

CURRICULAM VITAE

Dr. J. SEBASTIN RAJ, M.Sc., Ph.D
Asst. Professor & Member In-charge

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EDUCATIONAL QUALIFICATION

- ✓ Ph.D. Botany (2008) St. Joseph's College, (Autonomous), Tiruchirappalli.
- ✓ M.Sc. Botany (2001) St. Joseph's College, (Autonomous), Tiruchirappalli.
- ✓ B.Sc. Botany (1999) St. Joseph's College, (Autonomous), Tiruchirappalli.

PROJECTS

- ✓ Asymbiotic seed germination and Micropropagation of selected orchid species from the Western Ghats of Tamil Nadu, India (**Ph.D Thesis**).
- ✓ *In vitro* regeneration of *Vanilla planifolia* Andr. and their Antimicrobial Activity (**M. Sc Thesis**).

TEACHING EXPERIENCE

ORGANIZATION : Jamal Mohamed College, (Autonomous), Tiruchirappalli.
DESIGNATION : Assistant Professor and Head i/c in Department of Biotechnology
DURATION : 2009 – Till Now

ORGANIZATION : Mahendra Arts and Science College, Kalippatti, Namakkal.
DESIGNATION : Assistant Professor in Department of Biotechnology
DURATION : 2007 – 2009

RESEARCH EXPERIENCE

ORGANIZATION : St. Joseph's College, (Autonomous), Tiruchirappalli.
DESIGNATION : **Junior Research Fellow (JRF)**
DURATION : 2004 – 2007

Title: Popularization of Orchid floriculture among rural masses by the adoption of Mycorrhizal fungal technology. Sponsored by the Department of Science and Technology, Government of India, New Delhi.

STAFF APPROVAL

- ✓ Department of Biotechnology, Periyar University, Salem.
- ✓ Department of Botany and Department of Biotechnology, Bharathidasan University, Tiruchirappalli.

**** PATENT ****

Deep learning based approach to study the characteristics of various micro plastic degrading enzymes that are released from microorganisms.

- ✓ Application No.202241040364 A
- ✓ Publication Date: 22/07/2022

Ph.D SCHOLARS AWARDED UNDER MY GUIDANCE

- **Ms. D. VITHYA** (Part – Time Research Scholar)

Ref. No: 18997/Ph.D. K9/Biotechnology/Part-Time/November 2018.

Title of the Thesis: Green Synthesis of Silver Nanoparticles and Exploring the Antioxidant, Antidiabetic and Anticancer Potential of *Pterocarpus indicus* Willd. Stem Bark and Leaves Extracts.

Ph.D SCHOLARS PURSUING UNDER MY GUIDANCE

- ✓ **Ms. D. Deepalakshmi**, Asst. Professor, Sri Sarada Niketan College, Karur.
- ✓ **Ms. Ruth Daniel** (NRI) Faculty of Natural Science, Dept. of Biology, University of Guyana, South America.
- ✓ **Mr. B. Maheswaran**, Asst. Professor, ANJAC, Sivakasi.

M.Phil SCHOLARS AWARDED UNDER MY GUIDANCE

- ✓ **C. Deepa** (2012), *In vitro* Culture Studies and Antimicrobial Activities of *Coleus aromaticus* Benth – A Valuable Medicinal Plant.
- ✓ **S. Deborah** (2012), Biodegradation of Distillery Effluent by Plant and Microbes.
- ✓ **P. Gomathi** (2013), Phytochemical Analysis, Antibacterial and Anticancer Activity of *Dodonaea viscosa* Linn.
- ✓ **S. Supaida** (2014), Drug Activity Studies in Chemical Component of *Alpinia calcarata* Rosc.
- ✓ **M. Nithya** (2014), Phytochemical Screening and Comparative Analysis of *In vitro* Antidiabetic Activity of *Wattakaka volubilis* Linn. and *Gymnema sylvestre* Linn.
- ✓ **M. Shahanaz Begum** (2015), *In vitro* Antidiabetic Activity of *Psidium guajava* Linn. and *Syzygium cumini* Linn.
- ✓ **B. Maheswaran** (2019), Dengue drug designing and SiO₂ Nano-particles Assessment for the Selected Plant Compounds against Dengue Vector.

RESEARCH COLLABORATION (Ph.D., Co-guide)

- Co-guide of Ms. Aiswarya (Reg. No: BDU2110372779647) under the guidance of Dr. S. Rajakumar, Asst. Professor, Dept. of Marine Biotechnology, Bharathidasan University, Trichy, (2021).
- Co-guide of Ms. S. Dhayanithi under the guidance of Dr. P. Chellapandi, Associate Professor and Head, Dept. of Bioinformatics, Bharathidasan University, Trichy, (2022).
- Co-guide of Ms. R. Sagaya Princy under the guidance of Dr. S. Rajakumar, Asst. Professor, Dept. of Marine Biotechnology, Bharathidasan University, Trichy, (2021).
- Co-guide of Ms. K. Indira under the guidance of Dr. K. Anbarasu, Associate Professor and Head, Dept. of Marine Biotechnology, Bharathidasan University, Trichy, (2023).

BOARD OF STUDIES MEMBER

- ✓ **Subject Expert** for UG and PG Biotechnology Board of Studies (BOS) meeting in PG & Research Department of Biotechnology, Mahendra Arts and Science College (Autonomous), Namakkal.
- ✓ **Subject Expert** for UG and PG Biotechnology Board of Studies (BOS) meeting in PG & Research Department of Biotechnology, ANJAC College, Sivakasi.
- ✓ **Subject Expert** for UG and PG Life Science Board of Studies (BOS) meeting in PG & Research Department of Life Science, PRIST University, Thanjavur.

AWARDS AND CERTIFICATE RECEIVED

- Lead Auditor of Environment Management Audits – by Nature Science Foundation, Coimbatore from 01st September, 2022 to 31st December, 2027.
- Best faculty Award - by Nature Science Foundation, Coimbatore on 25th February 2023.
- Certified lead auditor in Green Campus, Environment, Energy and Waste Management Audits by Nature Science Foundation, Coimbatore since 2022.

RESOURCE PERSON

- ✓ Act as a resource person in TNSCST sponsored “Creation of Scientific awareness to the Nagapattinam (District) School Students” on 28th June, 2012, conducted by Department of Chemistry, AVC College (Autonomous), Mayilladuthurai.
- ✓ Act as a resource person in TNSCST sponsored “Creation of Scientific awareness to the students” on 17 & 18 July, 2012 conducted by Department of Zoology, Periyar EVR College (Autonomous), Tiruchirappalli – 620020.

- ✓ Acted as resource Person in the 'In-service Training Programme for Secondary Grade Science Teachers' sponsored by TNSCST, Chennai and organized by Dept. of Biotechnology, Dhanalakshmi Srinivasan college of Arts and Science for women, Perambalur, held during 3rd – 7th August, 2015.
- ✓ Acted as a resource Person in Biotechnology Department Association activity in Cauvery College, Tiruchirappalli on 12th September, 2018.
- ✓ Acted as a resource Person in Microbiology Department Association activity in Dhanalakshmi Srinivasan College of Arts and Science, Perambalur on 20th September, 2018.
- ✓ Acted as a resource Person in Biotechnology Department Association activity in Sri Bharathi Arts and Science College, Pudukkottai on 15th December, 2021.
- ✓ Acted as a resource Person in PRIST University, Thanjavur, One day seminar on applied Biology, on 04th May, 2022.

DOCTORAL COMMITTEE MEMBER FOR Ph.D SCHOLARS

- ✓ Mr. K. Ramanathan, Ph.D Scholar, Dept. of Biotechnology, Srimad Andavan Arts and Science College, Trichy.
- ✓ Ms. J. Bhuvaneshwari, Ph.D Scholar, Dept. of Biotechnology, Srimad Andavan Arts and Science College, Trichy.
- ✓ Ms. B. Vasuki, Ph.D Scholar, Dept. of Biotechnology, Srimad Andavan Arts and Science College, Trichy.
- ✓ Ms. T. Padmadevasena, Ph.D Scholar, Dept. of Biotechnology, Srimad Andavan Arts and Science College, Trichy.
- ✓ Ms. G. Tharani, Ph.D Scholar, Dept. of Biotechnology, Bharath College of Science and Management, Thanjavur.
- ✓ Ms. D. Benasir, Ph.D Scholar, Dept. of Biotechnology, Bharath College of Science and Management, Thanjavur.
- ✓ Ms. Uma Maheswari, Ph.D Scholar, Dept. of Biotechnology, Srimad Andavan Arts and Science College, Trichy.

PAPER PUBLICATIONS

1. Francis Xavier, T., Senthilkumar, S., Okoh, A.I and **Sebastin Raj J.** (2003). Antibacterial activity of *Malaxis reedi* Sw. An ornamental orchid of Shervaroy Hills of Eastern Ghats, South India. Science Focus (Nigeria) 5: 82-88.
2. **Sebastin Raj J.**, Senthilkumar, S and John Britto, S. (2004). *In vitro* propagation of *Vanilla planifolia* Andr. (Orchidaceae). Biodiversity and Conservation. Ed. John Britto S, The Rapinat Herbarium. 306-309.
3. John Britto, S., Senthilkumar, S., **Sebastin Raj J.**, Philip Robinson, J and

Vinothkumar, D. (2004) *In vitro* Seed germination, Protocorm Growth and Development of *Dendrobium aequum* Lindl. RETELL. Vol: 5, No:1.

4. **Sebastin Raj, J.**, John Britto, S., Philip Robinson, J., Vinoth Kumar, D and Senthilkumar, S. (2006) *In vitro* seed germination and plantlet Regeneration of *Coelogyne mossiae* Rolfe. Journal of Biological Research. 5: 79-84.
5. Philip Robinson, J., John Britto, S., **Sebastin Raj J.**, Vinoth Kumar, D and Senthilkumar, S. (2006). Micropropagation of *Emilia zeylanica* C.B.Clarke, by using explants of Inflorescence rachis. Journal of Biological Research. 5: 79-84.
6. Philip Robinson, J., Balakrishnan, V., **Sebastin Raj J** and John Britto, S. (2009). Antimicrobial Activity of *Alphinia calcarata* Rosc. And characterization of new α, β unsaturated carbonyl compounds. Advances in Biological Research. 3(5-6): 185- 187.
7. Vinoth Kumar, D., John Britto, S., **Sebastin Raj J.**, Philip Robinson, J., and Senthil Kumar, S. (2009). Callus regeneration from stem explants of *Pseudarthra viscida* (L.) Wight and Arn. – A vulnerable medicinal plant. African Journal of Biotechnology. Vol. 8(17), PP. 4048-4051.
8. **Sebastin Raj J** and Inayath Sidique, K.M., (2011). *In vitro* rapid clonal propagation of *Aristolochia bracteolata* Lam. (Aristolochiaceae). – a valuable medicinal plant. World Journal of Agricultural Sciences. 7 (6): 653-658.
9. **Sebastin Raj J.**, John Britto S and Senthil Kumar S R., (2013). Micropropagation of *Operculina turpethum* (Linn.) Silva Manso. Using Cotyledonary node explants. Academic Journal of Plant Sciences. 6 (2): 77-81.
10. **Sebastin Raj J** and Muhirkuzhali, S (2014). Asymbiotic seed germination and Micropropagation of *Spathoglottis plicata* Blume. International Journal of Advances in Pharmacy, Biology and Chemistry. 3(2); 495-501.
11. **Sebastin Raj J**, John Britto, S., Vinoth Kumar, D., Philip Robinson J and Thangavel P. (2014). Rapid Propagation of *Vanda testacea* (Lindl.) Rchb.F. – A Highly Medicinal Value Epiphytic Orchid of India. World Journal of Agricultural Sciences 10 (5): 223-230.
12. Deborah, S and **Sebastin Raj J** (2016). Bioremediation of heavy metals from distilleries effluent using microbes. Journal of Applied and Advanced Research, 1 (2): 23-28.
13. Philip Robinson, J, Jyoti Prasad Kakati, **Sebastin Raj J**, Suriya K (2017). *In vitro* seed germination of *Cymbidium aloifolium*(L.) sw., a potential medicinal orchid from Eastern Ghats of Tamil nadu, India. Journal of Plant Biotechnology, 44(3): 343-348.
14. Mythili R, Selvankumar T, Srinivasan P, Sengottaiyan A, **Sebastin Raj J**, FuadAmeen, AhmedAl-Sabri, S.Kamala-Kannan, M.Govarthanan (2018). Biogenic synthesis, characterization and antibacterial activity of gold nanoparticles synthesised from vegetable waste, Journal of Molecular Liquids, (262) 318-321.
15. Sugapriya Menaga Paulraj, Maheswaran Baskaran, Sakkanan Ilango, Geetha Paramasivam and **Joseph Sebastin Raj**, (2020). Insilico and proteomic analysis of Dengue vector Midgut proteins treated by *Aegle marmelos* Bioactive compounds,

16. Vithya D and **Sebastin Raj J**, (2021). Phytochemical profiling and GC-MC analysis of *Pterocarpus indicus* Willd. Using ethanolic stem bark and leaves extract. International Journal of Botany Studies, Vol.6(1), 395-399.
17. Baskaran M and **Sebastin Raj J**, (2021). Molecular docking of phytochemicals against dengue NS2B/NS3 protease: A study from virtual perspective, International Journal of Advance and Innovative Research, Vol 8(1).
18. Vithya D and **Sebastin Raj J** (2021). Antioxidant and antidiabetic activity of synthesized silver nanoparticles using leaves and stem bark of *Pterocarpus indicus* Willd., International Journal of Biology, Pharmacy and Allied Science, Vol.10 (6): 1763-1783.
19. Vithya D and **Sebastin Raj J**, (2021). Synthesis of Silver nanoparticles using leaves and stem bark of *Pterocarpus indicus* and its activity on human breast cancer cell line (MCF-7), International Journal of Pharmaceutical Sciences and Research, Vol. 12(9). 4807-4816.
20. Baskaran Maheswaran, Natchimuthu Karmegam, Mysoon Al-Ansari, Ramasamy Subbaiya, Latifah Al-Humaid, **Joseph Sebastin Raj**, Muthusamy Govarthanan (2022). Assessment, Characterization and quantification of microplastic from riversediments, Chemosphere, Vol. 298, 1-11.
21. Deepalakshmi. D and **Sebastin Raj J**. (2022). Antioxidant, Antidiabetic, Antimicrobial and Anticancer Activity of SNP from Endophytic Fungi *Rhizopus delemer*, Indian Journal of Natural Sciences, Vol.13 (73). 1-12.
22. Baskaran Maheswarana, Mysoon Al-Ansari, Latifah Al-Humaid, **Joseph Sebastin Raj**, Woong Kim, Natchimuthu Karmegam, Kasim Mohamed Rafi (2022). In vivo degradation of polyethylene terephthalate using microbial isolates from plastic polluted environment. Chemosphere, Vol. 310, 1-11.
23. Deepalakshmi. D and **Sebastin Raj J**. (2022). Phytochemical, Pharmacological and Growth Promoting Study of Endophytic Fungi *Rhizopus delemer* Isolated from *Abutilon Indicum* (L) Sweet. International Journal of Life science and Pharma Research, Vol.12(6), 8-17.

PAPER PRESENTATION

1. **Sebastin Raj, J.**, John Britto, S., Philip Robinson, J., Vinothkumar, D and Senthilkumar. Effects of Different hormone Mediated plant Regeneration from *Operculina turpethum* (L.) Silva Manso. National Symposium on Microbial and Plant Biotechnology. Feb. 17-19, 2005. Loyola College (*Autonomous*), Chennai – 600 034.
2. Vinothkumar, D., John Britto, S., **Sebastin Raj, J.**, Philip Robinson, J and Senthilkumar, S. Phytosociological Studies of Sacred Groves in Pudukottai District. National Symposium on Microbial and Plant Biotechnology. Feb. 17-19, 2005. Loyola College (*Autonomous*), Chennai – 600 034.
3. Philip Robinson, J., John Britto, S., Vinothkumar, D., **Sebastin Raj, J** and Senthilkumar, S. *In vitro* Sensitivity of a few medicinal plants – A comparative Approach. UGC National Seminar on Present Scenario in Plant Science

Research. Feb' 19-20-2005. Annamalai University, Annamalainagar, Chidambaram – 608 002.

4. **Sebastin Raj J**, Manoharan K and Paliwal K, Effect of *Azospirillum* on fodder production in the semi-arid region of South India. Proceedings of the XXI International Grassland Congress and the VIII International Rangeland Congress (Vol. I). on 1st June 2008.
5. **Sebastin Raj, J.**, Udhayakumar, V., John Britto, S., Philip Robinson, J., Vinothkumar, D and Senthilkumar. (2009). Regeneration of multiple shoots from cotyledonary node of in vitro raised seedlings of *Operculina turpethum* (Linn.) Silva Manso – an endangered medicinal plant. The Journal of the Swamy Botanical Club and National conference on Modern Trends in plant in vitro biology. Bharathidasan University, Trichy. Vol. 26 (special issue) Page No. 58.
6. Abinaya, S, Kavitha, N., and **Sebastin Raj, J.** Phytoremediation of industrial effluent using the technique of root zone cleaning system. State level seminar on “Emerging Advancements in Biosciences” 17th March, 2012. Dept. of Microbiology and Biotechnology, JMC, Trichy.
7. Kavitha, N., Abinaya , S, and **Sebastin Raj, J.** Studies on *in vitro* regeneration and genetic transformation in Cucumber (*Cucumis sativus* L.). State level seminar on “Emerging Advancements in Biosciences” 17th March, 2012. Dept. of Microbiology and Biotechnology, JMC, Trichy.

WORKSHOP ATTENDED

1. State level workshop on Techniques in Tissue Culture and Histochemistry. September 16-17, 2004, St. Joseph's College (Autonomous), Tiruchirappalli – 620 002.
2. Regional Conference on Fern Diversity of India. February'24th 2007, Conducted by Center for Biodiversity and Biotechnology, St. Xavier's College (Autonomous), Palayamkottai.
3. State Level Workshop on Agribiotech, (Sponsored by MoEF) organized by the Department of Biotech Sciences between 23rd – 24th February 2008, Mahendra Arts and Science College, Namakkal.
4. National Workshop on Methods in *in vitro* Toxicology, dated on 14-23rd September, 2011 (10 days workshop). Organized by MGDC, Bharathidasan University, Tiruchirappalli.
5. State Level Workshop on “Structural Bioinformatics and Protein 3-D Structure Visualization”, on 28th July, 2014, organized by Dept. of Biotechnology and Bioinformatics, Bishop Heber College (Autonomous), Tiruchirappalli.

SEMINAR AND CONFERENCE ATTENDED

1. National level Symposium on Medicinal plants – Diversity, Utilization and conservation. February 5-6, 2001, St. Joseph's College (Autonomous), Tiruchirappalli – 620 002.

2. UGC sponsored State Level Seminar on Examination Reforms, held at Jamal Mohamed College (JMC), Trichy on March 12, 2010.
3. NAAC sponsored National Level Seminar on Quality Enhancement in Teaching, Research and Extension in Higher Education Institutions – Prospects and Problems, organized by Internal Quality Assurance Cell (IQAC), JMC, Trichy, during April 15 and 16, 2010.
4. State level seminar on “Recent Trends in Chemical Research (RTCR – 2010)” Conducted by the PG and Research Department of Chemistry, JMC, Trichy, 5th and 6th October, 2010.
5. Seminar on “Creating Competitiveness to excel in higher education – a TQM approach” organized by IQAC, JMC, Trichy, on 8th December, 2010.
6. National level forum on emerging debates on communicable disease, organized by Dept. of Microbiology, JMC, Trichy, held on 28th February, 2011.
7. Colloquium on “3R Concept and its practice in academia and research” organized by MGDC in Bharathidasan University, Trichy, on 2nd October, 2011.
8. A one-day Seminar on ‘Teaching, Learning and Research in Higher Education- Excellence and Beyond Excellence’ organized by the IQAC, JMC, Trichy on 7th March 2012.
9. Two-day National conference on ‘Current Challenges in Environment’ organized by the Dept. of Zoology, JMC, Trichy, on 7-8th March, 2013.
10. Science Academies Lecture workshop on ‘Recent Trends in Biology and Biotechnology’ organized by Dept. of Biotechnology, JMC, Trichy, on 29th to 31st January, 2014.
11. UGC sponsored National seminar on Recent Trends in Botany, organized by Dept. of Botany, JMC, Trichy, on 24th February, 2016.
12. One-day Seminar on ‘Intellectual Property Rights and Patenting in Life Sciences: Problem and Prospects’, organized by Dept. of Botany, JMC, Trichy, on 1st March, 2018.
13. One-day lecture series on ‘Traditional Biotechnology for a better tomorrow’ organized by Dept. of Biotechnology, St. Joseph’s College, Trichy, on 2nd March, 2018.
14. State level seminar on ‘Conservation of Biological Diversity’ organized by Dept. of Zoology, Periyar EVR College, Trichy, on 5th March, 2019.

CONFERENCE ORGANIZING MEMBER

- ✓ Organizing committee members in Modern Trends in Healthcare Biotechnology and Environment, organized by the Department of Biotech Sciences between 22nd -23rd February 2008, Mahendra Arts and Science College, Namakkal.

- ✓ Organizing committee members in one-day state level seminar on Beacon Biotech, organized by the Department of Biotech Sciences dated on 20th February 2009, Mahendra Arts and Science College, Namakkal.
- ✓ Organizing committee members in State level seminar on “Emerging Advancements in Biosciences” 17th March, 2012. Dept. of Microbiology and Biotechnology, JMC, Trichy.
- ✓ Organizing committee members in National seminar on “Frontiers in Biosciences” on 5th March, 2016. Dept. of Microbiology and Biotechnology, JMC, Trichy.

IQAC SEMINARS

- ✓ UGC sponsored State level seminar on Examination Reforms, on 12th March, 2010 in JMC, Trichy.
- ✓ NAAC Sponsored National Level Seminar on Quality enhancement in teaching, research and extension in higher education institutions – prospects and problems, on 15-16th April, 2010 in JMC, Trichy.
- ✓ One day seminar on ‘Creating competitiveness to excel in higher education – a TQM approach’ on 8th December, 2010 in JMC, Trichy.
- ✓ One day seminar on ‘Teaching learning and research in higher education – excellence and beyond excellence’ on 7th March, 2012 in JMC, Trichy.
- ✓ Staff enrichment programme on ownership culture on 14th June, 2019 in JMC, Trichy.

ORGANIZING SECRETARY

- ✓ National Seminar on RTLS – 2015, 25th February, 2015.
- ✓ International Seminar on ETBR- 2018, 3rd March, 2018.

MEMBERSHIP IN JAMAL MOHAMED COLLEGE

- ✓ *Member In-charge (MID)* of Biotechnology Department Since December - 2013 to till date
- ✓ Meeladunnabi function – vice-president (2015)
- ✓ Students Healthcare Centre (since 2016 to till date)
- ✓ Academic council member (Since 2018 to till date)
- ✓ College Staff Association (department in-charge)
- ✓ Department Association activity
- ✓ IQAC (department in-charge)
- ✓ NIRF (department in-charge)

ACTED AS JURY

- ✓ Acted as Jury in the event of CARTOONIST in Animalia -2K19 (A state level inter collegiate Extravaganza), organized by the PG & Research Department of Zoology, Jamal Mohamed College (Autonomous), Tiruchirappalli, held on 10th October, 2019.

ADDRESS FOR COMMUNICATION

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Associate Professor and Head
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Mobile No: 8489100777
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PERSONAL INFORMATION

Father's Name : Joseph
Mother's Name : Amul Mary
Nationality : Indian
Religion : Christian
Date of Birth : 08-05-1978
Marital Status : Married

DECLARATION

I hereby declare that all the above-mentioned details are correct to the best of my knowledge and belief.

Yours sincerely

(J. Sebastin Raj)