

Faculty Profile



Dr. M. Palanivelmurugan M.Sc., Ph.D.

Assistant Professor (OG), Department of Chemistry

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HIGHLIGHTS:

✚ Number of Journal Publications: **11**

✚ H-Index: **6**

PROFESSIONAL LINKS:

✚ Scopus ID: [57704669300](#)

✚ Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=57704669300>

✚ Google Scholar ID:

<https://scholar.google.co.in/citations?user=r4nENjQAAAAJ&hl=en&oi=ao>

✚ AICTE Faculty ID: 1- 47883513042

✚ ORCID ID: <https://orcid.org/0000-0002-8009-6406>

AREA OF SPECIALIZATION:

-  Nanomaterials & Nanotechnology
-  Phytochemistry and Pharmacology
-  Formulation and Animal Handling
-  Photocatalysis & Dye Degradation
-  Organic Synthesis and Methodology
-  Chemical Biology

SELECTED PUBLICATIONS

1. **Mohanasundaram, P.**, Mary Saral, A. (2022), “Correlation between Anti-oxidant property and Total phenolic and flavonoid content of Azadirachta Indica A Juss Flowers” *ECS Transactions*, 107 (1), pp. 15021-15031. <https://doi.org/10.1149/10701.15021ecst>
2. **Mohanasundaram, P.**, & Saral, A. M. (2023). “Phytochemical Screening, Antibacterial, Antifungal, Anti-Biofilm and Antioxidant Activity of Azadiracta Indica A. Juss. Flowers”, *Chemistry & biodiversity*, e202201049. Advanced online publication. <https://doi.org/10.1002/cbdv.202201049> (Q2, IF = 2.5)
3. Sayoni Maitra Roy, Vrinda Garg, Sushmitha Pedugu Sivaraman, Sourav Barman, Chitrita Ghosh, Pousali Bag, **Palanivelmurugan Mohanasundaram**, Partha Sona Maji, Arnab Basu, Anjaneyulu Dirisala, Surya K Ghosh and Amit Ranjan Maity, “Overcoming the barriers of nuclear-targeted drug delivery using nanomedicine-based strategies leads to an enhanced anticancer therapy”, *Journal of Drug Discovery Science and Technology*. <https://doi.org/10.1016/j.jddst.2023.104408> (Q2, IF = 4.9)
4. **Mohanasundaram, P.**, Sankaran, S., Mathivanan, D., Kamaraj, C., & Mary Saral, A. (2024). Hydroalcoholic extract: A potential source from *Azadirachta indica* a Juss flower for DNA and BSA binding, scavenging, fungicidal, and larvicidal activities. *Journal of Phytopathology*, 00, e13269. <https://doi.org/10.1111/jph.13269> (Q3, IF = 1.1)
5. S, S., **Mohanasundaram, P.**, Kumar, A. S., & A, M. S. (2024). Electrochemical Investigation, DNA Binding, DFT, and Molecular Docking Analysis of Phenolic Acids isolated from *Macrotyloma uniflorum*. *Journal of Molecular Structure*, 139288. <https://doi.org/10.1016/j.molstruc.2024.139288> (Q2, IF = 4.7)
6. **Mohanasundaram, P.** and Mary Saral, A. (2025), ‘A Systematic Review of Neem Flower (*Azadirachta indica*): A Promising Source of Bioactive Compounds with Pharmacological and Immunomodulating Properties’, *Traditional Medicine Research* 10(7), 41.

- <https://doi.org/10.53388/TMR20241025001> (Q2, IF = 1.3)
7. **Mohanasundaram, P.** and Mary Saral, A. (2025), ‘*In-vitro* Scratch Assay, Cytotoxicity, DNA/BSA Binding Properties, and Antimicrobial Activity of Green Synthesized TiO₂ Nanoparticles *via* Neem Flower’, *Materials Advances*, 6, 3533-3545. <https://doi.org/10.1039/D5MA00144G> (Q1, IF = 4.7)
 8. **Mohanasundaram, P.**, Saral A., M. (2025), ‘Binding properties and biological applications of green synthesized ZnO nanoparticles from neem flower’, *Sci Rep* 15, 17727. <https://doi.org/10.1038/s41598-025-02157-x> (Q1, IF = 3.9)
 9. **Mohanasundaram, P.**, Mary Saral A. (2025), ‘Neem Flower Extracts as a Source of Bioactive Compounds: In-vitro Antitumor and Larvicidal Evaluation, Biomolecular Interactions, and Density Functional Theory Insights’, *Chemistry & Biodiversity* 22, 11, e01147. <https://doi.org/10.1002/cbdv.202501147> (Q2, IF = 2.5)
 10. Cheng-Hsu Li, Yi-Jin You, Jian-Ming Wong, Hsiao-Yin Hou, Sung-Han Chen, **Palanivelmurugan Mohanasundaram**, Jia-Han Jiang, Cheng-I Lee, Ching-Chieh Weng, and Pei-Jhen Li. (2026), ‘Mechanochemical Ester Activation with La(III): Efficient Amidation under Mild and Moisture-Tolerant Conditions’, *Asian Journal of Organic Chemistry* 15(3), e70300. <https://doi.org/10.1002/ajoc.70300> (Q3, IF = 2.7)
 11. Lavanya V, Santha Kumar Kannappan, Sugumar Monisha, **Palanivelmurugan Mohanasundaram**, A. Mary Saral and Annamalai Senthil Kumar (2026), ‘Rutin-Grafted Carbon Nanofibers Derived From *Clitoria Ternatea* Flower-Extract for Bio-Friendly Voltammetric pH Sensing Applications’, *RSC Advances*, 16 (38): 42827–42840. <https://doi.org/10.1039/d6ra05128f> (Q1, IF=6.1)

PATENTS PUBLISHED/GRANTED:

1. **Mohanasundaram, P.**, Mary Saral A. (2025), “Topical Herbal Ointment Formulation from *Azadirachta indica* Flower Extracts for Wound Healing Applications” – Patent published. Application number: 202641087893.

HONORS AND AWARDS:

- ✚ Best Cocurricular Active Student Award (2015-2016)
- ✚ Best Cocurricular Active Student Award (2016-2017)
- ✚ Academic Proficiency Award (2018-2019)
- ✚ First Rank Holder in Post Graduation – MSc Chemistry (2017-2019)
- ✚ Best Poster Presentation Award in National Level Conference, held @ Dr. NGP College of Arts and Science, Coimbatore, Tamil Nadu, India. (2019).
- ✚ Student Convenor for a National Conference “Recent Trends in Chemistry - 2019”, held @ Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore, Tamil Nadu, India.

TITLE OF THE Ph.D. THESIS:

- ✚ Phytochemical screening, biological evaluation, and material Application of extracts and in vivo wound-healing activity of the herbal formulated ointment from *Azadirachta indica* A Juss Flowers

INTERNATIONAL INTERNSHIP EXPERIENCES:

- ✚ IIPP Intern @ National Chung Cheng University, Taiwan, under the guidance of Dr. Pei-Jhen Li, Department of Chemistry and Biochemistry, from August 2024 to October 2024.
- ✚ IIPP Intern @ National Chung Cheng University, Taiwan, under the guidance of Dr. Pei-Jhen Li, Department of Chemistry and Biochemistry, from June 2025 to August 2025.

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

- ✚ Five days of hands-on training on **Density Functional Theory & its Applications using Gaussian 16**, held at Vellore Institute of Technology, Vellore, India.
- ✚ Three days of hands-on training on **in silico molecular design and engineering**, held at SRKV, Coimbatore, Tamil Nadu, India.
- ✚ Correlation between Anti-oxidant property and Total phenolic and flavonoid content of *Azadirachta Indica* A Juss Flowers, Mohanasundaram, P., Mary Saral, A. **First International Conference on Technologies for Smart Green Connected Society (ICTSGS)** – 2021, Poster Presentation.

- ✚ Anti-bacterial, Anti-fungal, Anti-dandruff, in-vitro Anti-arthritis activity, and Anti-oxidant activity of *Azadirachta Indica* A Juss Flower, Palanivelmurugan M, Mary Saral A, **International Conference of Recent Advances in Biotechnology and Environmental Sciences (ICRABES-2022)** – Oral Presentation.
- ✚ Green synthesis of ZnO and CuO nanoparticles from *Azadirachta Indica* A Juss Flower extract and their Antibacterial, Antifungal, and Antioxidant Activity, Palanivelmurugan M, A Mary Saral. **International Conference on Advances in Materials, for Health, Environment and Circular Economy (ICAMTHEC-2022)** – Oral Presentation.
- ✚ Participated in the **7th International Conference on Nanoscience and Nanotechnology (ICONN-2023)** held at SRMIST, Chennai.
- ✚ “TBAI promoted Synthesis of 3,4-dihydropyrimidin-2(1H)-ones via Biginelli reaction” Palanivelmurugan Mohanasundaram, Manojkumar Kaliannan, Siva Senthil Kumar Boominathan*, published in **International Conference on ICICS-19** – Oral Presentation
- ✚ “Catalytic Free Multicomponent reaction towards Dihydropyridine Derivative via Hantzsch Reaction”, Manojkumar Kaliannan, Palanivelmurugan Mohanasundaram, Siva Senthil Kumar Boominathan*, published in **International Conference on ICICS-19** - Poster Presentation.
- ✚ “Bronsted Acid Catalysed Multicomponent reaction towards Dihydropyridine derivatives via Hantzsch Reaction” Manojkumar Kaliannan, Palanivelmurugan Mohanasundaram, Siva Senthil Kumar Boominathan*, **National Conference on Recent Trends in Chemistry’19** - Poster Presentation.
- ✚ “Rapid access to indeno[1,2-c] quinolines via Brønsted-Acid Catalyzed Cascade Reaction” Palanivelmurugan Mohanasundaram, Manojkumar Kaliannan, Siva Senthil Kumar Boominathan*, **National Conference on Recent Trends in Chemistry’19** - Poster Presentation.

REVIEWER OF JOURNALS:

- ✚ World Scientific Journal
- ✚ Chemistry and Biodiversity
- ✚ Environmental Quality Management