immune sera. Indian Journal of Animal Sciences. 2003. 73 (9), 960-962
3. K.Nataraja seenivasan, N.Prabhu, K.Selvanayaki, Suresh.S.S.Raja and S.Ratnam.Human Leptospirosis in Erode, South India Serology, Isolation and characterization of the Isolates by Randomly Amplified Polymorphic DNA (RAPD) Finger printing. Japanese Journal of Infectious Disease. 2004. 57, 193-197
- 4.R.Subashkumar,G.Vivekanandhan,**Suresh.S.S.Raja**,K.Natarajaseenivasan,T.Thayumanavan and Lakshmanaperumalsamy. Typing of *Aeromonas hydrophila* of fish and human diarrhoeal origin by outer membrane proteins and lipopolysaccharides. Indian Journal of Microbiology. 2005. 45 (4);291-294
5. Radhika krishna, A.Maripandi,Suresh.S.S.Raja, K.Ponmurugan, Sameer Sharma and Natarajaseenivasan. Characterization of leptospiral isolates by using PCR-RFLP analysis. Advanced biotech. 2008. VII (03)
- 6.A.Maripandi.,**Suresh.S.S.Raja**,P.Ponmurugan and G.Gurusubramaniyan. Random Amplification of Polymorphic DNA (RAPD) of *Salmonella enteridis* isolated from Chicken samples. Biotechnology. 2007. 6(2)
7. C.K.Venil and Suresh S.S.Raja. Beta asarone – an antimicrobial compound from sweet flag (*Acorus calamus* Linn). The Indian Forester. 2009. 135(1); 126-132
8. J.Manjunathan, Suresh S.S.Raja and V.Kaviyarasan. Production of Vitamin B12 by *Pseudomonas* isolated from Sago Waste. Indian Journal of Medicobiological Research. 2010. 1(1):68-72
9. A.S.Narayanan, **Suresh.S.S.Raja**, K.Ponmurugan, S.C.Kandekar, K.Natarajaseenivasan, A.Maripandi and Q.A.Mandeeel. Antibacterial activity of selected medicinal plants against multiple antibiotic resistant uropathogens: a study from Kolli Hills, Tamilnadu, India. Beneficial Microbes. 2011. 2 (3):235-243.
10. R. Palanivelan , Rajakumar S., **Suresh S.S. Raja** and P.M. Ayyasamy. Optimization of prime parameters for textile dye decolorization by design of experiments (DOEs) using *Lysinibacillus fusiformis* M1. Desalination and Water Treatment; 2014 DOI:10.1080/19443994.2014.944583
11. P. M. Ayyasamy, **Suresh S. S. Raja**, B. Subashni and R. Palanivelan. Bio-statistical evaluation of cultural conditions on industrial textile dye decolourisation using a native bacterium *Micrococcus endophyticus* (ES37). Journal of Water Reuse and Desalination. 2015.1(1)
12. R. Palani velan, P.M. Ayyasamy, Subashni B, **Suresh S.S. Raja**. Eco-friendly colour removal potential of fungal species isolated from Vegetable and fruit wastes. International Journal of Plant, Animal and Environmental Sciences. 2015. 5(1) :266-271;
13. Mohammed Musthafa, Alwarrappan Sankaranarayanan, Karuppiah Ponmurugan, **Suresh S.S. Raja**. Bioactive peptides from *Loligo duvauceli* (Indian marine squid) orbigny against multidrug resistant pyogenic clinical pathogens. South Indian Journal of Biological Sciences. 2015. (1) 24-29;
14. R.Vijayakumar, R.Manikandan and **Suresh.S.S.Raja**. Comparative evaluation of methods to detect biofilm formation by bacterial isolates of poultry environments. Scientific Transaction in Environment and Technovation.2016. (10)1-5
15. Girish R Nair and **Suresh S.S. Raja**. Decoding Complex Soil Microbial Communities through New Age “Omics”. Journal of Microbial & Biochemical Technology. 2017. 9(6): 301-309. . DOI: 10.4172/1948-5948.1000382
16. Girish R Nair and **Suresh S.S. Raja**. Climate and Soil Properties Influence Species Diversity of Soil *Bacillus* Community in India. Microbiology Insights. 2018. 11: 1–7.. DOI:

10.1177/1178636118810366

17. Beerbal Kumar, B., Panneer Selvam, K., Nambirajan, G. and Suresh.S.S.Raja. Carrier derived isolates of Vancomycin Intermediate Staphylococcus aureus (VISA) –prevalence and antibiotypes. *Wide Spectrum* 7(1): 44-51. 2018
18. Girish Nair, R. and **Suresh S.S. Raja**. Characterization and phylogenetic analysis of alkaline  $\alpha$ -amylase producing *Brevibacillus laterosporus* from mountain climatic zone of India. *Journal of Drug Delivery and Therapeutics*. 2019 9(3): 125-129.
19. **Raja S.S. Suresh**, Younis, E.M. and M. Fredimoses, 2020. Isolation and molecular level characterization of novel *Streptomyces* sp. ACT2 isolated from marine mangrove sediments with antidermatophytic potentials. *Journal of King Saud University – Science*. 2020. 32:1902-1909. DOI: <https://doi.org/10.1016/j.jksus.2020.01.020>.
20. R.S. Kumar, Parvaiz Ahmad, S. Sujani Sathya Keerthana, P. Jeya Cressida, I. Ganesh Moorthy, **Raja S.S. Suresh**. Extraction and purification of an antimicrobial bioactive element from lichen associated *Streptomyces olivaceus* LEP7 against wound inhabiting microbial pathogens. *Journal of King Saud University – Science*. 2020. 32:2009-2015.
21. Anila Venugopal, Harsha Ganesan, **Suresh Selvapuram Sudalaimuthu Raja**, Vivekanandhan Govindasamy, Manimekalan Arunachalam, Arul Narayanasamy, Palanisamy Sivaprakash, Pattanathu K.S.M. Rahman, Abilash Valsala, Gopalakrishnan, Zothan Siana, Balachandar Vellingiri.. Novel Wastewater Surveillance Strategy for Early Detection of COVID – 19 Hotspots. *Current Opinion in Environmental Science & Health*. 2020. <https://doi.org/10.1016/j.coesh.2020.05.003>
22. Ramasamy Venkatesan, **Suresh SS Raja**, R. Vijayakumar and K. Panneerselvam. Isolation and Identification of *Staphylococci* and *Pseudomonas* from Diabetic Foot Ulcer in Perambalur District Hospitals in Tamil Nadu. *Journal of Pharmaceutical Research International*. 2021. 33(13): 15-21
23. Ponmurugan Karuppiyah, Muhammad Musthafa Poyil, **Suresh S. S. Raja** and Imran Mohammad Mohammad. Screening and isolation of vitamin B12 producing *Pseudomonas* sp. from different natural sources. *Annals of Phytomedicine*. 2021. 10(1): 249-254,. DOI: <http://dx.doi.org/10.21276/ap.2021.10.1.27>.
24. Ramasamy Venkatesan, **Suresh SS Raja**, R. Vijayakumar and K. Panneerselvam. Screening and Characterization of Biofilm Formation by *Staphylococcus* spp. and *Pseudomonas* spp isolates from Diabetic Foot Ulcer. *Journal of Pharmaceutical Research International*. Volume 11., No 5 (September) 2021, pp 139-144
25. Mathan Kumar, R., Jani, K., Parvathi, J.R., Thomas B.M., **Suresh SS Raja**, Anita Pandey and Avinash Sharma. Bacterial diversity of geochemically distinct hot springs located in Maharashtra, India. *Archives in Microbiology* **204**, 110 (2022). <https://doi.org/10.1007/s00203-021-02728-2>
26. Venkatesan, R. **Suresh SS Raja**, Vijayakumar, R. and K. Panneerselvam, Screening and characterization of biofilm formation by *Staphylococcus* spp. and *Pseudomonas* spp. isolates from diabetic foot ulcer. *International Journal of Life Science and Pharma Research*. 2021. 11(5): L139-144.
27. Muhammad, M. P., Ponmurugan, K., **Suresh S. S. R.**, Sasikumar, P. (2022). Isolation, Extraction, and Characterization of Verotoxin-producing *Escherichia coli* O157:H7 from Diarrheal Stool Samples. *Sudan journal of medical sciences* 2022, 17(1), 116–127
28. Karuppiyah, P., **Raja, S.S.S.**, Poyil, M.P. (2022). Microbiological profile of diabetic foot infections and the detection of *mecA* gene in predominant *Staphylococcus aureus*. *Universa medicina*. 2022. 41(2):121-128 (ISSN / eISSN 1907-3062 / 2407-2230)
29. Ramasamy, V., **Raja S.S.S.**, T. Durairaj, M. Chinnasamy, T. Nooruddin and P. Annamalai,. Antimicrobial efficiency of a marine *Streptomyces* sp. VPTSA1-4 isolated from Coromandel coast of Bay of Bengal, India. *J. Appl. Sci.*, 2023. 23: 16-25.
30. Sholkamy, E.N., S. Palsamy, **Raja, S.S.S.**, Alarjani, K.M., Alharbi, R.M., Abdel-Raouf, N., Alsamhary, K.I., Durairaj, V., Mangaladoss, F., Apu, E.H. and M. A. Habila. GC-MS analysis and bioactivity of *Streptomyces* sp. nkm1 volatile metabolites against some phytopathogenic Fungi. *Braz. Arch. of Biol. and Tech*. 2023. Vol.66: e23220626, <https://doi.org/10.1590/1678-4324-2023220626>



**a. Book Edited**

1. **Secondary Metabolites: Sources and Applications**, InTech – Open Science, Croatia, 2018, ISBN: 978-1-78923-643-9; Print ISBN: 978-1-78923-642-2.
2. **Secondary Metabolites: Trends and Reviews**, InTech – Open Science, Croatia, 2022, ISBN: 978-1-80355-208-1; Print ISBN: 978-1-80355-207-1.

**b. Book Chapter published**

1. Thirumurugan, D., Cholarajan, A., **Suresh S.S. Raja** and Vijayakumar, R. An *Introductory Chapter: Secondary Metabolites*. In: *Secondary Metabolites: Types and Applications*, Chapter I, [Vijayakumar, R. and Suresh S.S. Raja (ed.)], InTech – Open Science, Croatia, ISBN: 978-1-78923-643-9; Print ISBN: 978-1-78923-642-2. (Scopus indexed).
2. C Hughes, I Mahalaxmi, N S Kumar, **S Raja**, R Thangarasu, S Warren, and M Waters. Clinical Presentation, Pathology, and Histopathology. *Chemistry World*. [RSC Books, Preprint]. 15 October 2020 (accessed: 26 September 2021). Available from: <https://www.chemistryworld.com/the-coronavirus-pandemic-and-the-future/clinical-presentation-pathophysiology-and-histopathology/4012580.article>
3. Girish Nair, **Suresh S.S. Raja** and Vijayakumar, R. *Introductory Chapter: Secondary Metabolites – An overview*. **Secondary Metabolites: Trends and Reviews**, InTech – Open Science, Croatia, 2022, ISBN: 978-1-80355-208-1; Print ISBN: 978-1-80355-207-1 (Scopus indexed).
4. Contributed chapters to “Methods in Actinobacteriology” Springer Protocols Handbooks, [ed. Dhanasekaran, D.] Springer Nature, Humana Press, New York, 2022. ISSN 1949-2448 ISSN 1949-2456 (electronic), ISBN 978-1-0716-1727-4 ISBN 978-1-0716-1728-1 (eBook), <https://doi.org/10.1007/978-1-0716-1728-1>
  - a. *Aerobic and anaerobic decolourization of textile dyes using actinobacteria* – Ramasamy Vijayakumar and Suresh Selvapuram Sudalaimuthu Raja. Chapter 101, pp. 695-704.
  - b. *Chemo-taxonomical characterization of actinobacteria* - Ramasamy Vijayakumar and Suresh Selvapuram Sudalaimuthu Raja. Chapter 26, pp. 181-186.
  - c. *Cultivation Techniques of Rare Actinobacteria* - Ramasamy Vijayakumar, Durairaj Thirumurugan, Alagappan Cholarajan and Suresh Selvapuram Sudalaimuthu Raja. Chapter 25, pp.169-180.