Dr P. P VIJAYA

Professor
Department of Nanoscience and Technology

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Research Area

- Nanogenotoxicity
- Nano-Drug Co Delivery System (NDCDS)
- Cancer therapeutics, and Bioimaging
- Nanofibers for Drug Delivery
- Preventive Genetics
- Drosophila Toxicity Studies
- DNA Fragmentation Assay
- Zebrafish Embryo Teratogenicity Assay
- Angiogenesis Assay using Chick Embryo
- Hemocompatibility Assay
- RNA Estimation
- Thin Layer Chromatography (TLC)
- Synthesis of Nanomaterials
- Characterization of Nanomaterials
- Onion Root Tip Mitosis Assay
- Nanotechnology for Forensic Application
- Synthesis of Quantum Dots and Quantum Mediated Drug Delivery
- Nano-phytotoxicity
- Nano-cytotoxicity

Courses Teaching

- Cell and Molecular Biology
- Genetics and Nanobiotechnology
- Pharmaceutical Biotechnology
- Environmental Biotechnology
- Toxicology
- IPR, Biosafety and Research Ethics
- Advances in Nanobiotechnology
- Nanodevices and Applications
- Practical methods in Nanotoxicology and Molecular Genetics (Value added Course)
- Nanotoxicology – Risk Assessment and Management (Certificate Course)

Research Experience: 28

Teaching Experience: 28

Research Credentials (as on November 2025 – Source: Google scholar)

H-index: 11 Citations: 585 i10-index: 13

Copyright : 1 **Patents :** Granted: 1 Filed: 1

Publications

International Journals: 24

Career

Other Institutes

1. Designation : HoD

Institution Name : Mohamad Sathak College of Arts and Science, Chennai

Period : June 2001 - April 2015

2. Designation : Teaching Assistant

Institution Name : Senior Research Fellow (SRF), NEERI CSIR, Chennai

Period : January 1999 - July 2001

At Bharathiar University

1. Designation : Professor

Period : April 2020 - Till Date

2. Designation : Associate Professor
Period : April 2015 - April 2019

Education

Ph. D.
Subject : Biotechnology
Institution : National Environmental Engineering Research Institute (NEERI)
Affiliated University : University of Madras
Year of Award : April 2003

M. Phil.
Subject : Human Genetics & Molecular Biology
Institution : Dr. A.L.M.P.G.I.B.M.S
Affiliated University : University of Madras
Year of Award : May 1995

M. Sc.
Subject : Human Genetics & Molecular Biology
Institution : Dr. A.L.M.P.G.I.B.M.S
Affiliated University : University of Madras
Year of Award : April 1992

Projects

National Level
Ongoing - 1 completed - 1

Research Guidance

Completed
Ph.D. - 4

On Going
Ph.D. - 8

Institutional Responsibilities

SWAYAM Coordinator – Department of Nanoscience and Technology
Period :Jun 2020 - Sep 2025
Nature of Responsibility :

Internal Committee(IC)
Period :Sep 2023 to Till date
Nature of Responsibility :

Visits

1. 4th International Workshop on Cancer Genetic & Cytogenetic Diagnostics (2016-03-30 - 2016-04-01)
2. Asia Pacific Cancer Leader's Summit 8th General Assembly (2016-04-13 - 2016-04-16)
3. Anticancer activity of Moringa Oliefera mediated Silver Nanoparticles (AgNps) on Human Lymphocyte Cells (2018-11-25 - 2018-11-23)
4. Computational integrative analysis of identification of potential therapeutic genes and networks in breast cancer (2018-09-15 - 2018-09-14)
5. EGFR Network Modeling for the Phenotypic Expression of Proliferation in Triple Negative Breast Cancer (2018-04-17 - 2018-04-15)
6. Novel therapeutic targets identification in breast cancer by systems biology approach (2017-10-14 - 2017-10-13)
7. TRAINING OF TEACHERS FOR STUDENT INDUCTION PROGRAMME (Deeksharambh-Phase II) organized by UNIVERSITY GRANTS COMMISSION (2019-10-31 - 2019-10-30)
8. SWAYAM Orientation workshop for SWAYAM MENTORS (2019-10-18 - 2019-10-18)

9. Converting the research work into worth commercialization-claim drafting (2019-08-30 - 2025-08-29)

10. Preeclampsia and HELLP Syndrome – Investigation using Raman Spectroscopy (2019-02-28 - 2019-02-28)

11. Translational Cancer Research Cancer Prevention and Treatment: From Ancient Medicine to Modern Medicine (2018-02-11 - 2018-02-08)

12. Motivating the students to prepare for the competitive Exams (2018-02-28 - 2018-02-28)

13. Toxicology and Risk Assessment on Environment (2017-11-24 - 2017-11-24)

14. Ductal Carcinoma of the Breast in the CIT- AICTE sponsored Faculty Development Programme on Advanced Material Science & Engineering: Nano- Bio 2017 (2017-11-02 - 2017-11-02)

15. One – Day Intensive Workshop on Fundamentals of X – Ray Diffraction (WFXRD) (2017-08-31 - 2017-08-31)

16. ADVANCES IN BIOLOGICAL SYSTEMS AND MATERIAL SCIENCE IN NANO WORLD, in the topic entitled Toxicology and Risk Assessment of Nanomedicine (2017-04-19 - 2017-04-19)

17. HELLP SYNDROME in the Two Days National Conference on Recent Trends in Nanotechnology (2017-03-25 - 2017-03-25)

18. Preeclampsia using Raman Spectroscopy in the Two Days National Conference on Recent Trends in Biotechnology (2017-03-24 - 2017-03-23)

19. Genetic Testing and Diagnosis of Diseases (2017-02-10 - 2017-02-10)

20. Advances in Prenatal Molecular Diagnostics (2016-07-25 - 2016-07-25)

21. Inborn Errors of Metabolism (2016-07-25 - 2016-07-25)

22. Cancer Diagnosis Technology and Nanowires that detect Cancer cells – Future Tool (2016-02-26 - 2016-02-26)

23. Sixth International Conference on Metals in Genetics Chemical Biology and Therapeutics (2016-02-17 - 2016-02-17)

24. Neuroprotective Study of Withania Somnifera by an in Silico Approach (2016-01-07 - 2016-01-03)

25. resource person in QIP – FDP (2015-11-23 - 2015-11-23)

26. Faculty Development Programme on Entrepreneurship (2017-11-21 - 2017-11-06)

27. Evaluating Neem Gum Infused Copper Oxide Nanofibers Synthesized by Euphorbia hirta Plant Extract to Enhanced Anti-cancer Activates (2024-01-23 - 2024-01-23)

28. In-Vitro Biomedical Applications of Neem gum Infused Copper Oxide Nanofibers using Euphorbia hirta Plant Extract (2024-02-02 - 2024-02-02)

29. Strategies for Patent to Product and Product to Market (2024-04-26 - 2024-04-26)

30. BU-Center for International Affairs (2024-11-28 - 2024-11-28)

31. Future Aspects of Nanomedicine – Starve the Tumor (2023-02-22 - 2023-02-22)

32. The Future of Nano-Medicine (2023-12-04 - 2023-12-04)

33. Future Aspects of Nanomedicine – Starve the Tumor, Feed the Cells (2025-08-01 - 2025-08-01)

34. Cellular and Chromosomal Interaction of Bio-synthesized Copper Oxide Nanoparticles - Induced Nano-cytotoxicity and Genotoxicity (2025-12-04 - 2025-12-06)

Patents

Granted - 1

1. Sesamum Indicum Seeds Infused Titanium Dioxide/Graphene Oxide Nanocomposite for Biomedical Application 01-2023 532811/202341001718 Dr., P.P.VIJAYA, S.SIVARANJANI

Filed - 1

1. Vinblastin-Loaded Iron Oxide Nanocomposite Nanofiber for Biomedical Application 01-1970 202341064904 Dr., P.P.VIJAYA, S.SIVARANJANI

Copyright

Dr P. P VIJAYA , Professor , Department of Nanoscience and Technology

1. CONCEPTS OF GENETIC ENGINEERING Dr. P. P. VIJAYA 55213/2014-CO/L 31-10-2014 L-60728/2014 17-12-2014

Selected Publications

1. Nano-Chemotherapeutic Approaches of Bio-Synthesized Chitosan Encapsulated Cyclophosphamide Loaded Magnetite Nanoparticles for Enhanced Lung Cancer Therapy

Journal of Cluster Science (2025) 36:172https://doi.org/10.1007/s10876-025-02902-2 (August 2025)
Prabu Velumani, Antalin Casmie A, Rajeswari Senthilvel, Antony Anista Michael, Vijaya Parthasarathy, Thirunavukkarasu Velusamy

2. Cellular and Chromosomal Interaction of Bio-Synthesized Copper Oxide Nanoparticles Induced Nano-cytotoxicity and Genotoxicity

Toxicology In Vitro/ Volume 104/ April 2025/ 106000, https://doi.org/10.1016/j.tiv.2024.106000 (December 2024)
Prabu Velumani, Naveen Palani, Antalin Casime A, Rajeswari Senthilvel, Vijaya Parthasarathy

3. Synthesis, Characterization and In-Vitro Toxicity Assessment of Superparamagnetic Iron Oxide Nanoparticles for Biomedical Applications

Journal of Nano Biomedicine and Engineering, 2022, Volume 14 Issue 3, September 2022, Pages 201-207, DOI: 10.5101/nbe.v14i3.p201-207 (September 2022)
Sivaranjani Sivalingam , Mahalakshmi Santhanakrishnan , Vijaya Parthasarathy

4. Biological investigation of chromium-doped cobalt oxide nanoparticles against HeLa cancer cell lines

Journal of Materials Science, Springer publications, July 2022, Journal of Materials Science, 57(27):1-9, DOI: 10.1007/s10853-022-07432-0 (July 2022)
Sivaranjani Sivalingam, Vijaykumar Murugan, P. P. Vijaya.

5. Evaluation of In - vitro hemolytic and antimicrobial activity of Titanium dioxide (TiO2) Nanoparticles by Hydrothermal method

Journal of Nano Biomedicine and Engineering, January 2021, Nano Biomedicine and Engineering, 13(1), DOI: 10.5101/nbe.v13i1.p36-43 (March 2021)
Mahalakshmi S, Vijaya P.P

6. Fabrication, Toxicity and biocompatibility of Sesamum indicum infused graphene oxide nanofiber- a novel green composite method

Journal of Applied Nanoscience, Springer publications, 2021, DOI:10.1007/s13204-020-01596-4, Corpus ID: 227133626 (February 2021)
Sivaranjani Sivalingam, Arya Kunhilintakath, Ponpandian Nagamony, Vijaya Parthasarathy

7. In Vitro Biocompatibility and Antimicrobial activities of Zinc Oxide Nanoparticles (ZnO NPs) Prepared by Chemical and Green Synthetic Route— A Comparative Study

Journal of BioNanoscience, Springer publications, BioNanoScience (2020) 10:112-121, https://doi.org/10.1007/s12668-019-00698-w (November 2019)
Mahalakshmi S, Hema N, Vijaya P.P

8. A Complete Review–Precision Diagnostics to Preeclampsia by Using Doppler Ultra Sonography, Biosensors and Raman Spectroscopy

European Journal of Pharmaceutical and Medical Research (August 2019)
Mahalakshmi S and Vijaya P. P

Dr P. P VIJAYA , Professor , Department of Nanoscience and Technology

9. Integration of cancer associated genes from human genome by manual curation of biological databases

International Journal of Current Research in Life Sciences (March 2018)
P Mumtaj, PP Vijaya

10. Neuro protective study of Withania Somnifera Dunn. by an In Silico Approach

International Journal of Chemistry and Pharmaceutical Sciences, 2016, 4(8):399-403 (June 2016)
Sharmila K, Mumtaj P, Vijaya Parthasarathy