Dr. Vignesh Arumugam M.Sc., Ph.D.,

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Department of Botany,
NGM College (Autonomous), Bharathiar University (Affiliated),
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EDUCATION

Ph.D. Botany	Bhrathiar University, Coimbatore, India	2015-2022
M.Sc. Plant Biotechnology	Bharathidasan University, Tiruchirappalli, India	2012-2014
B.Sc. Biotechnology	JJ College of Arts & Science, Pudukkottai, India	2009-2012

PROFESSIONAL EXPERIENCE

- Assistant Professor of Botany, NGM College (Autonomous), Pollachi, India — 2023- Onw.
- Project Assistant, Department of Botany, Bharathiar University, Coimbatore, India — 2014-2016

FELLOWSHIPS AND AWARDS

- Best Researcher- Phytochemical analysis- International Academic Awards- Science Father — 2024
- Innovative Project Proposal Award by Institutions Innovation Council, BU, India — 2020-2021
- TNSCST- Project Assistant, Bharathiar University, Coimbatore, India — 2014-2016

Google Scholar Citation Index

- Citation : 731
- H-Index : 13
- i10 Index : 16

ResearchGate Citation Index

- Research Interest Score : 479.3
- H-Index : 12

JOURNAL EDITORIAL BOARD MEMBER

- Pharmacological Research - Reports
- Journal of Nutraceuticals and Health
- Majestic Greengenix: A Journal of Modern Plant Science
- Annals of Nutrition and Dietetics
- Journal of Ecology and Conservation
- Majestic American Journal of Food Sciences

REVIEWER OF PEER-REVIEWED JOURNAL

- South African Journal of Botany
- Environmental Health Insights
- Natural Product Communications
- Pharmacological Research - Reports
- Molecular Nutrition & Food Research
- American Journal of Health Promotion
- Journal of Food and Nutrition Sciences
- Applied Biochemistry and Biotechnology
- Pharmacological Research - Natural Products
- International Journal of Advances in Applied Sciences
- Journal of Enzyme Inhibition and Medicinal Chemistry
- Pharmacological Research - Modern Chinese Medicine
- Comprehensive Reviews in Food Science & Food Safety
- 3 Biotech
- Metabolites
- Phytomedicine
- Food Bioscience
- Scientific African
- Phytomedicine Plus
- Food and Humanity
- Food Science & Nutrition
- Food Chemistry Advances
- Journal of Herbal Medicine
- Food Research International
- Journal of Molecular Structure
- World Journal of Gastroenterology

TEACHING INTEREST

- Biotechnology
- General Botany
- Bioinformatics
- Microbiology

TEACHING EXPERIENCE

Assistant Professor, Department of Botany, 2023 – Onwards,
Nallamuthu Gounder Mahalingam College, Pollachi, India

Teaching and research responsibilities:

- Deliver lectures and practical sessions in Microbiology, Biochemistry, Biotechnology and Bioinformatics, ensuring students gain both theoretical knowledge and hands-on experience.
- Supervise 5 B.Sc., project students, providing academic mentoring, experimental design support and assistance in manuscript preparation for publications.
- Serve as the Department R & D coordinator, placement coordinator, facilitating career guidance and skill development programs and act as the scholarship coordinator, assisting students in securing scholarships and financial aid.
- Conduct advanced research in Pharmacology, microbiology, food biotechnology and nanotechnology, focusing on developing innovative solutions and applications in these fields.
- Proactively seek funding opportunities by preparing and submitting research proposals to funding agencies, aiming to secure grants for departmental and interdisciplinary research projects.
- Contribute to curriculum enhancement, develop new teaching methodologies, and organize seminars, workshops, and conferences to promote academic growth and research collaborations.

RESEARCH EXPERIENCE

Graduate Research Associate, 2015 - 2022,
Bharathiar University, Coimbatore, India

Research responsibilities:

- A phytosociological and ethnobotanical survey was carried out for suitable conservation measures in the Nilgiris Biosphere Reserve, India.
- Quantified Nutraceuticals activities (Proximate analysis, micronutrients, Primary and Secondary Metabolites and *in vitro* antioxidant, anti-inflammatory and anti-diabetic activities of the different extracts of *B. tinctoria.*
- Identified bioactive compounds from the crude extracts of *B. tinctoria* using GC-MS and LC/MS technique.
- Tested antibacterial and anti-biofilm activities of bioactive compounds against different human pathogenic bacteria.
- Green synthesized ZnO NPs from *B. tinctoria* leaf and fruit extracts to confirm UV, FTIR, XRD, EDX, SEM, DLS and ZETA and antibacterial, anti-biofilm, antioxidant and anticancer activities.
- Analyzed the potential benefits of plant extracts against various human cancer cell lines using *in vitro* techniques (MTT, LDH, MMP and DAPI) and compared with green synthesized ZnO NPs activities.

Research Assistant, 2014 - 2016
Bharathiar University, Coimbatore, India

Research responsibilities:

- Collected and identified endangered plant species from various parts of Tamil Nadu, India.
- Clonally multiplied the putative plant cell lines and established primary *in vitro* cultures as well as working collections in *ex vitro.*
- Compared primary and secondary metabolites between each species.
- Analyzed various antioxidant and free radical scavenging activity between each plant species.
- Optimized cryopreservation protocol for cell lines by encapsulation- Vitrification methods.
- Analyzed cryoprotection through the determination of biochemical changes with tolerance towards cryopreservation.
- Analyzed the genetic stability of true types of plants after cryopreservation.

PEER REVIEWED PUBLICATIONS

2026

- **Vignesh A.**, Thoufeeq Ahamed I., Aldosari FM., Albakri GS., Kumar Yadav K (2026). Exploring the potential of essential oil from *Oxalis latifolia* leaves against the bacterial skin disease impetigo by *in vitro* and *in silico* approaches. **South African Journal of Botany** 190, 481-503. **Impact Factor: 3.1; (Q2 Journal); (SCIE Indexed).**
- **Vignesh A.**, Amal TC., Soltane R, Eltayeb LB., Kumar Yadav K (2026). A review on functional foods regulate the gut microbiota and mast cell function in inflammatory bowel disease (IBD). **Probiotics and Antimicrobial Proteins. Impact Factor: 5.3; (Q1 Journal); (SCIE Indexed).**

2025

- **Vignesh A.**, Amal TC., Vasanth K (2025). Exploring the impact of post-COVID-19 taste loss on food-related experiences, quality of life, coping strategies, and rehabilitation. **Discover Food** 5(159) 1-15. **Impact Factor: 3.6; (Q2 Journal); (SCIE Indexed).**
- **Vignesh A.**, Dharani K., Selvakumar S., Vasanth K (2025). Phytochemical composition*, in vitro* cytotoxicity and *in silico* ADME/Tox analysis of the active compounds of *Oxalis latifolia* Kunth. extracts with promising anticancer potential. **3 Biotech** 15, 19. **Impact Factor: 3.1; (Q1 Journal); (SCIE Indexed).**
- **Vignesh A.**, Amal TC., Shanmugam A., Selvakumar S., Vasanth K (2025). Effects of dietary approaches to prevent hypertension and enhance cardiovascular health. **Discover Food** 5(9) 1-19. **Impact Factor: 3.6; (Q2 Journal); (SCIE Indexed).**
- **Vignesh A.**, Menaka C., Amal TC., Selvakumar S., Vasanth K (2025) Exploring the Dual Impact of Nanoparticles on Human Well-being: A Comprehensive Review of Risks and Benefits. **Next Nanotechnology,** 8, 100223. **Impact Factor: 3.7; (Q2 Journal); (Scopus Indexed).**
- G.Sathiyaraj, M.Akilesh, **A.Vignesh,** K.Naveen Kumar, S.Gopinath, S.Mohanapriya, J.M.Malecki, K.Kadirvelu, R.Shankar & N.Dharmaraj (2025). Benzothiazole-based Schiff base for sensing Ca $^{2+}$ ions: Synthesis, DFT studies, toxicity evaluation in Zebrafish embryo and *in silico* analysis of MMP-9 inhibition. **Journal of Photochemistry and Photobiology A: Chemistry,** 158, 15985. **Impact Factor: 4.4; (Q1 Journal); (SCIE Indexed).**
- C.Menaka, A. Logamadevi, **A. Vignesh** (2025). Unveiling the socio-cultural practices of medicinal plants used by the ethnic community of Soliga tribes in Tamil Nadu, India. **Phytomedicine Plus,** 191, 100799. **(Q2 Journal); (Scopus Indexed).**
- Sarvalingam A., **Vignesh A.**, Varatharaju G., Murugan M (2025). Phytochemical screening and potential of antimicrobial and anti-inflammatory activity of organic extract derived from *Tragia plukenetii* Radcl. Sm. **The Journal of Indian Botanical Society,** 104, 1-8. **(Scopus Indexed).**

2024

- **Vignesh A.**, Amal TC., Vasanth K (2024). Food contaminants: Impact of food processing, challenges and mitigation strategies for food security. **Food Research International** 191, 114739 **Impact Factor: 8.8; (Q1 Journal); (SCIE Indexed).**
- **Vignesh A.**, Amal TC., Sarvalingam A., Vasanth K (2024). A Review on the Influence of Nutraceuticals and Functional Foods on Health. **Food Chemistry Advances** 5, 100749. **(Q1 Journal); (Scopus Indexed).**
- **Vignesh A.**, Amal TC., Sivalingam R., Selvakumar S., Vasanth K (2024). Unraveling the Impact of Nanopollution on Plant Metabolism and Ecosystem Dynamics. **Plant Physiology and Biochemistry** 210, 108598. **Impact Factor: 6.2; (Q1 Journal); (SCIE Indexed).**
- **Vignesh A.**, Amal TC., Kalaiyarasan J., Selvakumar S., Vasanth K (2025). An effective bio-inspired synthesis of palladium nanoparticles using *Crateva religiosa* G.Forst. leaf extract: a multi-functional approach for environmental and biomedical applications. **Biomass Conversion and Biorefinery. Impact Factor: 4.3; (Q2 Journal); (SCIE Indexed).**
- **Vignesh A.**, Amal TC., Sivalingam R., Selvakumar S., Vasanth K (2024). Influence of ecological factors on the phytochemical composition and bioactivity of *Berberis tinctoria* Lesch. wild edible fruits. **Biochemical Systematics and Ecology** 112, 104771. **Impact Factor: 2.2; (Q3 Journal); (SCIE Indexed).**
- **Vignesh A.**, Menaka C., Amal TC., Vasanth K (2024). Plant ecosystems and sustainable development in the Western Ghats, India. **Journal of Ecology and Conservation** 2(1) 1-4.

- **Vignesh A.**, Amal TC., Vasanth K (2024). An Investigation into the Impact of Millets on Global Health and Sustainability. **Journal of Nutraceuticals and Health** 2(1) 25-26.

2023

- **Vignesh A.**, Amal TC., Selvakumar S., Vasanth K (2023). Unraveling the role of medicinal plants and Gut microbiota in colon cancer: Towards microbiota- based strategies for prevention and treatment. **Health Science Review** 9, 100115. **(Q2 Journal); (Scopus Indexed).**
- **Vignesh A.**, Amal TC., Selvakumar S & Vasanth K (2023). Conservation linkages of endangered medicinal plant and exploration of phytochemicals, pharmaceutical screening and *in silico* validation of *in vivo*-wild and *in vitro*-regenerated plant *Boucerosia diffusa* Wight. **3 Biotech** 13(7), 1-22. **Impact Factor: 3.1; (Q1 Journal); (SCIE Indexed).**
- Sathiyaraj G., **Vignesh A.,** Priyanka K., Neethu KS., Badhmapriya D., Preethi K., Dharmaraj N., Kaveri MV (2023). Construction of 3-amino-9-ethylcarbazole scaffold for multifunctional applications: Chemosensor for copper(II) ions along with antibacterial, antioxidant and anti-inflammatory activity, **Results in Chemistry** 6, 101141. **Impact Factor: 5.8; (Q2 Journal); (SCIE Indexed).**
- Raja K., **Vignesh A.,** Lavanya P., Ravi M., Selvakumar S & Vasanth K (2023). A New organosulfur compound identified from *Striga angustifolia* (D. Don) C.J. Saldanha inhibits lung cancer growth and induces apoptosis via p53/mTOR signaling pathway. **Applied Biochemistry and Biotechnology** 5, 1-21. **Impact Factor: 3.5; (Q2 Journal); (SCIE Indexed).**
- Dipshika N., **Vignesh A.,** Raja K., Selvakumar S & Vasanth K (2023). Exploration of phytochemicals and probing potential effects of *Priva cordifolia* active extract on PACAP 38 and its nociceptor in the human trigeminovascular system. **3 Biotech** 13(39) 1-14. **Impact Factor: 3.1; (Q1 Journal); (SCIE Indexed).**
- Janani K., **Vignesh A.,** Pradeepa Veerakumari K., Vasanth K & Rakkiyappan R (2023). Selecting the soil suitable for plant breeding and identifying the most endemic plant species in Nilgiris using the interval type 2 q-rung orthopair fuzzy Bonferroni mean operator. **Computational and Applied Mathematics** 42(55) 1-49. **Impact Factor: 2.4; (Q2 Journal); (SCIE Indexed).**

2022

- **Vignesh A.,** Selvakumar S & Vasanth K (2022). Comparative LC-MS analysis of bioactive compounds, antioxidants and antibacterial activity from leaf and callus extracts of *Saraca asoca.* **Phytomedicine Plus** 2(1) 100167. **(Q2 Journal); (Scopus Indexed).**
- **Vignesh A.,** Sivalingam R & Vasanth K (2022). Diversity of Woody Flora and Physico- chemical attributes of soil in the Nilgiri Hills, Tamil Nadu, India. **Proceedings of the national academy of sciences, India section b: biological sciences** 92(1): 95-103. **(Q2 Journal); (Scopus Indexed).**
- **Vignesh A.,** Sivalingam R., Selvakumar S & Vasanth K (2022). A review on ethnomedicinal and phytopharmacological potential of traditionally wild and endemic plant *Berberis tinctoria* Leach. **Thai Journal of Pharmaceutical Sciences** 46(2): 137-148. **(Q3 Journal); (Scopus Indexed).**

2021

- **Vignesh A.,** Selvakumar S & Vasanth K (2021). Green synthesis and characterization of zinc oxide nanoparticles using *Berberis tinctoria* Lesch. leaves and fruits extract of multi-biological applications. **Nanomedecine Research Journal** 6(2): 128-147. **(Q3 Journal); (Scopus Indexed).**
- **Vignesh A.,** Pradeepa Veerakumari, K., Selvakumar, S., Rakkiyappan, R & Vasanth, K (2021). Nutritional assessment, antioxidant, anti-inflammatory and antidiabetic potential of traditionally used wild plant, *Berberis tinctoria* Lesch. **Trends in Phytochemical Research**, 5(2), 71-92. **(Q3 Journal); (Scopus Indexed).**

2014

- Sivakumar S.R & **Vignesh A** (2014). *In vitro* activity of seaweed extracts collected from Gulf of Mannar Coast Islands, Tamil Nadu on clinical isolates. **World Journal of Fish and Marine Sciences** 6 (6), 504-508.

UNDER THE CONSIDERATION

- **Arumugam Vignesh**, Thomas Cheeran Amal, Subramaniam Selvakumar, Krishnan Vasanth. Optimization of ultrasound-assisted extraction (UAE) of nutritional and anti-nutritional components in wild fruit *Cucumis trigonus* Roxb.). **Journal of Food Composition and Analysis (3rd Revision Completed).**

- **Arumugam Vignesh,** Madhiyan Selladurai, Thomas Cheeran Amal, Chinasamy Menaka. Microplastics from ultra-processed food may harm mental health: A review of emerging evidence and biological mechanisms. **Biological Psychiatry (With Editor).**

- **Arumugam Vignesh,** Madhiyan Selladurai, Thomas Cheeran Amal. Ultrafine Particles in Incense fumes and Lung Cancer: A Review. **Pesticide Biochemistry and Physiology (With Editor).**

- **Arumugam Vignesh,** Thomas Cheeran Amal, Chinasamy Menaka, Annadurai Logamadevi, Krishnan Vasanth. Exploring Plant Compounds for Diabetes Management and Complications Mitigation. **Journal of Drug Delivery Science and Technology (With Editor).**

- **Arumugam Vignesh,** Thomas Cheeran Amal, Chinasamy Menaka. Exploring Plant Compounds for Diabetes Management and Complications Mitigation. **Phytomedicine (With Editor).**

- **Arumugam Vignesh,** Ibraheem Thoufeeq Ahamed, Balamurugan Sneha**.** Fatty acid mediated modulation of inflammatory pathways involving endocrine resistance by *Cucumis trigonus* Roxb. seed oil: A network pharmacology and molecular docking study**. 3 Biotech (With Editor).**

- **Arumugam Vignesh,** Thomas Cheeran Amal, Krishnan Vasanth. Nutraceuticals and oil characterization of *Cucumis trigonus* Roxb. seed residues; its antibacterial and cytotoxic effect on human embryonic kidney (HEK293) cell lines. **Food Chemistry (With Editor).**

- **Arumugam Vignesh,** Thomas Cheeran Amal, Krishnan Vasanth. Novel Strategies for Mycotoxin Detection, Mitigation, and Risk Assessment in Food: A Comprehensive Review. **Food Chemistry (With Editor).**

- Chinasamy Menaka, Annadurai Logamadevi and **Arumugam Vignesh.** Traditional medicinal practices of ethnobotanical plants used by Soliga tribal communities in Tamil Nadu, India. **Trends in Phytochemical Research (Under Review).**

OTHER PROFESSIONAL ACTIVITIES

DCA (Diploma in Computer Application) program, CSC Computer Education, Aranthangi, India. 2008.

REFERENCES

Dr. K. Vasanth
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Bharathiar University
Coimbatore- 641 046
Tamil Nadu, India
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Associate Professor & Head
Department of Botany
NGM College (Autonomous)
Pollachi- 642 001
Tamil Nadu, India
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Professor & Head
Department of Plant Science,
Manipal School of Life Sciences Manipal
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Manipal- 576 104, Karnataka, India.
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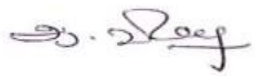
Department of Botany
Bharathiar University
Coimbatore- 641 046
Tamil Nadu, India
Phone: +91 99521 06759
Email: pgurusaravanan@gmail.com

DECLARATION

I affirm that all information supplied by me as above is true and correct. I also fully understand that if at any stage, it is discovered that any attempt has been made by me to willfully conceal or misrepresent the facts, my candidature is liable to be summarily rejected or employment terminated.



Place: Pollachi
Date: 22.07.2026

Signature of the candidate
(A. VIGNESH)

PhD Thesis Link: https://shodhganga.inflibnet.ac.in/handle/10603/400529