



Dr. S. Anusuya
Assistant Professor

Address

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Date of Birth: 15/01/1985

Educational Qualification:

Ph.D., Plant Science- Bharathidasan University, Tiruchirappalli (Nov 2015-Highly Recommended)

M.Phil., Biotechnology (80%) - Bharathidasan University, Tiruchirappalli (Mar 2009)

M.Sc., Plant Science (87%) - Bharathiar university, Coimbatore (Apr 2007)

B.Sc., Botany (91%) - Bharathidasan University, Tiruchirappalli (Apr 2005)

QUALIFIED TNSET 2017

Awards:

- ✓ University **FIRST** rank- B.Sc., Botany, Bharathidasan University, Tiruchirappalli.
 - ✓ University **SECOND** rank- M.Sc., Plant Science, Bharathiar University, Coimbatore.
 - ✓ **Post-Graduate Merit Scholarship for University Rank holders** (2005-2007)
 - ✓ Sri Nirupa memorial gold medal for proficiency in Botany during 2004-05
 - ✓ Sri Nirupa memorial gold medal for best out gone during 2004-05.
 - ✓ Gold medal for proficiency in Tamil during 2004-05.
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Teaching & Research Experience

- Assistant Professor in Department of Botany, St. Joseph's College, Tiruchirappalli (19/06/2018 to till date)
- Principal Investigator, **SERB-National Post Doctoral Fellow(DST)** in Department of Botany, Bharathiar University, Coimbatore (10/04/2017 to 30/11/2017).
- Assistant Professor in Department of Botany, Bishop Heber College, Tiruchirappalli (10/07/2015 to 31/03/2017).
- Project fellow in TNSCST project entitled "An Ecofriendly approach to control rhizome rot of turmeric" at Dept. of Plant Science, Bharathidasan University, Tiruchirappalli (01/06/2012- 31/05/2014).

Areas of Research: Molecular Plant Pathology, Nanotechnology, Natural Product-Based Therapeutics

Research Supervision/ guidance: Ongoing (4)

Publications

1. **S. Anusuya**, R. Parthasarathy. 2025. Natural Synthesis of β -Glucan Nanoparticles via Microwave for Breast Cancer Prevention: A Study on Oats-Derived Nanoparticles. *Natural Product Research*. 1–7. <https://doi.org/10.1080/14786419.2025.2477225>. **Impact Factor: 2.1**
2. S. P. Parthasarathy, **S. Anusuya**, S. Rajalakshmi, D. Megha, C. Appunu, S. Alagumanian, M. Manickavasagam. (2024). Elucidating the efficacy of functionalized multi-walled carbon nanotube in the biogenesis of L-Dopa and antioxidant metabolites in cell cultures of *Hybanthus enneaspermus*. *Plant Physiology and Biochemistry*, 206: 108310. **Impact Factor: 6.5**
3. Parthasarathy R, Jayabaskaran C, Manikandan A, **Anusuya S**. Synthesis of Nickel-Chitosan Nanoparticles for Controlling Blast Diseases in Asian Rice. *Applied Biochemistry and Biotechnology* (2022) <https://doi.org/10.1007/s12010-022-04198-8>. **Impact Factor: 3.1**
4. Sathiyabama M, **Anusuya S**. Enhanced growth, yield and phytoconstituents in turmeric (*Curcuma longa* L.) plants treated with β -D-Glucan nanoparticle under glass house condition. *African Journal of Agronomy* (2021). 9(2), 001-005.
5. K. Rajan, A. Archana and **S. Anusuya**. Larvicidal potential of certain plant extracts of the family Lamiaceae against *Anopheles subpictus* (Diptera: Culicidae). *International Journal of Mosquito Research* 8(6) (2021) 35-42.
6. **Anusuya S**. Chitin Derived Bionanoparticles Evoke Defense Responses in Chickpea: a Cost-effective Strategy for Sustainable Chickpea Production. *Bionanoscience* (2021) 1-12. **Impact Factor: 3.0**
7. Manikandan A, Parthasarathy R, **Anusuya S**, Jianying H. An overview of plant defense-related enzymes responses to biotic stresses. *Plant Gene* 27 (2021) 100302. **Impact Factor: 2.2**
8. Sirumbayee E, **Anusuya S**. Preparation of Zinc Oxide Nanoparticles using *Azima tetraacantha* Lam. Leaf Extract and Its Potential for the Removal of Contaminants from Water. *J. Nanosci. Tech.* (2020), 862-865.
9. Haripriya P, Stella PM, **Anusuya S**. Foliar Spray of Zinc Oxide Nanoparticles Improves Salt Tolerance in Finger Millet Crops under Glasshouse Condition. *SCIOL Biotechnol* (2018), 20-29.
10. **S. Anusuya**, K. Nibiya Banu. Silver-chitosan nanoparticles induced biochemical variations of chickpea (*Cicer arietinum* L.). *Biocatalysis and Agricultural Biotechnology*. 8 (2016) 39-44. **Impact Factor- 3.4**

11. M. Sathiyabama, Nirit Bernstein, **S. Anusuya**. Chitosan elicitation for increased curcumin production and stimulation of defence response in turmeric (*Curcuma longa* L.). *Ind. Crops and Products*. 89 (2016) 87–94. **Impact Factor- 5.6**
12. **Anusuya, S.** & Sathiyabama, M. 2016. Effect of chitosan on growth, yield and curcumin content in turmeric under field condition. *Biocatalysis and Agricultural Biotechnology*. 6: 102-106. **Impact Factor- 3.4**
13. **Anusuya, S.** & Sathiyabama, M. 2015. Induced Chitinase and Chitosanase Activities in Turmeric Plants by Application of β -D-Glucan Nanoparticles. *Notulae Scientia Biologicae*, 7: 295- 298.
14. **S. Anusuya** & M. Sathiyabama, Protection of turmeric plants from rhizome rot disease under field conditions by β -D-glucan nanoparticle. *International Journal of Biological Macromolecules* 77 (2015) 9-14. **Impact Factor-7.7**
15. **S. Anusuya** & M. Sathiyabama, Effect of β -glucan nanoparticle pre-treatment in inducing resistance against *Pythium aphanidermatum* infection in *Curcuma longa* (L.). *Int. J. Biol. Macromolecules* 74 (2015) 278-282. **Impact Factor-7.7**
16. **S. Anusuya** & M. Sathiyabama, Foliar application of β -D-glucan nanoparticles to control rhizome rotdisease of turmeric. *Int. J. Biol. Macromolecules* 72 (2015) 1205–1212. **Impact Factor-7.7**
17. **S. Anusuya** & M. Sathiyabama, Preparation of β -D-glucan nanoparticles and its antifungal activity. *Int. J. Biol. Macromol.* 70 (2014) 440–443. **Impact Factor-7.7**
18. **S. Anusuya** & M. Sathiyabama, 2014. Application of nano-glucan to turmeric rhizome induce defence response against *Pythium aphanidermatum*. *Archives of Phytopathology and Plant Protection*, <http://dx.doi.org/10.1080/03235408>. **Impact Factor: 1.0**
19. **S. Anusuya** & M. Sathiyabama, 2014. Effect of Chitosan on Rhizome Rot Disease of Turmeric Caused by *Pythium aphanidermatum*. *ISRN Biotechnology*, <http://dx.doi.org/10.1155/2014/305349>.
20. **S. Anusuya** & M. Sathiyabama, 2013. Identification of defence proteins from the seed exudates of *Cicer arietinum* L. and its effect on the growth of *Fusarium oxysporum* f.sp. *ciceri*. *Archives of Phytopathology and Plant Protection*, <http://dx.doi.org/10.1080/03235408>. **Impact Factor: 1.0**
21. Anusuya N, **Anusuya S**, Manian R, Siddhuraju P, Manian S. Antioxidant and free radical scavenging activity of certain dietary and medicinal plant extracts. *Food*. 2009; 3: 47-52.

Cumulative Impact Factor: 60.1; Total Citations: 650; h- index: 13; i10-index: 14

Books Published:

1. **S. Anusuya**, S.R. Senthilkumar (2025). Basics in Drug Discovery: A molecular docking approach, Genic Books Publishers Pvt. Ltd, Agra, UP. ISBN: 9700190523220
2. **S. Anusuya** (2025). Economic Botany: Integrating Traditional knowledge with next-generation science, Genic Books Publishers Pvt. Ltd, Agra, UP. ISBN: 9788198641441

Book chapters:

1. **S. Anusuya**, M. Sathiyabama (2025). Nanointegrated Methods for Plant Disease Management and Sustainable Agriculture: Theresa, M., Jose, A., Parameswaranpillai, J., & E K, R. (Eds.). (2025). *Agricultural Sustainability through Nanotechnology* (1st ed.). CRC Press, Taylor and Francis group, UK, 99-112. <https://doi.org/10.1201/9781003354253>
2. Manikandan, A., Vijayakumar, T.P., Parthasarathy, R., Prakash, P., **Anusuya, S.**, Murugesan, K., Weseley, E., Jianying, H. (2024). Chitosan Based metal/metal oxides hybrid nanocomposites for plant protection, Eds. Prathamesh, G., Srushti, M., (eds), *Agricultural Research updates*, Nova Science Publishers, NY, 47, 147-174.
3. **S. Anusuya**, K. Rajan, Role of Zinc and Zinc Oxide Nanofertilizer in Enhancing Crop Production. Springer, 2024: Rakesh Kumar Bachheti, Archana Bachheti, Azamal Husen (eds), *Metal and Metal-Oxide Based Nanomaterials*, 111-131.
4. R. Koshila Ravi, **S. Anusuya**, M. Balachandar, T. Muthukumar. Microbial interactions in soil formation and nutrient cycling. Springer Nature, 2019: A. Varma, D. K. Choudhary (eds.), *Mycorrhizosphere and Pedogenesis*, https://doi.org/10.1007/978-981-13-6480-8_21
5. R. Koshila Ravi, **S. Anusuya**, M. Balachandar, T. Muthukumar. Influence of xenobiotics on the mycorrhizosphere. Springer Nature 2019: A. Varma, D. K. Choudhary (eds.), *Mycorrhizosphere and Pedogenesis*, https://doi.org/10.1007/978-981-13-6480-8_7

Conferences/Seminars

- Organized an International Virtual Conference on “**Frontiers in Biological Research**” (15-21st February 2021) at St. Joseph’s College, Tiruchirappalli in association with The Biomics, Bangalore.
- Poster presented in International Conference on “**Sustainable management and Conservation of natural resources**” sponsored by National Biodiversity Authority-India (15.02. 2020).
- Organized One day workshop on Electrophoresis (DBT-STAR Scheme), St. Joseph’s College, Tiruchirappalli (07.02.2020).

- Participated in International conference on “**Cancer inferno and its prevention strategies**” organized by PG Department of Biochemistry, Periyar EVR college, Trichy (22.02.2019).
 - Participated in International conference on “**Potential impact of pesticides on environment and human health**” organized by Department of Chemistry, Dayananda Sagar University, Bengaluru (November 2nd-4th, 2017).
 - Presented poster entitled “**Zinc oxide nanoparticles promotes the growth of ragi (*Eleusine coracana* (L.) Gaertn.) Seedlings under salt stress**” in 10th NABS National conference on Recent trends in Life Sciences: Research, Practices and Application for sustainable development, Bharathiar University, Coimbatore (7-8 September, 2017).
 - Participated in Indo-French Seminar on “**Women in Science**” through CEFIPRA in Indian Institute of Science Bangalore, India (3-5 Feb 2015).
 - Won third place in oral presentation entitled “**Chitosan induced disease resistance in *Curcuma longa* L. against rhizome rot**” in National conference on Agricultural Biotechnologies for sustainable food security, Pudukkottai, TamilNadu (22 - 24 March 2013).
 - Presented Poster entitled “**Application of chitosan to turmeric plants induce defense enzymes, plant growth and control rhizome rot disease under field condition**” in National symposium on pathogenomics for diagnosis and management of plant diseases, CTCRI, Thiruvananthapuram (24-25 October, 2013).
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Resource person:

1. Chairperson in International Conference exploring multidisciplinary innovations for a sustainable world at St. Joseph`s College for Women, Alapuzha on 16.12.2024.
2. Zonal level training of Trainers(ToT) workshop conducted by SCERT (TN Govt) at Yercaud, Salem from 17.10.2024 to 18.10.2024.
3. SCERT-ToT Upper Primary Science- Book Introduction (Online) conducted by SCERT on 05.10.2024
4. Zonal level training of Trainers (ToT) workshop conducted by SCERT (TN Govt) at Yercaud, Salem from 12.09.2024 to 13.09.2024.
5. Panelist in 31st Foundation day & Kisan Mela at National Research Centre for Banana- Panel Discussion on 21.08.2024.
6. Chairperson in National conference on Plant Actives, Bioenergy and sustainable products sponsored by DST-SERB at Bishop Heber College, Trichy on 02.08.2024.

7. Student Young Scientist Programme-2023 (YSSP) sponsored by TamilNadu State Council for Science and Technology (TNSCST) from 26.12.2023 to 09.01.2024.
8. Knowledge Enrichment Programme on “Climate change and Sustainability” at Srimad Andavar Arts & Science College, Trichy on 01.03.2023.
9. “Nanotechnology in Plant pathology” in Summer Training Program In Biology organized by Bharathiar University, Coimbatore organized & The Academy of Sciences, Chennai-July 23-August 6, 2022.
10. Talk on “Impact of Climate change on Biodiversity” on 07.06.2022- Vimala College, Thrissur, Kerala
11. External Expert- Project Proposal in Life Sciences (Bishop Heber College, Trichy) on 12.11.2021.
12. Chairperson in Student Conclave- Science through Inquiry and Research (STIR) by United Board for Christian Higher Eductaion in Asia- 28.06.2021
13. One day Lecture workshop on Bioproducts- Srimad Andavan College of Arts and Science, Trichy- 21.03.2019

Academic Bodies:

- Board of Studies- Member- Department of Botany, Holy Cross College, Trichy (from 2021-till date)

Reviewer in Journals:

- ✓ Natural Product Research (Springer)
- ✓ International Journal of Biological Macromolecules (Elsevier)
- ✓ Carbohydrate Polymers (Elsevier)
- ✓ Bionanoscience (Springer)
- ✓ Applied Biochemistry and Biotechnology (Springer)
- ✓ Colloids and Surfaces A: Physicochemical and Engineering Aspects (Elsevier)
- ✓ Ecotoxicology and Environmental Safety (Elsevier)
- ✓ Biocatalysis and Agricultural Biotechnology (Elsevier)
- ✓ Current Plant Biology (Elsevier)
- ✓ Pesticide Biochemistry and Physiology (Elsevier)
- ✓ Australasian Plant Pathology (Springer)
- ✓ Plant Science (Elsevier)