

ARULMIGU PALANIANDAVAR ARTS COLLEGE FOR WOMEN, PALANI

STAFF PROFILE

Dr. ANJANA SURENDRAN MSc.,Ph.D.,
Archana Sadhanam, Mala-Eram P.O
Puthukulam, Mukkuzhy
Pathanamthitta District Pin: 689664
Email: anjanasree1127@gmail.com
Mobile no: 9497364852



Academic Qualification

| S.No | Degree | Year | Subject | University/Institution | % of marks |
|------|---------------|------|---------|---|------------------------|
| 1. | Ph.D. | 2020 | Botany | The Gandhigram Rural Institute (Deemed to be University), Gandhigram | 80 Highly Commended |
| 2. | M.Sc., | 2015 | Botany | The Gandhigram Rural Institute (Deemed to be University), Gandhigram. | 82.67 |
| 3. | B.Sc., | 2013 | Botany | Mahatma Gandhi University, Kottayam, Kerala | 79.0 |

Research Experience

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| Title of Ph.D Thesis | : | Systematic studies on the family Myrtaceae of Tamil Nadu, India <ul style="list-style-type: none">❖ Reported 18 genera with 143 species from the family❖ Discovered 7 new genera❖ Explored different areas of tiger reserves, and wildlife sanctuaries in the Western Ghats |
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| | | ❖ Analyzed the genus <i>Syzygium</i> by chemotaxonomy and molecular taxonomy |
| M.Sc. Dissertation | : | Systematic studies on the genus <i>Syzygium</i> of Western Ghats ❖ Documented 55 species from the genus <i>Syzygium</i> ❖ Explored various forest areas in Tami Nadu and Kerala |

Teaching and Research Experience

| S.N o | Designation | Department/ College | Duties performed | Period of service |
|-------|---------------------|--|--|--------------------------------|
| 1. | Assistant Professor | Department of Botany, Arulmigu Palaniandavar Arts College for Women, Palani | <u>Handling classes for</u> B.Sc & M.Sc Botany Allied course for B.Sc Zoology <u>Guiding dissertations/ projects</u> | 22.08.2022 to till date |
| 2 | Guest Faculty | Department of Biotechnology, Mother Teresa Women's University, Kodaikanal | <u>Handling classes for</u> M.Sc. Botany and M.Sc Integrated Biotechnology <u>Guiding dissertations/ projects</u> | 23.09.2020 - 22.06.2022 |
| 3 | Guest Faculty | Department of Biotechnology, Mother Teresa Women's University, Kodaikanal | <u>Handling classes for</u> M.Phil Botany, M.Phil Zoology and M.Phil Microbiology | Academic year 2021 & 2021-2023 |
| 4 | SRF | Studies on Population dynamics, <i>invitro</i> propagation and conservation of three endemic and endangered Trees of Western Ghats | Field and Laboratory Research on SERB, New Delhi funded project | April, 2016-March, 2017 |

Awards Received

Received **Best Paper Presentation award** at the International conference on Bioresource technology for food, energy and environmental sustainability (ICBTFEES-2020).

Technical Skills

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| Plant taxonomy preparation | Identification of Plants specimen Processing and preparation of various plant specimens as herbarium Poisoning of plant specimens Knowledge on Digital herbarium Identification of new species of <i>Impatiens</i> & <i>Syzygium</i> |
| Molecular Biology | DNA Isolation from Plants PCR techniques Sequencing of genome Blast and Phylogenetic tree construction |
| Phytochemistry | Phytochemicals/ essential oil isolation Column chromatography UV-VIS, FTIR, NMR, GC-MS or LC-MS technology |

Other Duties performed

| S.No. | Name of the programme | Organizers | Role as | Duties performed |
|----------|--|--|-----------------------------|---|
| 1 | International Conference on Advances in Biosciences and Biotechnology | Mother Teresa Women's University, Kodaikanal | Organizing committee member | Organized technical sessions for paper presentation |
| 2 | Workshop on Medicinal plants, their compound purification and marketing opportunities (An entrepreneurial skill development) | Mother Teresa Women's University, Kodaikanal | Organizing committee member | Organized technical sessions of the workshop |

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| | programme for students) | | | |
| 3 | Workshop on Medicinal plants, their compound purification and marketing opportunities (An entrepreneurial skill development programme for students) | Mother Teresa Women's University, Kodaikanal | Resource person | Delivered a lecture on "Conservation of Medicinal Plants through Biotechnological tools" |

Laboratory equipment handling and techniques known:

- ❖ All basic equipment to teach BSc. & MSc. Botany
- ❖ Herbarium preparation techniques
- ❖ Tissue culture techniques
- ❖ Phytochemical analysis, Soxhlet extracts
- ❖ Antimicrobial, larvicidal and antioxidant analysis
- ❖ Essential oil isolation and GC-MS analysis
- ❖ Plant DNA isolation, sequencing, clade construction and phylogenetic analysis
- ❖ R-software, BLAST, MEGA-7

List of Publication (15)

| S. No | Author(s) | Title | Name of Journal | Vol. | Page | Year |
|-------|--|---|---|---------|-----------|------|
| 1 | R.Ramasubbu, C.Divya, Anjana Surendran | A note on the taxonomy, field status and threats to three endemic species of <i>Syzygium</i> (Myrtaceae) from the southern Western Ghats, India | Journal of threatened taxa (I.F. 0.496) | 8 (11) | 9384-9390 | 2016 |
| 2 | R. Ramasubbu, C. Divya, N. Sasi Kala, Anjana | <i>Impatiens megamalayana</i> , a new species of <i>Impatiens</i> from the Western Ghats, | Phytotaxa (I.F. 1.72) | 302 (2) | 193-197 | 2017 |

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|----|--|---|----------------------------------|--------|-------------|------|
| | Surendran& A.K. Sreekala. | Tamil Nadu, India | | | | |
| 3 | Ramasubbu Raju, Anjana Surendran, DivyaChelladurai, Sasi Kala Nambi&ManikandanGurusamy | A new species of <i>Syzygium</i> (Myrtaceae) from the South Western Ghats of Tamil Nadu, India | Phytotaxa (I.F. 1.72) | 374(3) | 263-267 | 2018 |
| 4 | A.K Sreekala, DivyaS.Pillai, R.Akhil, Anjana Surendran &R.Ramasubbu | A new species of <i>Syzygium</i> (Myrtaceae) from the Agasthyamalai Biosphere Reserve, Kerala, India | Phytotaxa (I.F. 1.72) | 403(1) | 066-070 | 2019 |
| 5 | Anjana Surendran, G.Manikandan & R.Ramasubbu. | Chemical signatures of essential oil: An alternative tool for the identification of the species of <i>Syzygium</i> Gaertn. of Tamil Nadu. | Indian Forester (I.F.0.11) | 146(9) | 806-814 | 2020 |
| 6 | R.Ramasubbu, AnjanaSurendran & Chandra Prabha A. | A new species <i>Impatiens</i> L. (Balsaminaceae) from Kodaikkanal Wildlife sanctuary, India. | Taiwania (I.F. 0.65) | 65(4) | 351-357 | 2020 |
| 7 | R.Ramasubbu, Anjana Surendran & KaruppaSamy, K | <i>Syzygium anamalaianum</i> sp.nov.(Myrtaceae), a new tree species from the Western Ghats of Tamil Nadu, India. | Phytotaxa (I.F. 1.72) | 450(2) | 237-242 | 2020 |
| 8 | R.Ramasubbu, Anjana Surendran& Chandra Prabha A. | Two new species of <i>Impatiens</i> (Balsaminaceae) from the Western Ghats of Tamil Nadu, India. | Phytotaxa (I.F. 1.72) | 460(4) | 249-258 | 2020 |
| 9 | Saranya Surendran, Raju Ramasubbu·Priya Prasannan, Anjana Surendran | A comprehensive Review on Ethnobotany, Phytochemistry and Pharmacology of <i>Rauwolfia</i> L. (Apocynaceae) | The Botanical Review (I.F. 3.16) | 87 | 311-376 | 2021 |
| 10 | Sofiavizhimalar A, Nithya K, | Phytochemical Screening and GC-MS studies and | Indian Journal of Natural | 12(68) | 34666-34674 | 2021 |

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|----|---|---|--|-----|---------|------|
| | Anjana Surendran & Thamaraiselvi C | Antioxidant activities of <i>Ruta chalepensis</i> L. | Sciences | | | |
| 11 | Athira Reghunath, Anjana Surendran and Raju Ramasubbu | Pollination system and reproductive failure in an endangered semi-evergreen tree, <i>Syzygium myhendrae</i> (Bedd. ex Brandis) Gamble | South African Journal of Botany (Elsevier) (I.F.3.111) | 150 | 583-595 | 2022 |

Books/Reports/Chapters/General articles etc.

| S.N o. | Title | Author's Name | Publisher | Year of Publication |
|--------|--|---|---|---------------------|
| 1. | Population status, threats and conservation approaches on three endemic and endangered species of <i>Syzygium</i> from the southern Western Ghats. | Anjana Surendran and Ramasubbu R. | Perspectives on Biodiversity of India. Centre for Innovation in Science and Social Acon (CISSA), Kerala | 2018 |
| 2. | Botanical terms for the identification of Angiosperms. | Anjana Surendran and Ramasubbu, R | Dept. of Biology, The Gandhigram Rural Institute - DU, Gandhigram. | 2018 |
| 3 | Phytochemistry and Pharmacological Potentialities of <i>Syzygium caryophyllatum</i> (L.)Alston | Karuppa Samy Kasi, Anjana Surendran and Raju Ramasubbu | Phytochemistry and Pharmacology of Medicinal Plants, Vol.2 by Apple Academic Press, US | 2022 |
| 4 | Phytochemistry and Pharmacological Potentialities of <i>Syzygium densiflorum</i> Wall. ex | Athira Reghunath, Anjana Surendran and | Phytochemistry and Pharmacology of Medicinal Plants, Vol.2 by Apple | 2022 |

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| Wight & Arn. and <i>S. travancoricum</i> (Myrtaceae) | Gamble | Raju Ramasubbu | Academic Press, US |
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Training programmes/Workshops/Webinars/Online Quiz

| S.No | Name of the training undergone | Organization | Period |
|------|---|--|---|
| 1. | Refresher course on Plant taxonomy | The Gandhigram Rural Institute (DU), Gandhigram, Dindigul, Tamil Nadu | 12-26 th December 2018 |
| 2. | Workshop on Mushroom training | The Gandhigram Rural Institute (DU), Gandhigram, Dindigul, Tamil Nadu | 2014 |
| 3. | National workshop cum training programme on Modern aspects of Plant taxonomy | Department of Biology, The Gandhigram Rural Institute (DU), Gandhigram, Dindigul, Tamil Nadu | 12-14 th February 2014 |
| 4. | Training in Mapping Bioresources with FOSS GIS software | Centre for Biodiversity Informatics, Department of Botany, Jamal Mohamed College, Tiruchirapalli | 5 th -6 th August 2016 |
| 5. | Seminar on Botanical Identification | Department of Botany, Arignar Anna Government Arts College, Namakkal, Tamil Nadu. | 23 rd -24 th February, 2017 |
| 6. | Lecture Workshop on Recent trends in Biological Sciences | Department of biology, The Gandhigram Rural Institute (Deemed to be University) Gandhigram. | 23 rd and 24 th October 2017 |
| 7. | Seminar on Cultivation and conservation of medicinal plants | Department of Botany, Sri Kaliswari college, Sivakasi, Tamil Nadu | 5 th January 2018 |
| 8. | Hands on training on Plant DNA Barcoding | Interuniversity Centre for Plant Biotechnology (IUCPB), University of Calicut, Kerala | 17-19 th January 2019 |
| 9. | National Workshop on Woody Plant Tissue Culture | The Gandhigram Rural Institute (DTBU), Gandhigram, Dindigul | 3 rd -4 th March 2022 |
| 10. | In-Service teacher training programme | Mother Teresa Women's University, Kodaikanal | 12 th -13 th May 2022 |
| 11. | FDP on Confluence of revised guidelines of IQAC | Arulmigu Palaniandavar Arts College for Women, Palani | 18-25 th November |

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| | | | 2022 | |
| 12 | COVID-19 Pandemic general awareness quiz | Chandigarh group of colleges, Landran, Mohali | 11 th April 2020 | |
| 13 | Online quiz on information technology skills | J.J.College of Arts and Science, Pudukkottai, Tamil Nadu | 04 th May 2020 | |
| 14 | International webinar on Plant Omics in Space | St.Joseph's College, Bengaluru | 05 th May 2020 | |
| 15 | Web series programme on COVID-19 virus | Nature Science foundation, Coimbatore, Tamil Nadu | 10 th May 2020 | |
| 16 | COVID-19 awareness quiz | M.V.Muthiah Government Arts college, Dindigul, Tamil Nadu | 11 th May 2020 | |
| 17 | E-Quiz on Chemistry in Daily Life | The Standard Fireworks Rajaratnam college for women, Sivakasi, Tamil Nadu | 12 th May 2020 | |
| 18 | International webinar on Plant Molecular Biology in Space | Nirmala college for Women, Coimbatore, Tamil Nadu | 14 th May 2020 | |
| 19 | Covid-19 Awareness quiz | St.Joseph's College, Irinjalakuda, Kerala | 14 th May 2020 | |
| 20 | National level online quiz on The Limit Does Not Exist | Bharath Institute of Higher Education and Research, Thiruvanchery, Chennai | 15 th May 2020 | |
| 21 | E-Quiz on Research Methodology & Statistical Analysis | St.Joseph's PG college, Hyderabad, Telangana | 17 th May 2020 | |
| 22 | COVID-19 Stress Management Through Yoga | Nature Science foundation, Coimbatore, Tamil Nadu | 17 th May 2020 | |
| 23 | Online quiz on Traditional Medicines & Covid-19 | J.J.College of Arts and Science, Pudukkottai, Tamil Nadu | 21 th May 2020 | |
| 24 | International webinar on Novel Insights into Plant Space Biology | A.V.C. College, Mayiladuthurai | 21 th May 2020 | |
| 25 | Quiz on International Biological Diversity day | A.V.V.M Sri Pushpam College, Thanjavur, Tamil Nadu | 22 th May 2020 | |
| 26 | E-Quiz on Life Science | Seethalakshmi Achi College for Women, Pallathur | 23 th May 2020 | |
| 27 | Patent Filing and Prosecution | KPR Institute of Engineering and Technology, Coimbatore, Tamil Nadu | 23 th May 2020 | |
| 28 | Application of Molecular Markers in Plant Systematics | V.O Chidambaram college, Toothukudi, Tamil Nadu | 23 th May 2020 | |

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| 29 | Ex-situ conservation of Threatened Angiosperm Plants | Natucare India, Mumbai | 24 th May 2020 |
| 30 | World Milk day Quiz | Vivekanandha College of Arts and Sciences for Women, Tiruchengode, Tamil Nadu | 24 th May 2020 |
| 31 | Online Botany Quiz | M.V.Muthiah Government Arts college, Dindigul, Tamil Nadu | 26 th May 2020 |
| 32 | Ecosystem Services and Management | Alagappa University, Karaikudi, Tamil Nadu | 24 th -26 th May 2020 |
| 33 | Influence of Climate change on Biodiversity Resources | V.O Chidambaram college, Thoothukudi, Tamil Nadu | 26 th May 2020 |
| 34 | Biopolymers: Renewable resources for human utilization | Alagappa University, Karaikudi, Tamil Nadu | 27 th May 2020 |
| 35 | Antiviral Marine Macroalgae sulfated Polysaccharides to Boost Immunity as well as active against Respiratory infections | V.O Chidambaram college, Thoothukudi, Tamil Nadu | 27 th May 2020 |
| 36 | Scope for the Utilization of Herbal medicines for Human Health in COVID-19 like scenario | V.O Chidambaram college, Thoothukudi, Tamil Nadu | 29 th May 2020 |
| 37 | Botany Quiz-2020 | Raja Doraisingam Govt.Arts College, Sivaganga | 2 nd June 2020 |
| 38 | Quiz on Teaching skills | Rajah Serfoji Govt. College, Thanjavur | 2 nd June 2020 |
| 39 | International e-conference on recent Biological Perspectives | V.V.Vanniaperumal College for Women, Virudhunagar, Tamil Nadu | 2 nd & 3 rd June 2020 |
| 40 | Phytochemical approaches and new drug discovery: Bottlenecks and solutions | JKKMMRF's- Annai JKK Sampoorani Ammal College of Pharmacy, Namakkal, Tamil Nadu | 4 th June 2020 |
| 41 | National webinar on Shola forests; A paradise of Biodiversity | Sree Narayana College, Thrissur, Kerala | 5 th June 2020 |
| 42 | Carrier in Biotechnology: Challenges and opportunities | Sri Kaliswari College, Sivakasi, Tamil Nadu | 6 th June 2020 |
| 43 | Faculty Development | Vivekananda College, Madurai | 18 th |

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| | Programme on Complementary Digital Tools in Plant Taxonomy | | February 2021 |
| 44 | Webinar on Role of Botanical Survey | Govt.Aranya Bharti P.G College, Baihar, M.P | 22 nd February 2021 |
| 45 | Faculty development programme on Intellectual property rights: Powerhouse for innovation | Vivekananda College, Madurai | 1 st March 2021 |
| 46 | Webinar on Plant associated beneficial bacteria- Structure and function | P.E.S college of Science, Arts and Commerce, Mandya, Karnataka | 25 th June 2021 |
| 47 | Webinar on Global scenario of GM crops | Vivekananda college, Madurai | 16 th July 2021 |
| 48 | National Webinar on Diversity and Pollination of Orchids | Carmel college, Mala | 8 th October 2021 |
| 49 | Webinar on Environmental Rehabilitation | Sri Kumara Gurupara Swamigal Arts college, Srivaikuntam | 22 nd December 2021 |
| 50 | IP awareness / training programme | Intellectual property office, India | 21 st January 2022 |

Participation & Presentation in National and International Conferences

National Conferences (09)

1. Presented a paper entitled “Systematics of *Eugenia* L. and *Syzygium* Gaertn. (Myrtaceae) of Tamil Nadu” in 29th Annual conference of Indian Association of Angiosperm Taxonomy and National Symposium on Modern Trends in Biosystematic of Angiosperm on 11-13th November 2019 at Jawaharlal Nehru Tropical Botanic Garden and Research Institute, Thiruvananthapuram, Kerala.
2. Presented a paper entitled “The chemical composition of essential oils isolated from the leaves of selected species of *Syzygium* Gaertn. (Myrtaceae)” in National symposium on Natural products for Human Health on 7& 8 February 2019 at Loyola college, Chennai.

3. Presented a paper entitled “The genus *Eugenia* P.Micheli ex L.(Myrtaceae) of Tamil Nadu” in the national conference on basic and applied biological sciences on 10& 11 October 2018 at Bharathiyar University, Coimbatore, Tamil Nadu.
4. Participated a conference on Bio-industries for Sustainable Livelihood on 27 and 28th March 2018 at Department of biology, The Gandhigram Rural Institute (Deemed to be University) Gandhigram.
5. Presented a paper entitled “Population Status, Threats and Conservation Approaches on Three Endemic and Endangered Species of *Syzygium* from Southern Western Ghats” in the National seminar organized in connection with 4th Indian Biodiversity Congress on 10-12 March 2017 at Pondicherry University, Puducherry.
6. Presented a poster entitled “Chemical composition of the essential oils isolated from the leaves of *Syzygium parameswaranii* and *S.sriganesanii*” in 10th National conference on “Recent trends in Life sciences; Research, practices and application for sustainable development” on 7-8 September 2017 at Bharathiyar University, Coimbatore, Tamil Nadu
7. Presented a paper entitled “Chemical composition of the essential oil of leaves of *Syzygium travancoricum* Gamble” in National conference on Recent trends in the applications of Macromolecular Materials (RAMM-2017) on 2nd and 3rd March 2017 at Department of Chemistry, Gandhigram Rural Institute-Deemed University, Gandhigram, Dindigul, Tamil Nadu.
8. Anjana Surendran and R.Ramasubbu. 2015. Presented a paper entitled “The family Myrtaceae of Dindigul district, Tamil Nadu” in a National Conference organized by Saraswathi Narayanan College, Madurai, Tamil Nadu.
9. Anjana Surendran and R.Ramasubbu. 2015. Systematic studies on the genus *Syzygium* of Western Ghats, India. V.O Chidambaram college, Toothukudi

International Conferences (04)

1. Presented a poster entitled “Nuclear DNA (*matK*)- An alternative tool for solving nomenclatural problems in the taxonomy of *Syzygium* Gaertn. of Tamil Nadu” in International Symposium on Plant Taxonomy and Ethnobotany on 13th& 14th February 2020 at Botanical Survey of India, Kolkata.
2. Presented a paper entitled “Phytochemical evaluation of essential oil of selected species of *Syzygium* of Tamil Nadu” in International Conference on Bioresource technology for food, energy and environmental sustainability (ICBTFEES-2020) on 8-10 January 2020 at The Gandhigram Rural Institute (Deemed to be University), Gandhigram.
3. Anjana Surendran and R. Ramasubbu. 2019. The genus *Syzygium* Gaertn. (Myrtaceae) of Tamil Nadu, India. International conference on emerging trends in Science and Social Sciences, Kuala Lumpur, Malaysia.
4. Presented a poster entitled “GC-MS Analysis of essential oils isolated from the leaves of two species of *Syzygium*” at International conference on Phytomedicine on 29-31 August 2018 at Bharathiyar University, Coimbatore, Tamil Nadu.

The novelty of the research studies executed

1. Discovered 8 new species of angiosperm including

- *Impatiens megamalayana*
- *mpatiens dindiguensis*
- *Impatiens palniensis*
- *Impatiens tamilnadens*
- *Syzygium bharathii*
- *Syzygium ponmudianum*
- *Syzygium anamalaianum*
- *Syzygium tirunelvelianum*

2. New accession of Plant gene sequences submitted in NCBI

Sequence submitted for the genus *Syzygium* in Gen bank

1. OM523082- *Syzygium densiflorum*
2. OM523083- *Syzygium chavaran*
3. OM523084- *Syzygium benthamianum*
4. OM523085- *Syzygium zeylanicum*

5. OM523086-*S.zeylanicum var.megamalayanum*
6. OM523087- *Syzygium anamalaianum*
7. OM523087- *Syzygium bharathii*
8. OM416041- *Syzygium claviflorum*
9. OM416042- *Syzygium occidentale*
10. OM416043- *Syzygium myhendrae*