

SENTHIL-NATHAN, SENGOTTAYAN

Professor

Principal Investigator (CSIR, DST, DBT & UGC)

Sri Paramakalyani Centre for Excellence in Environmental Sciences,

Manonmaniam Sundaranar University,

Alwarkurichi 627 412, Tamil- Nadu, INDIA

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EDUCATION

Ph D

Animal Science-Biopesticides/Insect Toxicology,
(Bharathiar University, 2000, Coimbatore, TN, India)

M Phil

Animal science, 1995 (Insect Biodiversity)

M Sc

Zoology, 1994

B Sc

Zoology, 1992 (Ancillary Chemistry and Botany)

PROFESSIONAL RESEARCH POSITIONS

Professor

(2017 -present)

Associate Professor

(2014-16)

Assistant Professor

(2007-14)

Visiting Professor

(2011-2012)

Research Scientist

(2006-2007)

**Post-Doctoral Research
Scientist**

(2003-2006)

Assistant Professor

(2000-2003)

Ph D student

(1995-1999)

Sri Paramakalyani Centre for Excellence in
Environmental Sciences,
Manonmaniam Sundaranar University,
Tamil Nadu.

Louisiana State University Agricultural Center,
Baton rouge, USA (Host Supervisor-Dr. M.J. Stout)

Plant Environment Division, Honam Agricultural
Research Institute, Republic of Korea
(Adviser-Dr. M. Y. Choi)

Department of Environmental Engineering,
Chonbuk National University, Republic of Korea
(Adviser-Dr. P. G. Chung)

Post Graduate and Research Department of
Biotechnology, Vivekanandha College, Periyar
University Tamil Nadu, India

Bharathiar University, Coimbatore TN
(Adviser-Dr. K. Murugan)

HONORS, AWARDS AND FELLOWSHIPS

2011-2012	BOYSCAST Fellow -DST Govt. of India (Louisiana State University, Baton Rouge, USA).
2010	Young Scientist award under Fast Track-DST, Govt. of India
2009	Young Scientist award under RGYI-DBT, Govt. of India
2004	CBNU-International Post-Doctoral Fellowship, Korea
2002, 2003	Best faculty award, VICAS, Periyar University
1994	Best outgoing student at Post Graduate level, Bharathiar University

SYNERGISTIC ACTIVITIES AND PROFESSIONAL POSITIONS

a. Administrative

- 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
- Disciplinary action panel (member), 2016- till date, MSU
- NAAC core committee (member), 2018, 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

- Subject Editor-Nature- Scientific Reports
- Associate Editor-Frontiers in Invertebrate Physiology
- Associate Editor-International Journal of Pest Management
- Associate Editor-Archives of Phytopathology and Plant Protection
- Associate Editor Florida Entomologist
- Editorial Board Member-Journal of Asia-Pacific Entomology
- Editorial Board Member Biopesticide International
- Editorial Board Member Austin Journal of Environmental Toxicology
- Review Editor- Frontiers in Plant Science
- *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.
- 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**, 4th Biopesticide International Conference, Crop Protection Research Centre, St. Xavier's College Palayamkottai, 2013.
- 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
- 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

- Question paper setter - M.Phil. and M.Sc., - Zoology, Environmental Science, Insecticide Toxicology, Biotechnology; Sri Sankara Arts & Science college, Periyar University, Bharathiar University, Bharathidasan University, University of Calicut.
- Doctoral Committee (member) - Research Scholars of Periyar University, Bharathidasan University, Madurai Kamaraj University, Karpagam University.
- External examiner, Ph.D viva-voce - Scholars of Periyar University, Bharathidasan University, University of Calicut.
- External Member, Graduate Research dissertation, Anna University, Chennai
- Member board of studies, Department of Zoology, St. Xavier's College, Palayamkottai
- Member board of studies, SPKCEES, MS University, Alwarkucih

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, Inspection Committee - Diploma in Human Care Services, Zion trust, Madurai, 2018
- Convener, Inspection Commission - ELP Centre, Diploma in Siddha Human Care, Sigaram Foundation, Kallidaikurichi, 2018.
- Chair Person, Inspection Commission - Thiruvalluvar college, Papanasam, 2017
- Convener & Subject expert, Inspection Commission - Department of Zoology, Muslim Arts College, Thiruvithancode, 2017.

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 PGPR, USA

Referee/Editorial Advisory (International Journals)



Acta Tropica, Asian Pacific Journal of Tropical Medicine, Arabian Journal of Chemistry Bioresource Technology, Chemical and Biological Technologies in Agriculture, Chemosphere, Crop Protection, Ecotoxicology and Environmental Safety, Experimental Parasitology, Journal of Hazardous Materials, Microbial Pathogenesis, Pesticide Biochemistry and Physiology, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Materials Research Bulletin, Toxicology, Toxicology Reports, Toxicon



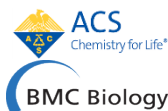
Archives of Insect Biochemistry and Physiology, Agriculture and Forest Entomology, Entomologia Experimentalis et Applicata, Entomological Research, Journal of Applied Entomology, Journal of Applied Microbiology, Journal of Microscopy, Letters in Applied Microbiology, Journal of Vector Ecology, Pest Management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



International Journal of Pest Management Science, Natural Product Research



Applied Biochemistry and Biotechnology, 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, Proteome Science



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, Nano-Bio Science, Plos One, Physiological Entomology

PEER REVIEWED PUBLICATIONS

List of Publications: Total Citations: **3120**; Total Impact Factors of published papers: **283.37** **Average impact of published paper: 2.93; H index: 32.**

1. **Senthil-Nathan, S.**, 2018. Effect of methyl jasmonate (MeJA)-induced defenses in rice against the rice leaffolder *Cnaphalocrocis medinalis* (Guenée) (Lepidoptera: Pyralidae). **Pest Management Science**, <https://doi.org/10.1002/ps.5139> (IF- **3.249**)
2. Chanthini, K.M.P., **Senthil-Nathan, S***, Soranam, R., Thanigaivel, A., Sreenath Kumar, C and Kingsley, S.J., 2018. Bacterial compounds, as biocontrol agent against early blight (*Alternaria solani*) and tobacco cut worm (*Spodoptera litura* Fab.) of tomato (*Lycopersicon esculentum* Mill.) **Archives of Phytopathology and Plant Protection**, <https://doi.org/10.1080/03235408.2018.1496525> (IF - 0.29)
3. Vasantha-Srinivasan, P., Chellappandian, M., **Senthil-Nathan, S***, Ponsankar, A., Thanigaivel, A., Karthi, S., Edwin, E.S., Selin-Rani, S., Kalaivani, K., Maggi, F. and Benelli, G., 2018. A novel herbal product based on *Piper betle* and *Sphaeranthus indicus* essential oils: Toxicity, repellent activity and impact on detoxifying enzymes GST and CYP450 of *Aedes aegypti* Liston (Diptera: Culicidae). **Journal of Asia-Pacific Entomology**, 21(4), pp.1466-1472. (IF- **0.875**)
4. Benelli, G., Pavela, R., Petrelli, R., Cappellacci, L., Canale, A., **Senthil-Nathan, S*** and Maggi, F., 2018. Not just popular spices! Essential oils from *Cuminum cyminum* and *Pimpinella anisum* are toxic to insect pests and vectors without affecting non-target invertebrates. **Industrial Crops and Products**, 124, pp.236-243. (IF- **3.849**)
5. Rajkumar, R., Shivakumar, M.S., **Senthil-Nathan, S*** and Selvam, K., 2018. Pharmacological and Larvicidal Potential of Green Synthesized Silver Nanoparticles Using *Carmona retusa* (Vahl) Masam Leaf Extract. **Journal of Cluster Science**, 29(6), pp.1243-1253. (IF- **1.302**)
6. Kumar, K.K., Sridhar, J., Murali-Baskaran, R.K., **Senthil-Nathan, S***, Kaushal, P., Dara, S.K. and Arthurs, S., 2018. Microbial biopesticides for insect pest management in India: Current status and future prospects. **Journal of invertebrate pathology**, <https://doi.org/10.1016/j.jip.2018.10.008> (IF- **2.198**)
7. Kamaraj, C., Deepak, P., Balasubramani, G., Karthi, S., Arul, D., Aiswarya, D., Amutha, V., Vimalkumar, E., Mathivanan, D., Suseem, S.R., Chanthini, K.M.P and **Senthil-Nathan, S***, 2018. Target and non-target toxicity of fern extracts against mosquito vectors and beneficial aquatic organisms. **Ecotoxicology and environmental safety**, 161, pp.221-230. (IF- **3.974**)
8. Karthi, S., Vaideki, K., Shivakumar, M.S., Ponsankar, A., Thanigaivel, A., Chellappandian, M., Vasantha-Srinivasan, P., Chanthini, K.M.P., Hunter, W.B. and **Senthil-Nathan, S***, 2018. Effect of *Aspergillus flavus* on the mortality and activity of antioxidant enzymes of *Spodoptera litura* Fab. (Lepidoptera: Noctuidae) larvae. **Pesticide Biochemistry and Physiology**, 149, pp.54-60. (IF- **3.440**)
9. Dinesh-Kumar, A., Srimaan, E., Chellappandian, M., Vasantha-Srinivasan, P., Karthi, S., Thanigaivel, A., Ponsankar, A., Chanthini, K.M.P., Shyam-Sundar, N., Annamalai, M., Kalaivani, K. and **Senthil-Nathan, S***.2018. Target and non-target response of *Swietenia*

- Mahagoni* Jacq. chemical constituents against tobacco cutworm *Spodoptera litura* Fab. and earthworm, *Eudrilus eugeniae* Kinb. **Chemosphere**, 199, pp.35-43. (IF- 4.208)
10. Chellappandian, M., Vasantha-Srinivasan, P., Senthil-Nathan, S., Karthi, S., Thanigaivel, A., Ponsankar, A., Kalaivani, K. and Hunter, W.B., 2018. Botanical essential oils and uses as mosquitocides and repellents against dengue. **Environment International**, 113, pp.214-230. (IF- 7.088)
 11. Vivekanandhan, P., Kavitha, T., Karthi, S., **Senthil-Nathan, S.** and Shivakumar, M.S., 2018. Toxicity of *Beauveria bassiana*-28 Mycelial Extracts on Larvae of *Culex quinquefasciatus* Mosquito (Diptera: Culicidae). **International Journal of Environmental Research and Public Health**, 15(3), p.440. (IF- 2.101)
 12. Vivekanandhan, P., Venkatesan, R., Ramkumar, G., Karthi, S., **Senthil-Nathan, S*** and Shivakumar, M.S., 2018. Comparative Analysis of Major Mosquito Vectors Response to Seed-Derived Essential Oil and Seed Pod-Derived Extract from *Acacia nilotica*. **International Journal of Environmental Research and Public Health**, 15(2), p.388. (IF- 2.101)
 13. Senthil-Nathan, S., 2018. Natural pesticide research (Editorial) **Physiological and Molecular Plant Pathology**, (IF- 1.7)
 14. Murugan, K., Jaganathan, A., Rajaganesh, R., Suresh, U., Madhavan, J., **Senthil-Nathan, S.** Rajasekar, A., Higuchi, A., Kumar, S.S., Alarfaj, A.A. and Nicoletti, M., 2018. Poly (Styrene Sulfonate)/Poly (Allylamine Hydrochloride) Encapsulation of TiO₂ Nanoparticles Boosts Their Toxic and Repellent Activity Against Zika Virus Mosquito Vectors. **Journal of Cluster Science**, 29(1), pp.27-39. (IF- 1.471)
 15. Annamalai, M., Annamalai, V.S., Chellappandian, T., Sengodan, M., Mayabini, K., Pirasanna, J.G.G., Totan, P and **Senthil-Nathan, S***. (2017). Effect of thiamethoxam on growth, biomass of rice varieties and its specialized herbivore, *Scirpophaga incertulas* Walker. **Physiological and Molecular Plant Pathology**, 101, pp. 146-155. (IF-1.7)
 16. Murali-Baskaran, R.K., **Senthil-Nathan, S***, Mankin, R.W. and Suresh, K., 2017. Kairomone activity of okra, *Abelmoschus esculentus* (L.) Moench genotypes on lepidopteran pests and their entomophages. **Physiological and Molecular Plant Pathology**, 101, pp.29-37 (IF-1.1).
 17. Annamalai, M., Vasantha-Srinivasan, P., Thanigaivel, A., Muthiah, C., Karthi, S., Jena, M., Pandi, G.G.P., Adak, T. and **Senthil-Nathan, S***, 2017. Effect of thiamethoxam on growth, biomass of rice varieties and its specialized herbivore, *Scirpophaga incertulas* Walker. **Physiological and Molecular Plant Pathology**, 101, pp.146-155. (IF-1.1)
 18. Chandrasekaran, R., Revathi, K., **Senthil-Nathan, S***, Kalaivani, K., Hunter, W.B., Duraipandiyam, V., Al-Dhabi, N.A. and Esmail, G.A., 2017. Eco-friendly formulation of wild *Bacillus thuringiensis* secondary metabolites through molecular characterization against the lepidopteran pest. **Physiological and Molecular Plant Pathology**, 101, pp.93-104. (IF-1.1)
 19. Dhivya, K., Vengateswari, G., Arunthirumeni, M., Karthi, S., **Senthil-Nathan, S***, and Shivakumar, M.S., 2017. Bioprospecting of *Prosopis juliflora* (Sw.) DC seed pod extract effect on antioxidant and immune system of *Spodoptera litura* (Lepidoptera: Noctuidae). **Physiological and Molecular Plant Pathology**, 101 (2018): 45-53. (IF-1.1)
 20. Vasantha-Srinivasan, P., Thanigaivel, A., Edwin, E.S., Ponsankar, A., **Senthil-Nathan, S***, Selin-Rani, S., Kalaivani, K., Hunter, W.B., Duraipandiyam, V. and Al-Dhabi, N.A., 2017.

- Toxicological effects of chemical constituents from Piper against the environmental burden *Aedes aegypti* Liston and their impact on non-target toxicity evaluation against biomonitoring aquatic insects. **Environmental Science and Pollution Research**, pp.1-13. (IF-2.7)
21. Murali-Baskaran, R.K., Sharma, K.C., Kaushal, P., Kumar, J., Parthiban, P., **Senthil-Nathan, S*** and Mankin, R.W., 2017. Role of kairomone in biological control of crop pests- A review. **Physiological and Molecular Plant Pathology**, 101 (2018): 3-15. (IF- 1.1)
 22. Kalaivani, K., Kalaiselvi, M.M. and **Senthil-Nathan, S***, 2017. Effect of Methyl Salicylate (MeSA) induced changes in rice plant (*Oryza sativa*) that affect growth and development of the rice leaffolder, *Cnaphalocrocis medinalis*. **Physiological and Molecular Plant Pathology**, 101, pp.116-126. (IF- 1.1)
 23. Kirubakaran, S.A., Abdel-Megeed, A. and **Senthil-Nathan, S***, 2017. Virulence of selected indigenous *Metarhizium pingshaense* (Ascomycota: Hypocreales) isolates against the rice leaffolder, *Cnaphalocrocis medinalis* (Guenée) (Lepidoptera: Pyralidae). **Physiological and Molecular Plant Pathology**, 101, pp.105-115. (IF- 1.1)
 24. Shahriari M, Sahbzadeh N, Zibae A, Khani A., **Senthil-Nathan, S.**, 2017 Metabolic response of *Ephestia kuehniella* Zeller (Lepidoptera: Pyralidae) to essential oil of ajwain and thymol, **Toxin Reviews**, 36(3), pp.204-209. (IF-0.9).
 25. Thanigaivel, A., **Senthil-Nathan, S***, Vasantha-Srinivasan, P., Edwin, E.S., Ponsankar, A., Selin-Rani, S., Pradeepa, V., Chellappandian, M., Kalaivani, K., Abdel-Megeed, A. and Narayanan, R., 2017. Chemicals isolated from *Justicia adhatoda* Linn reduce fitness of the mosquito, *Aedes aegypti* L. **Archives of Insect Biochemistry and Physiology**, 94(4), p.e21384. (IF-1.6)
 26. Thanigaivel, A., Vasantha-Srinivasan, P., Edwin, E.S., Ponsankar, A., Selin-Rani, S., Chellappandian, M., Kalaivani, K., **Senthil-Nathan, S*** and Benelli, G., 2017. Development of an eco-friendly mosquitocidal agent from *Alangium salvifolium* against the dengue vector *Aedes aegypti* and its biosafety on the aquatic predator. **Environmental Science and Pollution Research**, pp.1-13. (IF- 2.7)
 27. Vasantha-Srinivasan, P., **Senthil-Nathan, S***, Ponsankar, A., Thanigaivel, A., Edwin, E.S., Selin-Rani, S., Chellappandian, M., Pradeepa, V., Lija-Escaline, J., Kalaivani, K. and Hunter, W.B., 2017. Comparative analysis of mosquito (Diptera: Culicidae: *Aedes aegypti* Liston) responses to the insecticide Temephos and plant derived essential oil derived from *Piper betle* L. **Ecotoxicology and Environmental Safety**, 139, pp.439-446. (IF-3.7)
 28. Vivekanandhan, P., **Senthil-Nathan, S.** and Shivakumar, M.S., 2017. Larvicidal, pupicidal and adult smoke toxic effects of *Acanthospermum hispidum* (DC) leaf crude extracts against mosquito vectors. **Physiological and Molecular Plant Pathology**, 101 (2018): 156-162. (IF-1.1)
 29. Radhika, S., Sahayaraj, K., **Senthil-Nathan, S.** and Hunter, W.B., 2017. Individual and synergist activities of monocrotophos with neem based pesticide, Vijayneem against *Spodoptera litura* Fab. **Physiological and Molecular Plant Pathology**, 101, pp.54-68. (IF- 1.1)
 30. Jinu, U., Rajakumaran, S., **Senthil-Nathan, S.** Geetha, N. and Venkatachalam, P., 2017. Potential larvicidal activity of silver nanohybrids synthesized using leaf extracts of *Cleistanthus collinus* (Roxb.) Benth. ex Hook. f. and *Strychnos nux-vomica* L. nux-vomica

- against dengue, Chikungunya and Zika vectors. **Physiological and Molecular Plant Pathology**, 101, pp.163-171. (IF-1.1)
31. Benelli, G, Pavela, R., Canale, A., Cianfaglione, K., Ciaschetti, G., Conti, F., Nicoletti, M., **Senthil-Nathan, S.**, Mehlhorn, H., Maggi, F., 2017. Acute larvicidal toxicity of five essential oils (*Pinus nigra*, *Hyssopus officinalis*, *Satureja montana*, *Aloysia citrodora* and *Pelargonium graveolens*) against the filariasis vector *Culex quinquefasciatus*: synergistic and antagonistic effects. **Parasitology International** 66(2), pp.166-171. (IF-1.8).
 32. Thanigaivel, A., Senthil-Nathan, S., Vasantha-Srinivasan, P., Edwin, E.S., Ponsankar, A., Selin-Rani, S., Pradeepa, V., Chellappandian, M., Kalaivani, K., Abdel-Megeed, A. and Narayanan, R., 2017. Chemicals isolated from *Justicia adhatoda* Linn reduce fitness of the mosquito, *Aedes aegypti* L. **Archives of Insect Biochemistry and Physiology**, 94(4). (IF- 1.6)
 33. Thanigaivel, A., Vasantha-Srinivasan, P., Senthil-Nathan, S., Edwin, E.S., Ponsankar, A., Chellappandian, M., Selin-Rani, S., Lija-Escaline, J. and Kalaivani, K., 2017. Impact of *Terminalia chebula* Retz. against *Aedes aegypti* L. and non-target aquatic predatory insects. **Ecotoxicology and environmental safety**, 137, pp.210-217. (IF-3.7)
 34. Lanka, S.K., **Senthil-Nathan, S.**, Blouin, D.J. and Stout, M.J., 2017. Impact of Thiamethoxam Seed Treatment on Growth and Yield of Rice, *Oryza sativa*. **Journal of Economic Entomology**, 110(2), pp.479-486. (IF-1.8)
 35. Murugan, K., Roni, M., Panneerselvam, C., Suresh, U., Rajaganesh, R., Aruliah, R., Mahyoub, J.A., Trivedi, S., **Senthil-Nathan, S.**, Rehman, H., Al-Aoh, H.A.N. and Kumar, S., 2017. *Sargassum wightii*-synthesized ZnO nanoparticles reduce the fitness and reproduction of the malaria vector *Anopheles stephensi* and cotton bollworm *Helicoverpa armigera*. **Physiological and Molecular Plant Pathology**. (IF-1.1)
 36. Vasantha-Srinivasan, P., **Senthil-Nathan, S***, Ponsankar, A., Thanigaivel, A., Chellappandian, M., Edwin, E.S., Selin-Rani, S., Kalaivani, K., Hunter, W.B., Duraipandian, V. and Al-Dhabi, N.A., 2017. Acute toxicity of chemical pesticides and plant-derived essential oil on the behavior and development of earthworms, *Eudrilus eugeniae* (Kinberg) and *Eisenia fetida* (Savigny). **Environmental Science and Pollution Research**, pp.1-12. (IF-2.7)
 37. Chellappandian, M., Thanigaivel, A., Vasantha-Srinivasan, P., Edwin, E.S., Ponsankar, A., Selin-Rani, S., Kalaivani, K., **Senthil-Nathan, S*** and Benelli, G., 2017. Toxicological effects of *Sphaeranthus indicus* Linn. (Asteraceae) leaf essential oil against human disease vectors, *Culex quinquefasciatus* Say and *Aedes aegypti* Linn., and impacts on a beneficial mosquito predator. **Environmental Science and Pollution Research**, pp.1-13. (IF-2.7)
 38. Edwin, E. S., Vasantha-Srinivasan, P., Ponsankar, A., Thanigaivel, A., Selin-Rani, S., Mankin, R. W., **Senthil-Nathan, S***, et al. 2016. Effects of temperature and nonionizing ultraviolet radiation treatments of eggs of five host insects on production of *Trichogramma chilonis* Ishii (Hymenoptera: Trichogrammatidae) for biological control applications. **Journal of Asia-Pacific Entomology**, 19(4), 1139-1144. (IF-1.0).
 39. Selin-Rani, S., **Senthil-Nathan, S***, Vasantha-Srinivasan, P., Edwin, E., Thanigaivel, A., Ponsankar, A. et al. 2016. Toxicity and physiological effect of quercetin on generalist herbivore, *Spodoptera litura* Fab. and a non-target earthworm *Eisenia fetida* Savigny **Chemosphere** 165 (2016) 257-267 (IF-3.7).

40. Ponsankar, A., Vasantha-Srinivasan, P., **Senthil-Nathan, S.**, Thanigaivel, A., Edwin, E.S., Selin-Rani, S., Kalaivani, K., Hunter, W.B., Alessandro, R.T., Abdel-Megeed, A. and Paik, C.H., 2016. Target and non-target toxicity of botanical insecticide derived from *Couroupita guianensis* L. flower against generalist herbivore, *Spodoptera litura* Fab. and an earthworm, *Eisenia foetida* Savigny. **Ecotoxicology and Environmental Safety**, 133, pp.260-270. (IF-3.7)
41. Edwin, E., Vasantha-Srinivasan, P., **Senthil-Nathan, S***, Thanigaivel, A., Ponsankar, A., et al. 2016. Anti-dengue efficacy of bioactive andrographolide from *Andrographis paniculata* (Lamiales: Acanthaceae) against the primary dengue vector *Aedes aegypti* (Diptera: Culicidae). **Acta Tropica** 163 (2016) 167-178. (IF-2.7).
42. Pradeepa, V., **Senthil-Nathan, S***, Sathish-Narayanan, S., Selin-Rani, S., et al. 2016. Potential mode of action of a novel plumbagin as a mosquito repellent against the malarial vector *Anopheles stephensi*, (Culicidae: Diptera). **Pesticide Biochemistry and Physiology** 134, pp.84-93 (IF-2.3).
43. Kalaivani, K., Maruthi-Kalaiselvi, M., **Senthil-Nathan, S.**, 2016. Effect of methyl salicylate (MeSA), an elicitor on growth, physiology and pathology of resistant and susceptible rice varieties. **Nature-Scientific Reports**, 6. 6:34498 | DOI: 10.1038/srep34498 (IF-7.6).
44. Vasantha-Srinivasan, P., **Senthil-Nathan, S***, Thanigaivel, A., et al., 2016. Developmental response of *Spodoptera litura* Fab. to treatments of crude volatile oil from *Piper betle* L. and evaluation of toxicity to earthworm, *Eudrilus eugeniae* Kinb. **Chemosphere** 155, 336-347 (IF-3.7).
45. Selin-Rani, S., **Senthil-Nathan, S***, Revathi, K., Chandrasekaran, R., Thanigaivel, A., Vasantha-Srinivasan, P., Ponsankar, P., Edwin, E. S., Pradeepa, V., 2016. Toxicity of *Alangium salvifolium* Wang chemical constituents against the tobacco cutworm *Spodoptera litura* Fab. **Pesticide Biochemistry and Physiology** 126, 92-101. (IF-2.1).
46. Ponsankar, A., Vasantha-Srinivasan, P., **Senthil-Nathan, S***, Edwin, E. S., Thanigaivel, A., et al. 2016. Target and non-target toxicity of botanical insecticide derived from *Couroupita guianensis* L. flower against generalist herbivore, *Spodoptera litura* Fab. and an earthworm, *Eisenia foetida* Savigny. **Ecotoxicology and Environmental Safety** 133, 60-270 (IF-3.7).
47. Edwin, E., Vasantha-Srinivasan, P., **Senthil-Nathan, S***, Thanigaivel, A., et al. 2016. Effect of andrographolide on phosphatases activity and cytotoxicity against *Spodoptera litura*. **Invertebrate Survival Journal (ISJ)** 13, 153-163. (IF-1.3)
48. Lija-Escaline, L., **Senthil-Nathan, S***, Thanigaivel, A., Pradeepa, V., Vasantha-Srinivasan, P., Ponsankar, P., Edwin, E. S., Ponsankar, P., Edwin, E. S., Selin-Rani, S., Abdel-Megeed, A., 2015. Physiological and biochemical effects of botanical extract from *Piper nigrum* Linn (Piperaceae) against the dengue vector *Aedes aegypti* Liston (Diptera: Culicidae) **Parasitology Research**, 114(11):4239-4249 (IF-2.3).
49. Pradeepa, V., Sathish-Narayanan, S., Kirubakaran, S.A., **Senthil-Nathan, S***, 2015. Toxicity of aristolochic acids isolated from *Aristolochia indica* Linn (Aristolochiaceae) against the malarial vector *Anopheles stephensi* Liston (Diptera: Culicidae). **Experimental Parasitology**, 153, 8-16 (IF-2.1).
50. de Almeida, G. D., Zanuncio, J. C., **Senthil-Nathan, S.**, Pratisoli, D., Polanczyk, R.A., Serrao, J. E., 2014. Cytotoxicity in the midgut and fat body of *Anticarsia gemmatilis*

- (Lepidoptera: Geometridae) larvae exerted by neem seeds extract. **Invertebrate Survival Journal**, 11, 79-86. (IF 1.1).
51. Chandrasekaran, R., Revathi, K., Thanigaivel, A., Kirubakaran, S.A., Senthil-Nathan, S*., 2014. *Bacillus subtilis* chitinase identified by matrix-assisted laser desorption/ionization time-of flight/time of flight mass spectrometry has insecticidal activity against *Spodoptera litura* Fab., **Pesticide Biochemistry and Physiology** 116, 1-12 (IF-2.1).
 52. Pradeepa, V., Sathish-Narayanan, S., Kirubakaran, S.A., Senthil-Nathan, S*., 2014. Antimalarial efficacy of dynamic compound of plumbagin chemical constituent from *Plumbago zeylanica* Lin (Plumbaginaceae) against the malarial vector *Anopheles stephensi* Liston (Diptera: Culicidae). **Parasitology Research** 113(8), 3105-3109. (IF-2.8).
 53. Kirubakaran, S. A., Sathish-Narayanan, S., Revathi, K., Chandrasekaran, R., Senthil-Nathan, S*., 2014. Effect of oil formulated *Metarhizium ansioptiae* and *Beauveria bassiana* against the rice leaffolder *Cnaphalocrocis medinalis* Guenée (Lepidoptera: Pyralidae). **Archives of Phytopathology and Plant Protection** 47(8), 977-992(IF-1.0).
 54. Revathi, K., Chandrasekaran, R., Kirubakaran, S.A., Senthil-Nathan, S*., 2014. Biocontrol efficacy of protoplast fusants between *Bacillus thuringiensis* and *Bacillus subtilis* against *Spodoptera litura* Fabr. **Archives of Phytopathology and Plant Protection** 47 (11), 1365-1375(IF-1.0).
 55. Senthil-Nathan, S., Physiological and biochemical effect of Neem and other Meliaceae plants secondary metabolites against Lepidopteran insects. **Frontiers in Invertebrate Physiology** (Invited Review Paper) 4,359: 1-17 (IF-2.2).
 56. Yazdani E, Sendi J. J., Aliakbar A., Senthil-Nathan, S., 2013. Effect of *Lavandula angustifolia* essential oil against lesser mulberry pyralid *Glyphodes pyloalis* Walker (Lep: Pyralidae) and identification of its major derivatives. **Pesticide Biochemistry and Physiology**, 107(3)369-376 (IF-2.1).
 57. Revathi, K., Chandrasekaran, R., Kirubakaran, S.A., Senthil-Nathan, S*., 2013. Effects of *Bacillus subtilis* metabolites on larval *Aedes aegypti* L. **Pesticide Biochemistry and Physiology** 107 (2)250-257 (IF-2.1).
 58. Nisha, S., Revathi, K., Chandrasekaran, R., Kirubakaran, S.A., Sathish-Narayanan, S., Stout, M. J., Senthil-Nathan, S*., 2012. Effect of plant compounds on induced activities of defense-related enzymes and pathogenesis related protein in bacterial blight disease susceptible rice plant. **Physiological and Molecular Plant Pathology** 80, 1-9. (IF-1.1).
 59. Chandrasekaran, R., Revathi, K., Nisha, S., Kirubakaran, S.A., Sathish-Narayanan, S., Senthil-Nathan, S*., 2012. Physiological effect of chitinase purified from *Bacillus subtilis* against the tobacco cutworm *Spodoptera litura* Fab. **Pesticide Biochemistry and Physiology**, 104 (1), 5-71 (IF-2.1).
 60. Thanigaivel, A., Chandrasekaran, R., Revathi, K., Nisha, S., Sathish-Narayanan, S., Kirubakaran, S.A., Senthil-Nathan, S., 2012. Larvicidal efficacy of *Adhatoda vasica* (L.) Nees against the bancroftian filariasis vector *Culex quinquefasciatus* Say and dengue vector *Aedes aegypti* L. in vitro condition. **Parasitology Research** 110:1993-1999. (IF-2.8).

61. Kalaivani, K., **Senthil-Nathan, S***, Murugesan, A.G., 2012. Biological activity of selected *Lamiaceae* and *Zingiberaceae* plant essential oils against the dengue vector *Aedes aegypti* L. (Diptera: Culicidae). **Parasitology Research** 110:1261–1268 (IF-2.8).
62. **Senthil-Nathan, S***, Choi, M.Y., Paik, C.H., Seo, H.Y., Kalaivani, K., Kim, J.D., 2009. Toxicity and behavioral effect of 3b,25,26-trihydroxycycloartane and, beddomei lactone on the rice leaffolder *Cnaphalocrocis medinalis* (Guenée) (Lepidoptera: Pyralidae). **Ecotoxicology and Environmental Safety** 72, 1156-1162 (IF-3.7).
63. **Senthil-Nathan, S***, Kalaivani, K., Choi, M.Y., Paik, C. H., 2009. Effects of Jasmonic Acid-induced resistance in rice on the plant brownhopper, *Nilaparvata lugens* Stål (Homoptera: Delphacidae) **Pesticide Biochemistry and Physiology** 95, 77-84 (IF-2.1).
64. **Senthil-Nathan, S***, Choi, M.Y., Seo, H.Y., Paik, C.H., Kalaivani, K., 2009. Toxicity and physiological effects of neem pesticides applied to rice on the *Nilaparvata lugens* Stal, the brown planthopper. **Ecotoxicology and Environmental Safety** 72, 1707-1713 (IF-3.7).
65. **Senthil-Nathan, S***, Choi, M.Y., Paik, C.H., Seo, H.Y., Kalaivani, K., Kim, J.D., 2008. Effect of azadirachtin on acetylcholinesterase (AChE) activity and histology of the brown planthopper *Nilaparvata lugens* (Stål). **Ecotoxicology and Environmental Safety** 70, 244-250 **Highlighted Article** (IF-3.7).
66. **Senthil-Nathan, S***, Choi, M.Y., Paik, C.H., Seo, H.Y., Kalaivani, K., Kim, J.D., 2008. The toxicity and physiological effect of goniotalamin, a styryl-pyrone, on the generalist herbivore, *Spodoptera exigua* Hubner **Chemosphere** 72, 1393-1400, (IF-3.6).
67. **Senthil-Nathan, S***, Hisham, A., Jayakumar, G., 2008. Larvicidal and growth inhibition of the malaria vector *Anopheles stephensi* by triterpens from *Dysoxylum* spp. (Meliaceae). **Fitoterapia** 76, 106-111 (IF-2.21).
68. **Senthil-Nathan S.**, 2007. The use of *Eucalyptus* leaf extract as a natural larvicidal agent against malarial vector *Anopheles stephensi* Liston (Diptera: Culicidae). **Bioresource Technology** 98 (9), 1856-1860 (IF-5.1).
69. **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-3.6).
70. **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-2.1).
71. **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-2.1).
72. **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-1.66).
73. **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-3.6).

74. **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-3.6).
75. **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-5.1).
76. **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-3.7).
77. **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-1.6).
78. **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-4.9).
79. **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-3.6).
80. **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-3.7).
81. **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-2.1).
82. **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-2.1).
83. **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-1.0).
84. **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-2.1).
85. **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-2.1).

86. **Senthil-Nathan, S***, Kalaivani, K., Murugan, K., Chung, P.G., 2005. Efficacy of neem limonoids on *Cnaphalocrocis medinalis* (Guenée) (Lepidoptera: Pyralidae) the rice leaf folder. **Crop Protection** 24 (8), 760-763 Top 25 articles (IF-1.66).
87. **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-2.5).
88. **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-1.0).
89. 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).
90. Murugan, K., Jeyabalan, D., Senthil Kumar, N., Sivaramakrishnan, 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-1.3).
91. . Murugan, K., Sivaramakrishnan, 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)
92. Murugan, K., Jeyabalan, D., Senthil Kumar, N., Babu, R., Sivaramakrishnan, S., **Senthil-Nathan, S.**, 1999. Antifeedant and growth inhibitory potency of neem limonoids against *Helicoverpa armigera* Hubner (Lepidoptera: Nocutidae). **Insect Science and its application** 1, 157-162 (IF-0.8)
93. Murugan, K., Senthil Kumar, N., Jeyabalan, D., **Senthil-Nathan, S.**, 1999. Bioactivities of neem products against Teak defoliator, *Hyblaea purea* Cramer (Lepidoptera: Hybacidae) **Journal of Non-Timber Forest products** 6, 78-82. (IF-0.6)
94. 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-0.6).
95. 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-0.6).
96. 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: Daneadae) **Flora and Fauna** 3, 99-102.
97. **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)

98. 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.
 99. 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.
 100. **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.
 101. **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)
 102. 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)
 103. 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.
 104. 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.
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Book(s) chapter published: (3)

1. **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.
2. **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.
3. 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 Alokshen [Eds] Phoinex Publisher, New Delhi, pp. 232-243.

RESEARCH SUPPORT AND FUNDING

Research Grants Secured (223.59 lakhs as Principal Investigator)

1. 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.
2. 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.
3. Molecular characterization of the entomopathogenic bacteria and detection of toxic gene in strain using RAPD-PCR technique: Development of microbial pesticides against the polyphagus insect *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae). **PI**, DST, Govt. of India, **Rs. 25** lakhs.
4. 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.
5. Effect of enriched CO₂ and O₃ on insect-plant interactions. A field experiment and green house analysis of CO₂ and O₃ mediated changes on plant chemistry in specialist herbivore performance. **PI**, CSIR, **Rs.27.09** lakhs
6. 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.
7. Effect of elevated CO₂ 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:

PDF

Dr. Chellappandian Muthiah, (N-PDF-DST)

Dr. S. Karthi, (N-PDF-DST)

Dr. A. Thanigai vel (N-PDF-DST) (Co-supervisor)

Dr. A. Ponsankar (N-PDF-DST) (Co-supervisor)

Ph.D. Research Scholars

Pavana K Nair Ph.D Student (2016-Present)

P. Kirupananda Rajan (2016-Present)

K. Chanthini Ph.D Student (2017-Present)

N. Shyam Sundar, Ph.D Student (2017- Present)

V. Stanly Raja, Ph.D Student, DST-SERB, SRF (2017- Present)

H. Sivanesh, Ph.D Student (2017- Present)

PREVIOUS MEMBERS OF THE BET LAB

[Dr. P. Indira-Gandhi](#), 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 **Assistant Professor** at Srimath Andavan College of Arts and Sciences, Trichy.

[Dr. R. Dr. 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).

[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).

[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 National Post-Doctoral Scientist (N-PDF-DST).

[Dr. S.Selin Rani](#), DST-Inspire fellow. Effects of plant extracts and its active compound against the polyphagous insects.

[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 National Post-Doctoral Scientist in South China University.

[Dr. E. Edwin](#), Research Fellow. Effects of plant extracts and its active compound against stored grain pest.

M. Phil.

1. **Mrs. P.S. Sangeetha**, Identification of certain medicinally important plant in relation to sericulture
2. **Mrs. S. Sangeeth**, 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)]

Invited Speaker

1. 2018, 'Impact of global warming on flora and fauna', Sri Narayana College, Punalur.
2. 2018, 'Tackling the plastic pollution - the nanotechnical way', P.G. Department of Zoology, Sri Parasakthi College for women, Courtallam, Tirunelveli.
3. 2017, 'Application of biotechnology in pest management'- Department of Zoology, Sri Paramakalyani college, Alwarkurichi.
4. 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.
5. 2017, Biopesticides, Development and formulation by biotechnological approach', Department of Zoology, St. Xavier's College.
6. 2017, Valedictory address, Zoology association, Department of Zoology, St. Xavier's College
7. 2015, Plenary lecture, 'Biodiversity products & Industrial Applications', Centre for biodiversity and forest studies, Periyar University, Salem.
8. 2014, '**Role of biopesticides in integrated agriculture system**', Department of Zoology, Sri Paramakalyani College, Alwarkurichi.
9. 2014, Keynote address, '**Biopesticide and sustainable agriculture**' in National Symposium on Biotechnology for Sustainable livelihood, at Annai Velankanni College, Kanyakumari.
10. 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.

11. 2013, Plenary lecture on **'Effect of elevated CO₂ 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.
12. 2012, **34th Meeting of the Rice Technical Working Group**, Hot Springs Convention Center Hot Springs, Arkansas, USA.
13. **2010, Tamil Nadu State Science forum 10th Conference**, Manonmaniam Sundaranar University, Tirunelveli, TN, India.
14. 2009, **'Academic interaction programme'**, invited paper and proposal conducted by BRNS (Department of Atomic Energy), Courtallam, Tirunelveli.
15. 2008, **'Biofertilizer development and usage in this Millennium'** in Sri Kumara Gurupara Swamigal Arts College, Srivaikuntam, Thoothukudi, Tamil-Nadu.
16. 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.
17. 2006, Invited paper presentation **Korean Entomological Science meeting** at Muju, South Korea.
18. 2006, Invited paper presentation in **Korean Entomological Science meeting** held at Seoul, South Korea.