

**Prof. SENTHIL-NATHAN, SENGOTTAYAN D.Sc, FNAAS**

Professor and Director (Research)

Sri Paramakalyani Centre for Excellence in Environmental Sciences,

Manonmaniam Sundaranar University,

Alwarkurichi 627 412, Tamil- Nadu, INDIA

Email: [senthil@msuniv.ac.in](mailto:senthil@msuniv.ac.in)Telefax: + 91 4634 210166 Academic media- [Google Scholar \(H-index 62\)](#), [Researchgate](#)**EDUCATION**

<b>D Sc (2024)</b>	Animal Science- Toxicology, Periyar University, TN	
<b>Ph D (2000)</b>	Animal Science-Biopesticides/Insect Toxicology	
<b>M Phil (1995)</b>	Animal Science, 1995 (Insect Biodiversity)	Bharathiar University, Coimbatore
<b>M Sc (1992)</b>	Zoology, 1994	
<b>B Sc (1989)</b>	Zoology, 1992 (Ancillary Chemistry and Botany)	

**PROFESSIONAL RESEARCH POSITIONS**

<b>Professor and Head (2022 - Present)</b>	
<b>Professor (2017 -2022)</b>	Sri Paramakalyani Centre for Excellence in Environmental Sciences, Manonmaniam Sundaranar University, Tamil Nadu.
<b>Associate Professor (2014-16)</b>	
<b>Assistant Professor (2007-14)</b>	
<b>Visiting Professor (2011-2012)</b>	Louisiana State University Agricultural Center, Baton Rouge, USA (Host Supervisor-Dr. M.J. Stout)
<b>Research Scientist (2006-2007)</b>	Plant Environment Division, Honam Agricultural Research Institute, Republic of Korea (Adviser-Dr. M. Y. Choi)
<b>Post-Doctoral Research Scientist (2003-2006)</b>	Department of Environmental Engineering, Chonbuk National University, Republic of Korea (Adviser-Dr. P. G. Chung)
<b>Assistant Professor (2000-2003)</b>	Post Graduate and Research Department of Biotechnology, Vivekanandha College, Periyar University Tamil Nadu, India
<b>Ph.D. student (1995-1999)</b>	Bharathiar University, Coimbatore TN (Adviser-Dr. K. Murugan)

**HONORS, AWARDS AND FELLOWSHIPS**

<b>2026</b>	Fellow in Indian Academy of Agricultural Sciences (FNAAS)
<b>2023</b>	Visiting Professor, Dept. of Entomology and Plant Pathology, Chiang Mai University, Thailand
<b>2021</b>	Fellow in the Academy of Sciences (FASch), The Academy of Sciences, Chennai.
<b>2011-2012</b>	BOYSCAST Fellow -DST Govt. of India (Louisiana State University, Baton Rouge, USA).
<b>2010</b>	Young Scientist award under Fast Track-DST, Govt. of India
<b>2009</b>	Young Scientist award under RGYI-DBT, Govt. of India
<b>2004</b>	CBNU-International Post-Doctoral Fellowship, Korea
<b>2002, 2003</b>	Best faculty award, VICAS, Periyar University

## SYNERGISTIC ACTIVITIES AND PROFESSIONAL POSITIONS

### a. Administrative

- Director, Centre for Research (2025 to till date), Manonmaniam Sundaranar University.
- Member-IQAC, Manonmaniam Sundaranar University (2025- till date).
- Member, Research Committee, MSU (2024)
- Nodal Officer- DST Project grant allotted to the MSU (2024)
- Co-ordinator, RUSA (2022)
- Co-ordinator, PURSE (2022)
- Subject Expert, Project Assistant Selection Committee for SERB-CRG Project(03.06.2022)
- Director, Planning and Development Section (2021), Manonmaniam Sundaranar University (2022-23).
- Member, Core Committee, Central Sophisticated Instrument facility, Manonmaniam Sundaranar University (2019-till date)
- Member of Technical Support Group in the category “Expert in Environment Science” (2021) to assist the Biodiversity Management Committee, Tirunelveli District.
- Member of Atal Ranking of Institutions on Innovation Achievements (ARIIA)2021
- Head- In-charge (2014), Sri Paramakalyani Centre for Excellence in Environmental Sciences, MSU, Alwarkurichi 627 412, Tamil- Nadu.
- Member Syndicate - Manonmaniam Sundaranar University, 2017-2018
- Member, Disciplinary Action Panel, Manonmaniam Sundaranar University, 2016- till date, MSU
- Convenor, NAAC core committee, 2018 to till date, MSU
- Head- In-charge (2002-03), Post Graduate and Research Department of Biotechnology, Vivekandha College, (Periyar University) Trichengode, Tamil-Nadu.

### b. Academic and Scientific Societal Service

- Editor-in-Chief - [Journal of Natural Pesticide Research](#) (Elsevier Inc.) (2021-till date)
- Senior Editor -[Physiological and Molecular Plant Pathology](#) (Elsevier Inc.) (2021-2023)
- Section Editor-[Toxin Reviews](#) (Taylor and Francis) (2021-till date)
- Editor-[Biocatalysis and Agricultural Biotechnology](#) (Elsevier Inc.) (2017-2024)
- Subject Editor-[Nature- Scientific Reports](#) (Nature Inc) (2012-2026)
- Academic Editor- [Plos One](#) (Plos.Org) (2019-till date)
- Associate Editor- [Chemical and Biological Technologies in Agriculture](#) (Springer) (2018-till date)
- Associate Editor-[Phytoparasitica](#) (Springer) (2021-2026)
- Associate Editor- [Neotropical Entomology](#) (Springer) (2019-till date)
- Associate Editor – [Toxicology Reports](#) (Elsevier Inc) (2018-2021)
- Associate Editor-[Frontiers in Invertebrate Physiology](#) (Frontiers Publisher) (2013-2026)
- Associate Editor-[International Journal of Pest Management](#)(Taylor and Francis) (2015-till date)
- Associate Editor-[Archives of Phytopathology and Plant Protection](#) (Taylor and Francis) (2013-till date)
- Associate Editor [Florida Entomologist](#) ([www.ufl.edu/](http://www.ufl.edu/))(2013-2024)
- Editorial Board Member- [Pesticide Biochemistry and Physiology](#) (Elsevier Inc.) (2021 to till date).
- Editorial Board Member-[Microbiology Research](#) (Elsevier Inc.) (2023-2024)
- Editorial board member – [Current Research in Insect Science](#) (Elsevier Inc.) (2021-till date)
- Editorial Board Member-[Journal of Asia-Pacific Entomology](#) (Elsevier Inc.) (2013-till date)
- Editorial Board Member- [Biologia](#) (Springer) (2015-till date)
- Editorial Board Member-[Biopesticide International](#) (Biopesticide.org) (2014-till date)
- Editorial Board Member -[Journal of Applied Research in Plant Protection](#) (2020 -till date)

- Editorial Board Member-[Agrochemicals \(MDPI\)](#) (2022 -2025)
- Editorial Board Member-[Physiological and Molecular Plant Pathology](#) (Else Inc.) (2024-2025)
- Guest Editor-MDPI-[Agriculture](#), [Journal of Fungi](#), [International Journal of Environmental Research and Public Health](#),
- *Ad-hoc* and panel reviewer for DST-SERB, DBT, ICMR, NSF, CSF.

**c. Academic Programming**

- MANO Environmental club organizing committee (member), 2015 - till date
- Stakeholder-Thamiraparani River conservation, Southern Western Ghats, 2009 - till date.
- Co-Convener, National Conference Global Climatic Change and Mitigation, SPKCEES, 2017.
- Co-Convener, National Conference Environmental Science and Technology, SPKCEES, 2017.
- Organizing Secretary, National seminar - '**Impact of Climate Change on Environment and Biodiversity (NCCEB - 2015)**', SPKCEES, 2015.
- Member, National advisory committee for the international conference (Member)- '**Ecofriendly Plant Protection and production for Food Security, Food Safety and the role of Biopesticides in Global Economy**', 4<sup>th</sup> Biopesticide International Conference, Crop Protection Research Centre, St. Xavier's College Palayamkottai, 2013.
- Member, National advisory committee for the international conference (Member)-'**Third International Congress on Global Warming on Biodiversity of Insects: Management and Conservation Strategies**' (GW-BIMC, '13)', Bharathiar University, 2013.
- Organizing committee member, National conference- '**Environ Nano-2011**' (UGC sponsored) 2011.
- National advisory committee for the national conference (Member) - '**Impact of Climate Change on the Biodiversity of Insects and Environment**', Organized by the Department of Zoology, Bharathiar University, Coimbatore, 2010.
- Organizing committee, National conference sponsored by the UGC (member) - '**Environ Nano-2010**', 2010.
- Organizing committee, State level conference on River Ecosystems and Climatic Change, SPKCEES, Alwarkurichi, 2010.
- National advisory committee (member) - '**Biopesticide International Conference (BIOCICON-2009)**' (Crop Protection Research Centre, St. Xavier's College Palayamkottai, 2009.
- National advisory committee (member) - '**International Congress of Global Warming on Biodiversity of Insects: Management and Conservation**' at Bharathiar University, Coimbatore, India, 2009.
- International advisory committee International Conference (member) - '**Biodiversity of insects: Challenging Issue in management and conservation**' at Bharathiar University, Coimbatore, India, 2006.
- National advisory committee for National Conference (Member) - "**Recent Trends Insect Control**", Bharathiar University, 2003.
- Organizing committee member - '**National Seminar on Biotechnology in the new Millennium**' at Vivekanandha College, Elaympalayam, TN, 2002.

**d. Recruitment**

- Qualification approval committee (member), 2010 - till date
- Assistant Professor Recruitment panel (member) - 2015 and 2016, 2002-till date
- Assistant Professor Recruitment panel (member) - 2015 to till date (VOC college)
- Department of Animal Science, Manonmaniam Sundaranar University
- Department of Biotechnology, Manonmaniam Sundaranar University
- Department of Environmental Science, Manonmaniam Sundaranar University

**e. Infrastructure**

- Chairperson, SPKCEES Plant Science Growth Chamber Committee, 2009 - present.
- Chairperson, SPKCEES Insect culture facility, 2009-present.
- SPKCEES Greenhouse Committee (Member), 2012-present.
- SPKCEES Animal house Committee (Member), 2012-present.

- Strategic Planning Committee (Member) for climate change studies, 2009 -present.
- Co-ordinator, SPKCEES sophisticated instrument facility, 2018 - present.
- Campus infrastructure development committee, RUSA (member), 2017 – present

**f. Academic**

- Member-Board of studies, Environmental Sciences, Central University of Kerala, Kerala
- Chairman- Board of studies, Environmental Sciences, Manonmaniam Sundaranar University
- Chairman- Board of studies, Environmental Sciences for Colleges, Manonmaniam Sundaranar University
- Chairman- Question paper setter, Department of Zoology, University of Calicut, Malappuram, Kerala
- Member, Board of studies, Department of Zoology, Manonmaniam Sundaranar University
- Member, Board of studies, Department of Zoology, Sri Parsakthi College for Women, Courtallam (2018-2021)
- Question paper setter - M.Phil. and M.Sc., - Zoology, Environmental Science, Insecticide Toxicology, Biotechnology; Sri Sankara Arts and Science college, Periyar University, Bharathiar University, Bharathidasan University, University of Calicut.
- Doctoral thesis evaluation panel member – Department of Zoology, Bharathiar University, Bharathidasan University, Calicut University; Department of Biotechnology -Periyar University.
- Doctoral Committee (member) - Research Scholars of Periyar University, Bharathidasan University, Madurai Kamaraj University, Bharathiar University, Karpagam University.
- External examiner, Ph. D viva-voce - Scholars of Periyar University, Bharathidasan University, University of Calicut and Thiruvalluvar University.
- External Member, Graduate Research dissertation, Anna University, Chennai
- Member, Board of studies, Department of Zoology, St. Xavier's College, Palayamkottai

**g. Funding Agency Advisory**

- Czech Science Foundation, Czech Republic.
- Department of Biotechnology, Government of India.
- Department of Science and Technology, Government of India
- Council of Scientific and Industrial Research, Government of India
- Indian Council of Agricultural Research, Government of India
- Ministry of Environment and Forests, Government of India

**h. Development**

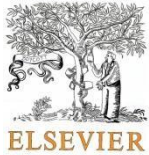
- Honorary observer, NAAC peer team visit - Nanjil Catholoc College of Arts and Science, Kanyakumari, 2017.
- Inspection Committee (member) - Constitution colleges of Manonmaniam Sundaranar University, 2017-2018
- Mentor, College development council - M.S. University Constituent college, Sathankulam, 2017
- Convener and Subject expert, Inspection Commission - Department of Zoology, Muslim Arts College, Thiruvithancode, 2017.
- Convener, Inspection Committee - Diploma in Human Care Services, Zion trust, Madurai, 2018
- Chair Person, Inspection Commission - Thiruvalluvar college, Papanasam, 2017
- Convener, Inspection Commission - ELP Centre, Diploma in Siddha Human Care, Sigaram Foundation, Kallidaikurichi, 2018.
- Convener, Inspection Commission - ELP Centre, Diploma in Human care, Subam Education Trust, Dindigul, 2019.
- Convener and Subject Expert, Diploma in Human care and Diploma in Biochemical MicrobialTechnology, Annai Indragandhi ELP centre, Thoothukudi, 2019.

**i. International Association**

- Non-funded cooperative agreement - United States Department of Agriculture, Agriculture Research Service, Fort Pierce Florida, 2018.
- Member, International Society for Pest Information (ISPI), Darmstadt, Germany.

- Member, International Commission for Plant – Bee relationship, France.
- Member, The Science Advisory Board, USA.
- Member, Indian Entomological Society
- Member, Entomological Society of Korea
- Member, Weed Science Society
- Member, Orthopterists' Society
- Member, Indian Association of Invertebrate Reproduction
- Member, Society of Biopesticide Sciences
- Member (Life-time, Asian PGPR Society for Sustainable Agriculture, USA

#### Ad-Hoc Referee for Peer-Review Journals



Acta Tropica  
Asian Pacific Journal of Tropical Medicine  
Arabian Journal of Chemistry  
Biological Control  
Bioresource Technology  
Chemical and Biological Technologies in Agriculture,  
Chemosphere  
Colloids and Surfaces B: Biointerfaces  
Crop Protection  
Ecotoxicology and Environmental Safety  
Experimental Parasitology  
Genomics  
Journal of Ethnopharmacology  
Journal of Hazardous Materials  
Microbial Pathogenesis  
Pesticide Biochemistry and Physiology  
Phytochemistry  
Phytomedicine  
Soil and Tillage Research  
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Materials  
Research Bulletin  
Toxicology  
Toxicon



Archives of Insect Biochemistry and Physiology  
Agriculture and Forest Entomology  
Entomologia Experimentalis et Applicata  
Entomological Research  
Journal of Applied Entomology  
Journal of Applied Microbiology  
Journal of Microscopy  
Letters in Applied Microbiology  
Journal of Vector Ecology  
Pest Management Science

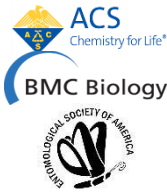


Taylor & Francis  
Taylor & Francis Group

Natural Product Research, Toxin Reviews, Biocontrol Science and Technology,  
3Biotech  
Applied Biochemistry and Biotechnology  
Biocontrol



Biologia  
Ecotoxicology  
Environmental Science and Pollution Research  
European Journal of Plant Pathology  
International Journal of Peptide Research and Therapeutics  
Integrated Pest Management Reviews  
Journal of Parasitic Diseases  
Parasitology Research  
Journal of Pest Science  
Journal of Plant Growth Regulator  
Probiotics and Antimicrobial Proteins  
Proteome Science  
Environmental Monitoring Assessment  
Waste and Biomass Valorization



BMC Biology



Brazilian Archives of Biology and Technology  
Cellular and Molecular Biology  
Indian Journal of Experimental Biology  
International Journal of Green Pharmacy  
Invertebrate Survival Journal  
Journal of Agricultural and Food Chemistry  
Journal of Economic Entomology  
Journal of Insect Science  
Journal of Plant Protection Research  
Microscopy and Microanalysis  
Nano-Bio Science  
Plos One  
Physiological Entomology  
Rice Science  
African Journal of Agricultural Research



Animals, Agriculture, Agronomy, Forests, Insects, Journal of Fungi, International  
Journal of Environmental Research and Public Health, Molecules,



International Journal of Tropical Insect Science

## PEER REVIEWED PUBLICATIONS

**List of Publications:** Total Citations: [11724](#). Total Impact Factors of published papers: [962.23](#) Average impact of published paper: [3.480](#); *H index*:[62](#)

1. Prabhakaran, V. S., Noh, M. Y., Park, K. B., Kim, T. Y., **Senthil-Nathan, S.**, and Han, Y. S. (2025) Plant immunity to insect herbivores: Mechanisms, interactions, and innovations for sustainable pest management. **Frontiers in Plant Science**, 16, 10.3389/fpls.2025.1599450.
2. Malarvizhi, P., Chanthini, K. M. P., Ramasubramanian, R., Deva-Andrews, A., Pavithra, G. S., Murugan, P., and **Senthil-Nathan, S.** (2025). Lysinibacillus fusiformis LF-E2 as a Plant Growth-Promoting Bioinoculant for Improved Rice Growth. **Biocatalysis and Agricultural Biotechnology**, 103683. 10.1016/j.bcab.2025.103683
3. Dhivya, M., Malarvizhi, P., Vasantha-Srinivasan, P., Han, Y.S., Karthi, S., Radhakrishnan, N., Amala, K., Karthick, K., **Senthil-Nathan, S.**, Ganesan, R. and Park, K.B.. (2025). Eco-friendly bioactives from *Nyctanthes arbor-tristis* (L.) for targeted control of *Aedes aegypti* and *Culex quinquefasciatus* with reduced impact on *Toxorhynchites splendens*. **Scientific Reports**, 15(1), 19322.
4. Padmanabhan, D., Manimekalai, R., **Senthil-Nathan, S.**, Suganthi, M., & Palanisamy, S. (2025). Biosynthesis, therapeutic characteristics, origin and strategies to improve the yield of vasicine in plants. **Vegetos**, 1-15.
5. Vasantha-Srinivasan, P., Han, Y. S., Karthi, S., **Senthil-Nathan, S\***, Park, K. B., Radhakrishnan, N., (2024). Phytochemical strategies for combating *Spodoptera litura* (Fab.): a review of botanicals and their metabolites. **Toxin Reviews**, 43(4), 591-633 (IF-5.266).
6. Kariyanna, B., **Senthil-Nathan, S\***, Vasantha-Srinivasan, P., Subba Reddy, B.V., Krishnaiah, A., Meenakshi, N.H., Han, Y.S., Karthi, S., Chakravarthy, A.K. and Park, K.B., 2024. Comprehensive insights into pesticide residue dynamics: unraveling impact and management. **Chemical and Biological Technologies in Agriculture**, 11(1), 182. (IF- 6.6).
7. Vasantha-Srinivasan, P., Srinivasan, K., Radhakrishnan, N., Han, Y. S., Karthi, S., **Senthil-Nathan, S\***, 2024. Larvicidal and enzyme inhibition effects of *Phoenix pusilla* derived Methyl oleate and malathion on *Aedes aegypti* strains. **Scientific Reports**, 14(1), 29327 (IF- 4.9).
8. Dhivya, M., Karthi, S., Amala, K., Vasantha-Srinivasan, P., Han, Y.S., Al Obaid, S., **Senthil-Nathan, S\*** and Park, K.B., 2024. Phytometabolites from coral jasmine flower extracts: Toxic effects on *Spodoptera litura* and enzyme inhibition in nontarget earthworm *Eisenia fetida* as an alternative approach. **Environmental Research**, 252, 118896 (IF- 8.3).
9. Deva-Andrews, A., Chanthini K.M.P., **Senthil-Nathan, S\***, 2024. Phycogenic nanoparticles efficiently catalyze pesticide degradation through a novel metabolic pathway utilizing solar light. **Chemosphere** 369, 143877 (IF- 8.3).
10. Chanthini, K.M.P., Pavithra, G.S., Murugan, P., Malarvizhi, P., Deva-Andrews, A., Ramasubramanian, R., Thulasi-Raman, N., Rajagopal, R., **Senthil-Nathan, S.**, 2024. Enhancement of root abscisic acid mediated osmotic regulation by macroalgal compounds promotes adaptability of Rice (*Oryza sativa* L.) in response to progressive metal ion mediated environmental stress. **Environmental Research**, 259, 119485 (IF- 8.3).
11. Chellappandian, M., Vasantha-Srinivasan, P., Han, Y.S., **Senthil-Nathan, S\***, Karthi, S., Kalaivani, K., Park, K.B., Veerabahu, C., Radhakrishnan, N., Raghuraman, P. and Almutairi, B.O., 2024. Essential oils from *Murraya koenigii* (L.) Spreng. and their phytochemicals as an environmental-friendly agent against pests of medical importance. **Biocatalysis and Agricultural Biotechnology**, 58, 103161 (IF-4).
12. Chanthini, K.M.P., Deva-Andrews, A., Kirupaanntha-Rajan, P., Almutairi, B.O. and **Senthil-Nathan, S\***, 2024. Systemic defense induced by fatty acid compounds from marine macroalgae, *Chaetomorpha antennina* in tomato (*Solanum lycopersicum*) plants alters the susceptibility of the polyphagous agricultural pest, *Spodoptera litura* Fab. **Chemical and Biological Technologies in Agriculture**, 11(1), 65 (IF-6.6).

13. Karthi, S., Vasantha-Srinivasan, P., **Senthil-Nathan, S\***, Han, Y.S., Shivakumar, M.S., Murali-Baskaran, R.K., Kalaivani, K., Radhakrishnan, N., Park, K.B. and Malafaia, G., 2024. Entomopathogenic fungi promising biocontrol agents for managing lepidopteran pests: Review of current knowledge. **Biocatalysis and Agricultural Biotechnology**, 103146 (IF-4).
14. Chanthini, K.M.P., Rajan, P.K., Abdel-Megeed, A. and **Senthil-Nathan, S\***, 2024. Mechanistic perceptions of the elicitorial resources from the marine kingdom-A paradigm shift in plant defense against insect pests. **Biocatalysis and Agricultural Biotechnology**, 103141 (IF-4).
15. Janaki, M., Kirupanantha-Rajan, P., **Senthil-Nathan, S\***, Stanley-Raja, V., Al Farraj, D.A., Aljeidi, R.A. and Arokiyaraj, S., 2024. Beneficial role of Burkholderia cepacia in heavy metal bioremediation in metal-polluted soils and enhance the tomato plant growth. **Biocatalysis and Agricultural Biotechnology**, 57, 103032(IF-4).
16. Chanthini, K.M.P., **Senthil-Nathan, S\***, 2024. Marine weeds against fungal phytopathogens- Current agronomical implications and intriguing perspectives for a sustainable future. **Physiological and Molecular Plant Pathology**, 2024 2, 02240 (IF-2.7).
17. Unni, P.S., Kirupaanntha-Rajan, P., Vasantha-Srinivasan, P., Srinivasan, S., Han, Y.S., Karthi, S., Radhakrishnan, N., Park, K.B., Rajagopal, R. and **Senthil-Nathan, S\***, 2024. Chemical composition and toxicity of commercial Mentha spicata and Eucalyptus citriodora essential oils on Culex quinquefasciatus and non-target insects. **Environmental Science and Pollution Research**, 31(14), 21610-21631 (IF-5.5).
18. Janaki, M., Sivadasan Unni, P.K., Stanley-Raja, V., **Senthil-Nathan, S\***, Almutairi, B.O. and Abdel-Megeed, A., 2024. Biocontrol Effect of Bacillus subtilis against Cnaphalocrocis medinalis (Guenée)(Lepidoptera: Pyralidae): A Sustainable Approach to Rice Pest Management. **Agronomy**, 14(2), 310 (IF-3.4).
19. de Souza, S.S., Gomes, A.R., Guimarães, A.T.B., de Matos, L.P., dos Santos Mendonça, J., da Luz, T.M., da Silva Matos, S.G., de Lima Rodrigues, A.S., **Senthil-Nathan, S.**, Rakib, M.R.J. and Kamaraj, C., 2024. Exposure to microcrystallized cellulose affects the health of tadpoles and sheds light on the threat these materials pose to amphibians. **Environmental Pollution**, 343, 123236 (IF- 8.9).
20. Vasantha-Srinivasan, P., Unni, P.K.S., Karthi, S., Ganesan, R., Senthil-Nathan, S., Chellappandian, M., Radhakrishnan, N., Rajagopal, R. and Patcharin, K., 2024. Bio-efficacy of chloroform crude extracts of chick weed Ageratum conyzoides (Linn.) against the tobacco cutworm Spodoptera litura (Linn.) and their non-toxicity against the beneficial earthworm. **J. King Saud University-Science**, 36(1), 102930 (IF- 3.8).
21. Chanthini, K.M.P., Pavithra, G.S., Murugan, P., Malarvizhi, P., Deva-Andrews, A., Ramasubramanian, R., Thulasi-Raman, N., Malafaia, G., **Senthil-Nathan, S\***, Prockow, J., 2024. Management of excessive soil H<sup>+</sup> ion induced toxicities by application of organic seaweed amendment enhances photosynthesis and resource use efficiencies in rice (*Oryza sativa*). **Environmental Research**, 247, 118179 (IF- 8.3).
22. Kalaivani, K., **Senthil-Nathan, S\***, Stanley-Raja, V., and Vasantha-Srinivasan, P. 2023. Physiological and biochemical alterations in Vigna radiata L. triggered by sesame derived elicitors as defense mechanism against *Rhizoctonia* and *Macrophomina* infestation. **Scientific Reports**, 13(1), 13884 (IF- 4.9).
23. Patil, N., Raghu, S., Mohanty, L., Jeevan, B., Basana-Gowda, G., Adak, T., **Senthil-Nathan, S.**, Govindharaj, G. P. P. 2023. Rhizosphere bacteria isolated from medicinal plants improve rice growth and induce systemic resistance in host against pathogenic fungus. **Journal of Plant Growth Regulation**, 1-17 (IF- 4.8).
24. Radhakrishnan, N., Karthi, S., Raghuraman, P., Ganesan, R., Srinivasan, K., Edwin, E.S., Ganesh-Kumar, S., Mohd Esa, N., **Senthil-Nathan, S\***, Vasantha-Srinivasan, P. and Krutmuangh, P., 2023. Chemical screening and mosquitocidal activity of essential oil derived from *Mikania scandens* (L.) Willd. against *Anopheles gambiae* Giles and their non-toxicity on mosquito predators. **All Life**, 16(1), p.2169959. (IF- 3.253).
25. Hasan, N.R.H., Yogarajalakshmi, P., Vasantha-Srinivasan, P., Shehata, W.F., Radhakrishnan, N., Jayakodi, S., Karthi, S., **Senthil-Nathan\***, S., Mansour, H.E.H., Ghazzawy, H.S. and Bushara, M.A.,

2023. From the Sea to Mosquito Control: The Potential of *Halymenia dilatata* Marine Alga as an Eco-Friendly Mosquitocidal Agent. **Sustainability**, 15(15), pp.1-16 (IF. 4.39).
26. de Souza, S.S., Gomes, A.R., Guimarães, A.T.B., de Lima Rodrigues, A.S., de Matos, L.P., dos Santos Mendonça, J., da Luz, T.M., da Silva Matos, S.G., Rahman, M.S., Ragavendran, C. and **Senthil-Nathan, S.**, 2023. Cellulose microcrystalline: A promising ecofriendly approach to control *Culex quinquefasciatus* larvae. **Science of The Total Environment**, p.165952 (IF. 10.754).
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  152. **Senthil-Nathan, S\***, Choi, M.Y., Paik, C.H., Seo, H.Y., Kim, J.D., 2007. The toxicity effect of neem extract and azadirachtin on brown planthopper, *Nilaparvata lugens* (BPH) (Homoptera: Delphacidae). **Chemosphere** **67** (1), 80-88(IF-7.086)
  153. **Senthil-Nathan, S\***, Choi, M.Y., Paik, C.H., Seo, H.Y., 2007. Food consumption, utilization and detoxification enzyme activity of the rice leaffolder larvae after treatment with *Dysoxylum* limonoids. **Pesticide Biochemistry and Physiology** **88** (3), 260-267. Top 25 articles(IF-3.963)
  154. **Senthil-Nathan, S\***. 2006. Effects of *Melia azedarach* Linn on nutrition physiology and enzyme activities of the rice leaffolder. **Pesticide Biochemistry and Physiology** Top 25 articles(IF-3.963)
  155. **Senthil-Nathan, S\***, Saehoon, K., 2006. Effects of *Melia azedarach* L. extract on the teak defoliator *Hyblaea puera* Cramer (Lepidoptera: Hyblaeidae) **Crop Protection** **25** (3), 287-291(IF-2.571)
  156. **Senthil-Nathan, S\***, Kalaivani, K., Chung, K. Murugan, K., 2006. The toxicity and behavioural effects of neem limonoids on *Cnaphalocrocis medinalis* (Guenée) the rice leaffolder. **Chemosphere** **62** (8), 1381-1387(IF-7.086)
  157. **Senthil-Nathan, S\***, Kalaivani, K., Chung, P.G., Murugan, K., 2006. Effect of neem limonoids on lactate dehydrogenase (LDH) of the rice leaffolder, *Cnaphalocrocis medinalis* (Guenée) (Insecta: Lepidoptera: Pyralidae) **Chemosphere** **62** (8), 1388-1393. (IF-7.086)
  158. **Senthil-Nathan, S\***, Savitha, G., George, D.K., Narmadha, A., Suganya, L., Chung, P.G., 2006. Efficacy of *Melia azedarach* L. extract on the malarial vector *Anopheles stephensi* Liston. **Bioresource Technology** **97** (11) 1214-1221(IF-9.642)
  159. **Senthil-Nathan, S\***, Chung, P.G., Murugan, K., 2006. Combined effect of biopesticides on the digestive enzymatic profiles of *Cnaphalocrocis medinalis* (Guenée) (Rice leaffolder) (Insecta: Lepidoptera: Pyralidae). **Ecotoxicology and Environmental Safety** **64** (3), 382-389 (IF-6.291)
  160. **Senthil-Nathan, S\***, Kalaivani, K., Mankin, R.W., Murugan, K., 2006. Effects of millet, wheat, rice, and sorghum diets on development of *Corcyra cephalonica* Stainton (Lepidoptera: Galleriidae) and its suitability as a host for *Trichogramma chilonis* Ishii (Hymenoptera: Trichogrammatidae)

**Environmental Entomology** 35 (3), 784-788 (IF-2.465)

161. Senthil-Nathan, S\*, Kalaivani, S., Sehoon, K., 2006. Effects of *Dysoxylum malabaricum* Bedd. (Meliaceae) extract on the malarial vector *Anopheles stephensi* Liston (Diptera: Culicidae) **Bioresource Technology** 97 (16), 2077-2083 (IF-9.642).
162. Senthil-Nathan, S\*, Kalaivani, K., Murugan, K., 2006. Behavioural responses and changes in biology of rice leaffolder following treatment with a combination of bacterial toxin and botanical pesticides. **Chemosphere** 64 (10), 1650-1658 (IF-7.086)
163. Senthil-Nathan, S\*, Kalaivani, K., Chung, P.G., Murugan, K., 2006. Effect of biopesticides on the lactate dehydrogenase (LDH) of the rice leaffolder, *Cnaphalocrocis medinalis* (Guenée) (Insecta: Lepidoptera: Pyralidae). **Ecotoxicology and Environmental Safety** 65 (1), 102-107 (IF-6.291)
164. Senthil-Nathan, S\*, Kalaivani, K., 2006. Combined effects of azadirachtin and nucleopolyhedrovirus (SpltNPV) on *Spodoptera litura* Fabricius (Lepidoptera: Noctuidae) larvae. **Biological Control** 36 (1), 94-104 (IF-3.687)
165. Senthil-Nathan, S\*, Kalaivani, K., 2005. Efficacy of nucleopolyhedrovirus (NPV) and azadirachtin on *Spodoptera litura* Fabricius (Lepidoptera: Noctuidae). **Biological Control** 34 (1), 93-98 [Top 25 articles](#) (IF-3.687)
166. Senthil-Nathan, S\*, Chung, P.G., Murugan, K., 2005. Effect of biopesticides applied separately or together on nutritional indices of the rice leaffolder *Cnaphalocrocis medinalis* (Guenée) (Lepidoptera: Pyralidae). **Phytoparasitica** 33 (2), 187-195. (IF-1.439)
167. Senthil-Nathan, S\*, Kalaivani, K., Murugan, K., Chung, G. 2005. The toxicity and physiological effect of neem limonoids on *Cnaphalocrocis medinalis* (Guenée) the rice leaffolder. **Pesticide Biochemistry and Physiology** 81 (2), 113-122 [Top 25 articles](#) (IF-3.963)
168. Senthil-Nathan, S\*, Kalaivani, K., Chung, P.G., 2005. The effects of Azadirachtin and Nucleopolyhedrovirus (NPV) on midgut enzymatic profile of *Spodoptera litura* Fab. (Lepidoptera: Noctuidae). **Pesticide Biochemistry and Physiology** 83 (1), 46-57 [Top 25 articles](#) (IF-3.963)
169. Senthil-Nathan, S\*, Kalaivani, K., Murugan, K., Chung, P.G., 2005. Efficacy of neem limonoids on *Cnaphalocrocis medinalis* (Guenée) (Lepidoptera: Pyralidae) the rice leaffolder. **Crop Protection** 24 (8), 760-763 [Top 25 articles](#) (IF-2.571)
170. Senthil-Nathan, S\*, Kalaivani, K., Murugan, K., Chung, P.G., 2005. Effects of neem limonoids on malarial vector *Anopheles stephensi* Liston (Diptera: Culicidae). **Acta Tropica** 96 (1), 47-55 (IF-3.112)
171. Senthil-Nathan, S\*, Chung, P.G., Murugan, K., 2004. Effect of botanicals and bacterial toxin on the gut enzyme of *Cnaphalocrocis medinalis*. **Phytoparasitica** 32 (5), 433-443 (IF-1.439)
172. Murugan, K., Senthil Kumar, N., Jeyabalan, D., Senthil-Nathan, S\*, Swamiappan, M., 2001. Influence of plant quality on interactions between the larval parasitoid *Compoletis chloride* Uchida (Hymenoptera: Ichneumonidae) and its host *Helicoverpa armigera* Hubner (Lepidoptera: Noctuidae) **Insect Science and Its Application** 20, 23-31 (IF-0.8)
173. Murugan, K., Jeyabalan, D., Senthil Kumar, N., Sivaramkrishnan, S., Senthil-Nathan, S\*, 2000. Influence of host plant on growth and reproduction of *Aphis nerii* (Homoptera: Aphididae) and feeding and prey utilization of its predator *Menochilus sexmaculatus* (Coleoptera: Coccinellidae) **Indian Journal of Experimental Biology** 38, 598-603 (IF-0.818)
174. Murugan, K., Sivaramkrishnan, S., Senthil Kumar, N., Jeyabalan, D., Senthil-Nathan, S\*, 1999. Potentiating effect of neem seed kernel extract and neem oil on nuclear Polyhedrosis virus (NPV) on *Spodoptera litura* Fab. (Lepidoptera: Noctuidae). **Insect Science and Its Application** 19, 229-235 (IF-0.8)
175. Murugan, K., Jeyabalan, D., Senthil Kumar, N., Babu, R., Sivaramkrishnan, S., Senthil-Nathan, S\*, 1999. Antifeedant and growth inhibitory potency of neem limonoids against *Helicoverpa armigera* Hubner (Lepidoptera: Noctuidae). **Insect Science and Its Application** 1, 157-162 (IF-0.8)
176. Murugan, K., Senthil Kumar, N., Jeyabalan, D., Senthil-Nathan, S\*, 1999. Bioactivities of neem products against Teak defoliator, *Hyblaea parea* Cramer (Lepidoptera: Hybaciidae) **Journal of Non-Timber Forest products** 6, 78-82. (IF-0.6)
177. Murugan, K., Jeyabalan, D., Senthil Kumar, N., Senthil-Nathan, S\*, Sivaprakasam, N., 1998. Growth promoting effects of plant products on silkworm - A biotechnological approach. **Journal of Scientific and Industrial Research** 57, 740-745 (IF-1.056)

178. Murugan, K., Sivaramakrishnan, S., Senthil Kumar, N., Jeyabalan, D., **Senthil-Nathan, S\***, 1998. Synergistic interaction of botanicals and biocides (Nuclear Polyhedrosis virus) on pest control. **Journal of Scientific and Industrial Research** 57, 732-739 (IF-1.056)
179. Murugan, K., Cithra, P.S., Senthil Kumar, N., **Senthil-Nathan, S\***, Jeyabalan, D., Sivaramakrishnan, S., 1997. Influence of age correlated host Plant biochemical diversity on feeding preference and survival of monarch butterfly *Danus chrysippus* (Lepidoptera: Danaeidae) **Flora and Fauna** 3, 99-102.
180. **Senthil-Nathan, S\***, Murugan, K., Senthil Kumar, N., Jeyabalan, D., Muthuraman, S., 1999. Pollination Ecology of Honeybee *Apis florea* - A Conservation approach, **Zoo's Print** 14, 3-4. (IF-0.4)
181. Murugan, K., Senthil Kumar, V., Jeyabalan, D, Babu R, **Senthil-Nathan, S\***, Sivaramakrishnan S., 1998. Interactive effect of neem products on the control of pulse beetle, *Callosbruchus maculatus* Fab. **Neem Newsletter** 15, 41-44.
182. Murugan, K., Senthil Kumar, N., Babu, R., **Senthil-Nathan, S\***, Sivaramakrishnan, S., 1998. Neem (*Azadirachta indica* A. Juss) latex as a potential deterrent agent for *Musca domestica* L. (Diptera: Muscidae). **Neem Newsletter** 15, 3-7.
183. **Senthil-Nathan, S\***, Murugan, K., Senthil Kumar, S., 1997. Status of *Colis hylae* (Lepidoptera: Pieridae) in Maruthamalai Hills, Western Ghats, Southern India. **Insect Environment** 1, 16.
184. **Senthil-Nathan, S\***, Murugan, K., Senthil Kumar, S., Jeyabalan, D., 1996. Succession of insect fauna during decomposition of litter in a Teak Forest. **Zoo's Print** 11, 14. (IF-0.4)
185. Senthil Kumar, S., Murugan, K., **Senthil-Nathan, S\***, Jeyabalan, D., 1996. Feeding and reproductive behavior of flower beetle, *Mylabris pustulata* Thunb. (Coleoptera: Meloidae) **Zoo's Print** 11 (7), 14-15. (IF-0.4)
186. Murugan, K., Senthil Kumar, N., **Senthil-Nathan, S\***, 1995. On a collection of Entomofauna from the Adjoining areas of Western Ghats, Erode, Tamil Nadu. **Insect Environment** 2, 12-13.
187. Murugan, K., Senthil Kumar, N., Babu, R., **Senthil-Nathan, S\***, 1995. Antifeedant and ovipositional deterrent effects of exudates of *Azadirachta indica* A. Juss, **Neem Newsletter** 12, 43-44.
- \*Corresponding Author

#### Book(s) chapter published: (3)

1. Chanthini, K.M.P. and **Senthil-Nathan, S.**, 2024. Ecotoxicological Assessment of Seaweed-Based Crop Biostimulant on Earthworm *Eudrilus eugeniae* Kinb. In *Teratogenicity Testing: Methods and Protocols* (pp. 331-338). New York, NY: Springer US.
2. Chanthini, K.M.P., Sivanesh, H., Ramasubramanian, R., Stanley-Raja, V., Karthi, S., Shyam-Sundar, N. and **Senthil-Nathan, S.**, 2024. Evaluation of the Ecotoxicology of Seaweed-Based Biopesticide Used in Combat of the Polyphagous Pest Using *Eudrilus eugeniae* Kinb. In *Teratogenicity Testing: Methods and Protocols* (pp. 339-350). New York, NY: Springer US.
3. **Senthil-Nathan, S.** Pollutant release and transfer registers. 2023, *Encyclopedia of Toxicology* 4th Edition <https://doi.org/10.1016/B978-0-12-824315-2.01146-5>, pp.1-13.
4. J. Sridhar, K. Kiran Kumar, R. K. Murali-Baskaran, **Senthil-Nathan, S.** Suraj Sharma, M. Nagesh, Pankaj Kaushal, Jagdish Kumar. (2020) Impact of Climate Change on Communities, Response and Migration of Insects, Nematodes, Vectors and Natural Enemies in Diverse Ecosystems, **Global Climate Change: Resilient and Smart Agriculture**, ISBN : 978-981-32-9855-2
5. **Senthil-Nathan S.** 2015. A review of biopesticides and their mode of action against insect pest's .In: *Environmental Sustainability- Role of Green Technologies*, **Springer-Verlag**, pp.49- 63.
6. **Senthil-Nathan, S.** 2011. Biology, Behavioral and Population Dynamics of the Rice Leafhopper Complex In: Ananthakrishnan, T. N., Sivaramakrishnan, K.G. (Eds.) *Dynamics of Insect Behavior*, **Scientific Publishers**, Jodhpur, pp.156-167.
7. Murugan, K., Jeyabalan, D., Senthil Kumar, N., **Senthil-Nathan, S.**, Sivaramakrishnan, S., 1999. Synergistic effect botanicals and microbial pesticides on *Spodoptera litura* Fab In: *Biopesticide in insect pest management*, (Ignachimuthu and Aloksen [Eds] **Phoinex Publisher**, New Delhi, pp. 232-243.

## RESEARCH SUPPORT AND FUNDING

### Research Grants Secured (223.59 lakhs as Principal Investigator)

1. Efficacy testing of insecticidal products Orange oil and formulation o3o-S-1-D (PREV-AM) against *Spodoptera frugiperda* (J. E. Smith) and *Sitophilus oryzae* L., PI, ORO Oro Agri Europe S.A. Estrada Municipal 533, Estrada do Lau, 2950-401 Palmela, Portugal, \$ 12710/
2. To evaluate the cyto-toxicological effects of bio active derivatives in the midgut and nervous tissues of the tobacco cutworm *Spodoptera litura* using Fluorescent microscopy techniques. PI, DBT foldscope, Govt. of India, Rs. 8 lakhs.
3. Induced defenses in rice (*Oryza sativa*) by exogenous chemical elicitor against specialized pest and disease of the rice.PI, DST, Govt. of India, Rs. 74.55 lakhs.
4. Molecular characterization of the entomopathogenic bacteria and detection of toxic gene in strain using RAPD-PCR technique: Development of microbial pesticides against the polyphagous insect *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae). PI, DST, Govt. of India, Rs. 25 lakhs.
5. Development of environmental-friendly biocontrol technology for the rice leaffolder by the induced defense of biotic and abiotic means in vivo with reference to high production of jasmonic acid. PI, DBT, Rs. 25.90 lakhs.
6. Effect of enriched CO<sub>2</sub> and O<sub>3</sub> on insect-plant interactions. A field experiment and green house analysis of CO<sub>2</sub> and O<sub>3</sub> mediated changes on plant chemistry in specialist herbivore performance. PI, CSIR, Rs.27.09 lakhs
7. Molecular characterization through RAPD-PCR technique of wide range of entomopathogenic fungi against the rice leaffolder complex with rice defense enzyme assay: Implication for integrated management of leaffolder population through novel biotechnology technique. PI, DBT, Rs. 23.67 lakhs.
8. Effect of elevated CO<sub>2</sub> on biology and nutritional ecology of the rice leaffolder *Cnaphalocrocis medinalis* Guenée (Lepidoptera: Pyralidae) and its natural enemies. PI, UGC-Major Research Project Scheme, University Grant Scheme, Rs. 10.76 lakhs.

## CURRENT MEMBERS OF THE BIOPESTICIDE AND ENVIRONMENTAL TOXICOLOGY (BET) LAB

### RESEARCH GUIDANCE:

#### Post-Doctoral Scientists

Dr. G. Ramkumar, Dr. Kothari UGC-Post-Doctoral Fellow (2021-22)

Dr. S. Karthi, DST-SERB & Dr. Kothari UGC-Post-Doctoral Fellow (2018-2021)

#### Ph.D. Research Scholars (Current)

M. Manjula Devi (2026-present)

J. Amala Inian J, (2026-Present)

P. Murugan P (2024-Present)

G. Pavithra G (2024-Present)

S. Ramasubramanian (2023 – Present)

## Completed Ph.D. Research Scholars

**Dr. P. Malarvizhi (2026)**

**Dr. A. Deva Andrews (2022 - Present)** Currently working as Assistant Professor (Ad-hoc), Sri Paramakalyani Center for Excellence in Environmental Sciences, Manonmaniam Sundaranar University, Alwarkurichi.

**Dr. P. Kirupananda Rajan (2016-2025)**, Chief Engineer, Tamil-Nadu Pollution Control Board, Tirunelveli

**Dr. Pavana K Nair** : Currently working as an Executive officer, Ross Life science Limited , Pune

**Dr. M. Janaki**, Biocontrol efficiency of entomopathogenic microbes against two lepidopteran pests: a sustainable approach agricultural pest management. Currently working as Assistant Professor (Ad-hoc), Department of Zoology, Sri Parasakthi College for Women, Courtallam.

**Dr. R. Ramasubramanian**, Bioprospecting and molecular characterization of a new *Bacillus* strain with a promising toxicity against the rice pest, *Cnaphalocrocis medinalis* (Guenée) (Lepidoptera: Crambidae). Currently working as **Assistant Professor** (Ad-hoc), Department of Microbiology, Sri Paramakalyani College, Alwarkurichi.

**Dr. H. Sivanesh**, Evaluation of botanical pesticide from *Suaeda maritima* (L) dumort against the pest and disease of the rice. Currently working as **Assistant Professor** (Ad-hoc), Department of Zoology, Kamaraj college of Arts and Science, Tuticorin.

**Dr. V. Stanly Raja DST-SERB, SRF** Evaluation of induced defense response in paddy using fungal elicitor against pest and disease of rice (*Oryza sativa*. L). Currently working as **Assistant Professor** (Ad-hoc), Sri Paramakalyani Center for Excellence in Environmental Sciences, Manonmaniam Sundaranar University, Alwarkurichi.

**Dr. S. Karthi, (N-PDF-DST and Dr. Kothari UGC-Post-Doctoral Fellow)** currently working as **Post-Doctoral Scientist**, University of Kentucky, Lexington, USA. (December 2021)

**Dr. N. Shyam Sundar**, Effect of certain medicinally important plant extract and secondary metabolites against the generalist herbivore *Spodoptera litura*. Currently working as **Assistant Professor** (Ad-hoc), Department of Zoology, Sri Paramakalyani College of Arts and Science, Alwarkurichi.

**Dr. K. Chanthini**, Induction of natural defense in response to elicitor compounds from *Chaetomorpha antennina* (Bory) kützing against the disease and pest of tomato, *Lycopersicon esculentum* mil. Bharath Ratna Dr. MGR centenary Ph.D. fellowship (2017-19). Currently working as **Assistant Professor** (Ad-hoc), Sri Paramakalyani Center for Excellence in Environmental Sciences, Manonmaniam Sundaranar University, Alwarkurichi.

**Dr. M. Chella Pandian (SERB-National Post-Doc)** currently working as **Assistant Professor**, Department of Botany, VOC College, Tuticorin.

**Dr. P. Indira-Gandhi, (DBT-RGYI-National Post-Doc)** currently working as **Assistant Professor**, Tamil Nadu Agricultural University, Coimbatore (2009-2010). Molecular Entomology.

**Dr. S. Nisha**, Integrated biological control of bacterial blight disease through induced systemic resistance by the mixture of PGPR strains and *Vitex negundo* L. extract. Junior Research Fellow (DBT) (2009-12). Currently working as **Assistant Professor and Head** at Sri Ram Nallamani Yadava College, Tenkasi.

[Dr. S. Sathish-Narayanan](#), Effect of entomopathogenic fungi *Metarhizium anisopliae* against teak pest in Western Ghats, Southern India: Implication for integrated management of teak pest. Junior Research Fellow (UGC). Currently working as a **Research Scientist** at KMTR, Tamil Nadu Forest Department.

[Dr. S.A. Kirubakaran](#), Molecular characterization through RAPD –PCR techniques of wide range of entomopathogenic fungi against the rice leaf folder complex with rice defense enzyme assay: Implication for integrated management of leaf folder population through novel biotechnology technique. SRF (DBT-RGYI). Currently working as **Quality Control Manager** at Festa soft drinks, D.R. Congo.

[Dr. R. Chandrasekaran](#), Biological activity of chitinase identified from *Bacillus subtilis* against *Spodoptera litura* Fab. Through biochemical and molecular aspects. Senior Research Fellow (CSIR). Currently working as **National Post-Doctoral Scientist** (N-PDF-DST), Mizoram Central university,

[Dr. K. Revathi](#), Identification and characterization of secondary metabolites from *Bacillus thuringiensis* against Polyphagous insect, *Helicoverpa armigera* and their acute toxicity on earthworm. Currently working as **Assistant Professor** Sri Sakthi Kilash College for women, Salem.

[Dr. J. Lija Escaline](#), Molecular characterization of entomopathogenic fungi against different mosquito species through novel biotechnology techniques. Currently working as **National Post-Doctoral Scientist** (N-PDF-DST), Bharathidhasan University

[Dr. A. Thanigaivel](#), DST-National Post-Doctoral Scientist Bioactivity and molecular characterization of field isolates of *Bacillus* spp., currently working as **National Post-Doctoral Scientist** (N-PDF-DST).

[Dr. A.Ponsankar](#), DST-National Post-Doctoral Scientist. Genetic characterization of the entomopathogenic fungi from rice cultivated region in Tirunelveli for effective management of *Spodoptera litura*. Currently working as **Assistant Professor**, Department of Biotechnology, Sri Parmakalyani Collge, Alwarkurichi.

[Dr. S.Selin Rani](#), DST-Inspire fellow. Effects of plant extracts and its active compound against the polyphagous insects. Currently working as **Assistant Professor**, Department of Biochemistry, Leshmipuram College of Arts and College, Neyyur, KK District.

[Dr. V.Pradeepa](#), Research Fellow. Isolation and Characterization of antimalarial compounds from *Aristolochia indica* Linn and *Plumbago zeylanica* Linn with prospective activity against the malarial vector *Anopheles stephensi* Liston (Diptera: Culicidae).

[Dr. P. Vasantha-Srinivasan](#), Research Fellow. Effect of medicinal plant and entomopathogenic fungi on the immune response of Lepidoptera larvae (*Spodoptera litura*). Currently working as Research Professor, Sunchon National University, Republic of Korea.

[Dr. E. Edwin](#), Research Fellow. Effects of plant extracts and its active compound against stored grain pest. Currently working as **Product Development Manager**, Abu Dhabi, UAE. University.

#### **M. Phil.**

1. **Mrs. P.S. Sangeetha**, Identification of certain medicinally important plant in relation to sericulture
2. **Mrs. S. Sangeetha**, Data mining of Protease-Introduction to Bioinformatics.

#### **Visiting Scholar-Scientist**

**Mr. Annamalai Mahendiran** – Scientist, Crop Protection Division, NRRI (ICAR), Cuttack, Odisha. [Under Professional Attachment Training (2016-17)].

**Graduate students guided****M.Sc.,**

S. Athi Renganayagi  
 V.Vasanth Sri  
 A.Yesharath Nisha  
 D.Mahaboop Uduman  
 A.Natarajan  
 S.Rajaram  
 S.Nisha  
 S.A.Kirubakaran  
 S.Sathish Narayanan  
 A.Amuthavalli  
 J. Lija Escaline  
 M.Revathy  
 S.Sathya Shree  
 A.Ponsankar  
 R.Seethapriya  
 S.Selin-Rani  
 T.Uma Maheswari  
 S.P.Mano Bala  
 R. Nirmala Devi  
 P.S.Sangeetha  
 B.Nirupama  
 D.Geetha  
 N. Chithanya  
 A. Smitha  
 S. Sivaranjane  
 S. Sappani Muthu  
 M. Tamilselvi  
 T. Manthiraselvi  
 M. Subalakshmi

S.Sangeetha  
 V.Sherina Thangam  
 M. Ann Preethi  
 M. Jubby Ann  
 A. Jesly Mary  
 N. Nagamani  
 K.S. Gangai-Abirami  
 Nandha Kumar  
 A. Asahel  
 A. Deva Andrews  
 M. Duraisankar  
 S. James raj  
 K. Jeganath  
 M. Kalaiselvi  
 R. Kalimuthu  
 P. Malarvizhi  
 M. Muruges  
 A. Selvaraj  
 K. Thanga Eswari  
 S. Anitharaj  
 A. Gandhimathi  
 P. Pandiselvi  
 S. Vainath Praveen  
 G.Pavithra  
 V.S. Aja  
 R.S. Deepthi  
 P. Karthik  
 R. Manju

**B.Sc.,**

G. Savitha  
 Dency K. George  
 L. Suganya  
 A. Narmadha  
 A. Deva Andrews  
 M. Durai Sankar  
 A. Asahel  
 S. James Raj  
 M. Mukesh  
 S. Anitharaj  
 A. Kasthuri Ramanan  
 R. Mahesh Pandian  
 P. Pandiselvi  
 S. Vainath Praveen  
 G. Pavithra  
 P. Murugan  
 V.S. Aja  
 R.S. Deepthi  
 P. Karthik  
 R. Manju  
 K. Pavithradvi  
 D. Ponraj  
 M. Tamilselvi  
 T. Manthiraselvi  
 M. Subalakshmi

R. Sowndarya Srivarshini  
 M.Deiva Sakthi Packiam  
 M.Manjula Devi  
 R.Nandhini  
 T.Sakthisamy  
 A.Suganthi  
 P.Vijayalakshmi

**Invited Speaker, resource person, chairperson, key-note speaker**

1. 2024, September 25. Invite talk on ‘ **Impact of plant vector borne diseases on global agriculture and food security**’ in the ‘National level seminar on Human, Animal, Plants-Vector borne diseases and their Control’ at Bharathidasan University, Thiruchy,TN
2. 2024, September 23, Invited talk on ‘**Biodiversity conservation of western Ghats with special reference the River Thamirabarani**’ on the occasion of ‘ World River Day Celebration’ at S.T.Hindu College, Thoothukudi, TN
3. 2024, August 16, Invited talk on “**Eco-friendly Pest Control Using Microbes And Botanicals**” under star college scheme sponsored by the Department of Biotechnology, Minsitry of Sciece at Department of Zoology St. Mary’s College, Thoothukudi, TN
4. 2023, February 24, Invited talk on “ **Aqueous Sea Weed Extract Alleviates Salinity – Induced Toxicities in Rice Plants (Oryza Sativa L.)**” in National Seminar on Recent Trends in Biology at Sri Paramakalyani College, Alwarkurichi, Tenkasi, Tamil Nadu.
5. 2023, February 24, Invited talk on “**Biocontrol of Rhizoctonia Solani (Ceratobasidiaceae) by Azospirillum Brasilense, and its Efficiency in Controlling Foot Rot Disease in Tomato (Solanum Lycopersicuml)**” in National Seminar on Recent Trends in Biology at Sri Paramakalyani College, Alwarkurichi, Tenkasi, Tamil Nadu.
6. 2023, February 24, Invited talk on “**Rice Endophytic Bacterial Strains Promote Colonization Of Rhizobacteria And Increases Plant Growth**” in National Seminar on Recent Trends in Biology at Sri Paramakalyani College, Alwarkurichi, Tenkasi, Tamil Nadu.

7. 2023, February 24, Invited talk on **“Removal of Pesticide in Soil with Seaweed Extract”** in National Seminar on Recent Trends in Biology at Sri Paramakalyani College, Alwarkurichi, Tenkasi, Tamil Nadu.
8. 2023, February 24, Invited talk on **“Macroalgal Biostimulant Improves Germination of Tomato Seeds Exposed to Salt Stress”** in National Seminar on Recent Trends in Biology at Sri Paramakalyani College, Alwarkurichi, Tenkasi, Tamil Nadu.
9. 2022, March 21 and 22, Invited talk on **“Applied Natural Product for sustainable development”** in International Conference at Sri Parasakthi college for women, courtallam, Tenkasi, Tamil Nadu.
10. 2022, March 3, **Keynote address on Recent Advances in the Management of Agricultural Insect Pest** in National symposium on recent trends advances in biology at Sri Paramakalyani college, Alwarkurichi, Tamil Nadu.
11. 2022, February 14, 2 to 5 PM Resource person for UGC-Sponsored **“Online Refresher Course in Environment and Sustainable Development”**, conducted by the UGC-Human Resource Development Centre, Bharathidasan University, Tiruchirappalli for University and College Teachers.
12. 2022, January 5, 11 -12 PM, Resource person for **“Pesticides and Insect Toxicology”** in a webinar conducted on 'innovations and advancements in food protection and grain storage' organized by CSIR-Central Food Technological Research Institute, Mysuru.
13. 2022, January 5, 2 to 5 PM Resource person for Refresher Course in Life Sciences for the University and College Teachers organized by the Human Resource Development Centre of Bharathiar University, Coimbatore
14. 2021, December 2, Invited talk on **“Environmental Pollution and Solution”** at Thiruvalluvar College Papanasam, Vickramasingapuram, Tirunelveli, Tamil Nadu.
15. 2021, October 4, Resource person in the Webinar on **'Scope of biopesticide in Indian perspective'** organized by ICAR-NIBSM, Raipur.
16. 2021, September 25, Inaugural Address **“Road Map to Clear CSIR – NET Examination”**, PG Department of Microbiology, Sri Paramakalyani College, Alwarkurichi.
17. 2021, July 19, Resource person for **'Ecofriendly products in the management of mosquitoes'** in national webinar on 'Taxonomy and recent trends in management of mosquitoes' organized by the Department of zoology and research center in association with IQAC-NMCC.
18. 2020, October 14, Resource person in the International Webinar on **“Treatment of Covid-19 – an Ethnobotanical Perspective”** organized by PG and Research Department of Zoology, Vivekananda College, Tiruvedakam West, Tamil Nadu, India.
19. 2020, July 23, Resource Person in the webinar on **“Effect of global climatic change on biodiversity”** held on. Organized by P.G. and Research Department of Zoology, Sri Paraskathi College for women, Courtallam.
20. 2020, June 12, Resource person for National level Webinar on **“Natural Pesticide for the Betterment of Eco-system - Present Status and Future Prospects”** organized by the PG and Research Department of Botany, V.O.Chidambaram College, Thoothukudi.
21. 2020, May 18, Resource person in the Webinar on **“Vaccine and Drug Development against COVID-19”** organized by Department of Biotechnology, School of Life Sciences, Mizoram University, Aizawl.
22. 2020, February 20, Resource person for **'National Seminar on Advances in Spectroscopy'**, delivered a key note address on 'AAS-sample preparation; Environmental perspective', Sri Parasakthi college for women, Courtallam.
23. 2020, January 29, Key note speaker in **“Ecotoxicology of environmentally soft pesticides – Public health perspective”**, நிறல் யம் 2020 (Niralyam), சித்தமருத்துவ வலறிவுகாலகக, Siddha medical college, Tirunelveli.
24. 2019, July 17, Invited judge for poster presentation in **“International seminar on climate changes”**, Department of Microbiology, Sri Paramakalyani College, Alwarkurichi.
25. 2019, Feb. 25<sup>th</sup> and 26<sup>th</sup> Key note speaker in **'Workshop on Molecular biological Technique'** PG

- and Research Department of Zoology, Sara Tucker College, Tirunelveli
26. 2018, **'Impact of global warming on flora and fauna'**, Sri Narayana College, Punalur.
  27. 2018, **'Tackling the plastic pollution - the nanotechnical way'**, P.G. Department of Zoology, Sri Parasakthi College for women, Courtallam, Tirunelveli.
  28. 2017, **'Application of biotechnology in pest management'**- Department of Zoology, Sri Paramakalyani college, Alwarkurichi.
  29. 2017, **'Current trends in mosquito control through biopesticides - An ecofriendly approach'**, ICMR sponsored National conference, Department of Biological Sciences, KSR college of Arts and Science, Tiruchengode.
  30. 2017, **'Biopesticides, Development and formulation by biotechnological approach'**, Department of Zoology, St. Xavier's College.
  31. 2017, Valedictory address, Zoology association, Department of Zoology, St. Xavier's College
  32. 2015, Plenary lecture, **'Biodiversity products and Industrial Applications'**, Centre for biodiversity and forest studies, Periyar University, Salem.
  33. 2014, **'Role of biopesticides in integrated agriculture system'**, Department of Zoology, Sri Paramakalyani College, Alwarkurichi.
  34. 2014, Keynote address, **'Biopesticide and sustainable agriculture'** in National Symposium on Biotechnology for Sustainable livelihood, at Annai Velankanni College, Kanyakumari.
  35. 2013, Chief guest address **Ecofriendly Plant Protection and production for Food Security, Food Safety and the role of Biopesticides in Global Economy Fourth Biopesticide International Conference**, Crop Protection Research Centre, St. Xavier's College.
  36. 2013, Plenary lecture on **'Effect of elevated CO<sub>2</sub> on rice plant and feeding performance of specialized rice herbivore and chairperson in Third international congress on global warming on biodiversity of insects: management and conservation strategies (GW-BIMC, '13)'** Bharathiar University, Coimbatore.
  37. 2012, **34th Meeting of the Rice Technical Working Group**, Hot Springs Convention Center Hot Springs, Arkansas, USA.
  38. **2010, Tamil Nadu State Science forum 10<sup>th</sup> Conference**, Manonmaniam Sundaranar University, Tirunelveli, TN, India.
  39. 2009, **'Academic interaction programme'**, invited paper and proposal conducted by BRNS (Department of Atomic Energy), Courtallam, Tirunelveli.
  40. 2008, **'Biofertilizer development and usage in this Millennium'** in Sri Kumara Gurupara Swamigal Arts College, Srivaikuntam, Thoothukudi, Tamil-Nadu.
  41. 2008, State level seminar on **'A modern Approach in Agricultural Economics and Ecosystem' under the topic 'Recent development in Agricultural economics with respect to environment'** at Sri Parasakthi College for Women, Courtallam, TN.
  42. 2006, Invited paper presentation **Korean Entomological Science meeting** at Muju, South Korea.
  43. 2006, Invited paper presentation in **Korean Entomological Science meeting** held at Seoul, South Korea.

#### *Seminars/symposium/lectures attended:*

1. Participated in the webinar on **Wildlife Resources of Oriental Region: Conservation Challenges** delivered by Dr. J. Antony Johnson, held on 3 July 2020 at Department of Habitat Ecology, Wildlife Institute of India, Dehradun, INDIA.
2. Participated in the One Day International Virtual Conference **"Microplastics 2020"** on 30.06.2020, organized by Centre of Nanobiotechnology at Vellore Institute of Technology, Vellore, India.
3. Participated in the four days **digital interaction series on the occasion of "World Environment Day 2020"** from 02.06.2020 to 05.06.2020. Organized by ENVIS RP – Centre for Coastal Zone Management and Coastal Shelter Belt, Institute for Ocean Management, Anna University, Chennai and Ministry of Environment, Forest and Climate Change, Government of India.

4. Participated in the webinar on **“Science Communication” and “Analysis of Scientific Publications forenhancedvisibility”** Under UGC STRIDE Program held on 29th May, 2020. Organized by Mizoram University Aizawl, India.
5. Attended the webinar on **“sleep disorders and health related challenges: what evidence-based medicine informs us”** held on 21.05.2020, Department of Zoology, Sri Parasakthi College for Women, Courtallam, Tamil Nadu.
6. Participated in the webinar on **“Research Data Management”** on 20.05.2020 organized by Department of Library and Information Science, Mizoram University, Aizawl.
7. Attended **‘National Colloquium on Molecular Breeding and Shaping the future of Rice’** organized by M.S.Swaminathan Research Foundation, Chennai during March 12<sup>th</sup> -13<sup>th</sup> , 2004.
8. Attended a national conference on **‘Recent Trends in Insect Control’** at Department of Zoology, Bharathiar University , Coimbatore during February 15<sup>th</sup>-16<sup>th</sup>, 2003.
9. Attended a workshop on **‘Recombinant DNA technology at School of Biotechnology**, Dr. G.R. Damodaran College of Science, Coimbatore during May 15<sup>th</sup>-16<sup>th</sup>, 2001.
10. Attended a national Symposium on **‘Commercial Exploitation of Economically Important Medicinal Plants’** at Kongunadu Arts and Science College, Coimbatore during August 24<sup>th</sup>- 25<sup>th</sup>, 2000.
11. Attended a national conference on **‘Biological Control of Insects in Agriculture, Forestry, Medicine and Veterinary Sciences** organized by Department of Zoology, Bharathiar University, Coimbatore, India during Jan.21-22, 1999.
12. Participated in 3<sup>rd</sup> International Symposium on **‘Afro Asian Society of Nematologists’** held on April 16-19, 1998, Sugarcane Breeding Institute, and Coimbatore.
13. Participated in the National Symposium on **‘Recent trends in Biological Sciences’** held in Department of Zoology on 16th March 1998 at Bharathiar University, Coimbatore, Tamil-Nadu, India
14. Attended an International Conference on **“Frontiers in Biotechnology”** held during Nov 26-29th, 1997 conducted by Regional Research Laboratory, CSIR Trivandrum, India.
15. Presented a paper in **VII All India Symposium on Invertebrate Reproduction** held during April 5-7, 1995 at Sree Narayana College, Cannanore, Kerala, India.
16. Presented a paper in **XIII National Symposium on Reproductive Biology and Comparative Endocrinology** held during January 20-21st, 1995 at Osmania University, Hyderabad, India.
17. Presented a paper in Seminar on **“Emerging trends in Applied Biology”** held during October 21 - 22nd, 1994 at Indian Institute of Chemical Technology, Hyderabad, India.
18. Presented a paper in Second National Symposium on **Prospects and Problems of Sericulture in India** held during March 7-9th, 1994 at Madras University PG Extension Centre, Vellore, India.
19. Presented a paper in **XII National Symposium on Reproductive Biology and Comparative Endocrinology** held during January 21-23rd, 1994 at School of Life Sciences , Pondicherry University , Pondicherry , India.
20. Presented a paper in the **III Indo-Pacific and VI All India Symposium on Invertebrate Reproduction** held during December 10-12th, 1993 at Ayya Nadar Janaki Ammal College, Sivakasi, India.
21. Attended an UGC National Seminar on **Fish health** held on March 29-30th, 1993 at Department of Zoology, Bharathiar University, Coimbatore, India.

### **Workshops attended**

1. Attended **‘One day Awareness Workshop on NPTEL’** jointly organized by NPTEL, IIT Madras and Manonmaniam Sundaranar University, Tirunelveli, 19th July 2019.
2. Participated in 34<sup>th</sup> Meeting of the **Rice Technical Working Group** February 27 March 1, 2012 Hot Springs Convention Center Hot Springs, Arkansas, USA.
3. Attended a workshop on **Hands on workshop in Invertebrate keeping** held on 27-29, March

1997 at Zoo outreach organization, Coimbatore, Tamil-Nadu, India

### Papers/Posters presented in the seminar /symposium (Abstract /Full paper)

Following paper were presented in National Seminar on Recent Trends in Biology at Sri Paramakalyani College, Alwarkurichi, Tenkasi, Tamil Nadu. 24<sup>th</sup> February 2023.

1. P. Malarvizhi, K. Chanthini, R. Ramasubramanian, H. Sivanesh and **S. Senthil- Nathan\***, 2023, "Rice endophytic bacterial strains promote colonization of rhizobacteria and increases plant growth.
2. S. Sappani Muthu, K. Chanthini, R. Ramasubramanian, H. Sivanesh and **S. Senthil- Nathan**, 2023, Removal of pesticide in soil with seaweed extract.
3. P. Murugan, K. Chanthini, R. Ramasubramanian, H. Sivanesh and **S. Senthil- Nathan**, 2023, Aqueous seaweed extract alleviates salinity-induced toxicities in rice plants (*Oryza sativa* L.)
4. R. S. Deepthi, R. Manju, K. Chanthini, R. Ramasubramanian, H. Sivanesh and **S. Senthil-Nathan**, 2023, Biocontrol of rhizoctonia solani (ceratobasidiaceae) by *Azospirillum brasilense*, and its efficiency in controlling foot rot disease in tomato (*Solanum lycopersicum* L)
5. G. Pavithra, K. Chanthini, R. Ramasubramanian, H. Sivanesh and **S. Senthil- Nathan**, 2023, Macroalgal biostimulant improves germination of tomato seeds exposed to salt stress.

Following paper were presented in 18<sup>th</sup> International conference on Converging microbiological innovation for application in animal and plant environment and healthcare (ICCMIA 2023), Department of Animal science, M.S. University, Tirunelveli 27-28<sup>th</sup> January 2023.

6. Janaki. M and **Senthil-Nathan. S**, 2023, "Isolation of rhizosphere phosphatase solubilization bacteria having bioremediation potential PGT and improved heavy metal stress tolerance effect on solanum lycopersicum.

Following papers/Posters were presented in National Symposium on Recent Trends and Advances in Biology, Sri Paramakalyani College, Alwarkurichi, March 3<sup>rd</sup> 2022.

7. Ramasubramanian. R, Karthi. S, **Senthil-Nathan. S**, Sivanesh. H, Shyam Sundar. N, Stanley Raja. V, and Chanthini. K.M.P, 2022, "Isolation and characterization of *Bacillus subtilis* for the potential control of rice leaf folder *Cnaphlocrosis medinalis*".
8. Stanley Raja. V and **Senthil-Nathan. S**, 2022, "A study on Induced defense mechanism in rice plants against diseases and pest using bio-elicitor extracted from *Aspergillus niger* cultured in the post- harvest wastes: a sustainable agronomical approach".
9. Sowndarya srivarshini. R, Aja. V.S, Tamil Selvi. M, Manthira Selvi. T, Subhalakshmi. M, Karthick. P, Stanley Raja. V and **Senthil-Nathan. S**, 2022, "A study on biochemical elicitor inducing the defense mechanism against disease and promoting seed germination in rice: a sustainable agronomical approach".
10. Deva Andrews. A and **Senthil-Nathan. S**, 2022, "*Aedes aegypti* insecticide resistance status obtained from rural and urban areas in Tenkasi, Tamil Nadu".
11. Anitharaj. S, Chanthini. K.M.P and **Senthil-Nathan. S**, 2022, "Seaweed chemicals have sub-lethal effects on the growth and histopathology of the polyphagous pest *Spodoptera litura* fab (Lepidoptera)".
12. Chanthini. K.M.P and **Senthil-Nathan. S**, 2022, "Organic agricultural practices enhance nutritional and antioxidant properties of tomato (*Lycopersicon esculentum*)".
13. Janaki. M, Chanthini. K.M.P and **Senthil-Nathan. S**, 2022, "Improvement of tomato seed germination by application of phosphate solubilizing bacteria (PSB) isolated from tomato rhizosphere".
14. Malarvizhi. P, Chanthini. K and **Senthil-Nathan. S**, 2022, "Insecticide resistance status of *Aedes albopictus* collected from rural and urban area in Tenkasi, Tamil Nadu".
15. Murugan. P, Chanthini. K and **Senthil-Nathan. S**, 2022, "Effect of entomopathogenic fungal

isolates on the development of rice pest *Cnaphlocrosis medinalis* (guenee)".

16. Pavithra. G, Chanthini. K, and **Senthil-Nathan. S**, 2022, "Alleviation of salt stress in rice (*Oryza sativa* L.) during germination by the application of seaweed extract".
17. Kirubanandarajan. P and **Senthil-Nathan. S**, 2022, "Jasmonic acid application enhances phenol accumulation in rice *Oryza sativa* (L)".
18. Vainath Praveen. S, Chanthini. K and **Senthil-Nathan. S**, 2022, "Seaweed compounds affect the performance of the immune system of polyphagous pest, *Spodoptera litura* fab. (lepidoptera)".

Following papers were presented in the International Conference on Applied Biology for Sustainable Development, Sri Parasakthi College for Women, Courtallam, March 21 -22, 2022

19. Kirubanantharajan. P and Senthil-Nathan. S, 2022, "Potential control of mosquito larvae through botanicals and their toxicity against non-target organism".
20. Pavana K Sivadasan Unni and Senthil-Nathan. S, 2022, "Physiological and biochemical effects of selected phytochemicals against mosquito *Culex quinquefasciatus*".

Following papers were presented in 5th International Conference on recent trends in applied science and Technology (ICRTAST-2021), Manonmaniam Sundaranar University, November 25-28th 2021.

21. Chanthini. K.M.P and **Senthil-Nathan. S**, 2021, "Effect of seaweed extract on the population density of rice PGPR (*Oryza sativa*.L)".
22. Stanley Raja. V and **Senthil-Nathan. S**, 2021, characterization of elicitor – the fungal chitosan to inducing the defence and promoting the growth in *Oryzae sativa*: A sustainable agronomical approach.
23. Sivanesh. H and **Senthil-Nathan. S**, 2021, "Effect of plant secondary metabolite in the control of rice pest, Yellow stem borer and disease, bacterial leaf blight"
24. Janaki. M and **Senthil-Nathan. S**, 2021," Seaweed bio-stimulants promote growth of phosphate solubilizing bacteria in the rhizosphere of tomato (*Lycopersicon esculentum* Mill)
25. Ramasubramanian. R and **Senthil-Nathan. S**, 2021,"Isolation and characterization of *Bacillus subtilis* for the potential control of rice leaf folder *Cnaphalocrocis medinalis*"

Following papers/Posters were accepted for presentation at Sixth National Conference on Biological Control: Innovative Approaches for Green India Organized by ICAR-NBIAR, Bengaluru, 3<sup>rd</sup> -5<sup>th</sup> March 2021.

26. Ramasubramanian. R and **Senthil-Nathan. S**, 2021,"Isolation and characterization of *Bacillus subtilis* for the potential control of rice leaf folder *Cnaphalocrocis medinalis*"
27. Sivanesh. H and **Senthil-Nathan. S**, 2021," Effect of plant secondary metabolite in the control of rice pest, Yellow stem borer and disease, bacterial leaf blight"

Following papers/Posters were accepted for presentation at international conferences

28. Chanthini. K.M.P and **Senthil-Nathan. S**, 2019, Innovinc International, "Sustainable Agriculture and Food Systems Summit (SAFS-2019)", to be held on 26-28, Sept, Berlin, Germany.
29. Karthi S., and **Senthil-Nathan S.**, "Comparative efficacy of two mycotoxins from *Beauveria bassiana* (Bals.) Vuill. and *Metarhizium anisopliae* (Metchnikoff) Sorokin against *Spodoptera litura* Fab. and their non-target activity against the earthworm, *Eudrilus eugeniae* Kinb.", during June 2-6, 2019, ISCE 2019 Annual Meeting Atlanta, Georgia, USA.
30. Karthi S., and **Senthil-Nathan S.**, 2019, "Comparative efficacy of the entomopathogenic fungus, *Beauveria bassiana* (Bals.) Vuill. and *Metarhizium anisopliae* (Metchnikoff) Sorokin on larval mortality, enzyme inhibition of *Spodoptera litura* Fab. and their non-target activity against *Eudrilus eugeniae* kinb" at Eighth International Symposium on Molecular Insect Science, Sitges, Spain.

Following posters were presented in the 'International Seminar on Microbes and Climate change' held on

17th July, 2019 at Department of Microbiology, Sri Paramakalyani College, Alwarkurichi, TN.

31. Chanthini, K, Shyam sundar. N, Soranam. R and **Senthil-Nathan. S.** 'Seaweed compounds as prospective disease control agent against early blight disease of tomato '
32. Stanley-Raja V, Sivanesh H and **Senthil-Nathan S.** 'Inducing defense mechanism and PGP in *Oryza sativa* using fungal chitosan as an elicitor'.

Following papers were presented in the National Seminar on 'Importance of conserving Ozone layer, International Ozone Day celebrations' held during 17-18th September, 2018 at Sree Narayana College, Punalur, Kerala.

33. Chanthini K., **Senthil-Nathan S\***, Thanigaivel A , Shyam-Sundar N, Karthi S, Stanley-Raja V, Sivanesh H, Chellappandian M, Soranam. R. 'Effect of raised CO<sub>2</sub> levels on early blight disease development and pathogen fitness on tomato plants'.
34. Shyam-Sundar N, **Senthil-Nathan S\***, Chanthini K., Thanigaivel A , Karthi S, Stanley-Raja V, Sivanesh H, Chellappandian M.' Developmental response of tobacco cutworm, *Spodoptera litura* Fab. to treatments of crude essential oil from *Desmostachya bipinnata* (Linn.)'.
35. Thanigaivel A, **Senthil-Nathan S\***, Narayanan K. R, Shyam-Sundar N, Chanthini K., Karthi Stanley-Raja V, Sivanesh H, 'Comparative efficacy of crude methanol of *Adhatoda vasica* (L.) Nees (Acanthaceae) against the dengue vector *Aedes aegypti* L. (Diptera: Culicidae)'.

Following papers were presented in the 'National conference on Environmental Science and technology' held on 18th and 19th January 2018 at Sri Paramakalyani Centre for Excellence in Environmental Sciences (SPKCEES), Manonmaniam Sundaranar University, Alwarkurichi, TN.

36. Chanthini K., **Senthil-Nathan S** and Soranam. R ' Key Coercions of Western Ghats' Ichthyofauna'
37. Chanthini K., **Senthil-Nathan S** and Soranam. R 'Bacterial compounds as prospective biocontrol agent against disease and pest of tomato'.

Following papers were presented in the 'National conference on Impact of Climate Change on Environment and Biodiversity (NCCEB - 2015)' held on 26th and 27th March 2015 at Sri Paramakalyani Centre for Excellence in Environmental Sciences (SPKCEES), Manonmaniam Sundaranar University, Alwarkurichi, TN.

38. Thanigaivel, A., Chandrasekaran, R., Revathi, K., **Senthil-Nathan, S.**, Survival and oviposition response of *Culex quinquefasciatus* Say and *Aedes aegypti* Linn against the *Justicia adhatoda* Linn.
39. Pradeepa, V., Kirubakaran, S.A., Selva-Kumar, G., Saravana-Kumar, M., **Senthil-Nathan, S.**, Novel Plumbagin repellent inhibit enzymes in malarial vector of *Anopheles stephensi*
40. Ponsankar, A., Edwin, E., Vasantha-Srinivasan, P., Selin-Rani, S., Thanigaivel, A., Pradeepa, V., **Senthil-Nathan, S.**, Efficacy of *Citrullus colocynthis* against the polyphagous pest *Spodoptera litura* Fabricius (Lepidoptera: Noctuidae)
41. Edwin, E., Ponsankar, A., Vasantha-Srinivasan, P., Selin-Rani, S., Thanigaivel, A., Pradeepa, V., **Senthil-Nathan, S.**, The effect of temperature and radiation on parasitization, emergence of adult and viability efficiency of *T. chilonis* in vitro conditions reared in different host eggs
42. Selin-Rani, S., Pradeepa, V., Selva-Kumar, G., Saravana-Kumar, M., **Senthil-Nathan, S.**, Toxicity of *Alangium salvifolium* Wang, and its chemical constituents against *Spodoptera litura* (Polyphagous) the tobacco cutworm (Lepidoptera: Noctuidae)
43. Vasantha-Srinivasan, P., Ponsankar, A., Edwin, E., Selin-Rani, S., Thanigaivel, A., Pradeepa, V., **Senthil-Nathan, S.**, Behavioral response of crude volatile oil of *Piper betle* L. (Piperales: Piperaceae) against *Spodoptera litura* Fabricius Lepidoptera: Noctuidae)
44. Lanka, S.K., **Senthil-Nathan, S.**, Davis, J.A., Stout, M.J., Influence of plant type and artificial diet on the activity of thiamethoxam against fall armyworm (*Spodoptera frugiperda*), 60th Annual Entomological Society Meeting, November 11th -14th , 2012 in Knoxville, TN, USA

Following papers were presented in 'National Seminar on Biotechnology in the new Millennium' on

February 15th-16th 2002 at Vivekanandha College of Arts and Sciences for Women, Elaympalayam, TN

45. **Senthil-Nathan**, S., Sivaranjane, S., Sangeetha, S., Potentiating effect of *Pongamia Sp.* on NPV in relation to control strategy of Tobacco cut worm.
46. **Senthil-Nathan**, S., Smitha, A., Growth enhancement activity of *Ocimum sanctum* in sericulture –A biotechnological approach.
47. **Senthil-Nathan**, S., Sherina, T.H., Vidya, V., Synergistic effect of neem on *Bacillus thuringiensis* in pest control.
48. **Senthil-Nathan**, S., Murugan, K., Age specific feeding preference and reproductive potential of *Zygogramma bicolorata* (Coleoptera: Zygogrammatidae), presented in III National Symposium on Reproductive Biology and Comparative Endocrinology held on Jan. 27th -28th, 1995 at Osmania University, Hyderabad, India.
49. Senthil Kumar, N., **Senthil-Nathan**, S., Murugan, K., Host plant influence on feeding and reproduction of teak pest *Hyblaea puera* and *Eutectona machaeralis*. Presented in the 7th all India Symposium on Invertebrate Reproduction, April 5-7, 1995, at Sree Narayana College, Cannanore, Kerala.
50. Murugan, K., Jeyabalan, D., Senthil Kumar, N., **Senthil-Nathan**, S., and Sivaprakasam, N., Growth promoting effects of plant products on silkworm - A biotechnological approach. Presented in . Presented in Frontiers in Biotechnology at Regional Research Centre, Trivandrum, Kerala, India, November 1997.
51. Murugan, K., Sivaramakrishnan, S., Senthil Kumar, N., Jeyabalan, D., **Senthil-Nathan**, S., Synergistic interaction of botanicals and biocides (Nuclear Polyhedrosis Virus) on pest control. Presented in Frontiers in Biotechnology at Regional Research Centre, Trivandrum, Kerala, India, November 1997.
52. Murugan, K., Senthil Kumar, N., Jeyabalan, D., **Senthil-Nathan**, S., Sivaramakrishnan, S., Synergistic effect of botanicals and microbial pesticide on *Spodoptera litura* Fab. Presented at the National Symposium of Biopesticides and Insect Pest Management at Entomological Research Institute, Loyola College, Madras, Tamil Nadu, India, February 1998.

The following papers were presented in “National Symposium on Biological Control of Insects in Agriculture, Forestry, Medicine and Veterinary Science” 21<sup>st</sup> -22<sup>nd</sup> January 1999 at Bharathiar University, Coimbatore, India.

53. **Senthil-Nathan**, S., Murugan, K., Jeyabalan, D. Effect of Azadirachtin and *Bacillus thuringiensis* (Berliner) on the behavioral and physiological response on *Cnaphalocrosis medinalis* Guenee (Rice leaf folder).
54. Kalaivani, K., Murugan, K., **Senthil-Nathan**, S., Senthil Kumar, N., Dietary influence on the parasitization of *Trichogramma chilonis* (Ishii).