

**Name** : Dr. P. Deepak  
**Designation** : Assistant Professor  
**Department** : Biotechnology  
**Qualification** : M.Sc., M.Phil., Ph.D.  
**Experience** : Teaching (2 year 09 months)  
**Area of Specialization(s)** : Marine Pharmacology, Nanotechnology  
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### Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
Ph. D.	Biotechnology	Periyar University, Salem, Tamil Nadu	2019
M. Phil.	Biotechnology	Periyar University, Salem, Tamil Nadu	2015
M.Sc.	Biotechnology	Periyar University, Salem, Tamil Nadu	2014
B.Sc.	Biotechnology	SSM CAS, Kumarapalayam, Namakkal, Tamil Nadu	2012

### Additional Qualifications

Diploma / Vocational / Certification	Area of Specialization	Institution / University / Agency Name	Year
Online Certificate	Genetic Engineering: Theory & Application	NPTEL	2019

### Research Publications (Indexed)

#### International

1. V Manon Mani, JK Mithu Ashwin, AJ Parimala Gnana Soundari, S. Sathiskumar, U. Priyadharshini, **P Deepak**, Wen-Chao Liu & , B Balamuralikrishnan. Mycofabrication of AgONPs derived from *Aspergillus terreus* FC36AY1 and its potent antimicrobial, antioxidant, and anti-angiogenesis activities. Molecular Biology Reports. 2021., Springer
2. **P Deepak**, Balamuralikrishnan B, Sungkwon Park, Palanisamy A, Perumal P. (2020) Phytochemical composition and mosquitocidal assays against Dengue Vector, *Aedes aegypti* of *Plectranthus amboinicus* (Lour.) Spreng extracts. Asian Pacific Journal of Tropical Medicine. 13(11): 494-502. DoI: 10.4103/1995-7645.295360. IF: 1.94. (Indexed in Web of Sci, UGC, Scopus)
3. SB Santhosh, D Natarajan, **P Deepak**, B Gayathri, L Kaviarasan, P Naresh, MJ Nanjan (2020). Metabolic enzyme inhibitory and larvicidal activity of biosynthesized and heat stabilized silver nanoparticles using *Annona muricata* leaf extract. BioNanoScience, 10, 267–278. <https://doi.org/10.1007/s12668-019-00709-w>. (Indexed in Web of Sci, UGC, Scopus)
4. SB Santhosh, MJN Chandrasekar, L Kaviarasan, **P Deepak**, T Silambarasan, B Gayathri, D Natarajan. (2020) Chemical composition, antibacterial, anti-oxidant and cytotoxic properties of green synthesized silver nanoparticles from *Annona muricata* L. (Annonaceae), Research Journal of Pharmacy and Technology, 13(1) 1-7. DOI: 10.5958/0974-360X.2020.00006.2 IF: 0.41. (Indexed in Web of Sci, UGC, Scopus)

5. V Amutha, **P Deepak**, C Kamaraj, G Balasubramani, D Aiswarya, D Arul, P Santhanam, AM Ballamurugan and P Perumal. (2019) Mosquito-larvicidal potential of metal and oxide nanoparticles synthesized from aqueous extract of the seagrass, *Cymodocea serrulata*. Journal of Cluster Science. <https://doi.org/10.1007/s10876-019-01542-7> IF: 1.715. (Indexed in Web of Sci, UGC, Scopus)
6. D Aiswarya, RK Raja, C Kamaraj, G Balasubramani, **P Deepak**, D Arul, V Amutha, C Sankaranarayanan, S Hazir and P Perumal. (2019) Biosynthesis of gold and silver nanoparticles from the symbiotic bacterium, *Photorhabdus luminescens* of entomopathogenic nematode: larvicidal properties against three mosquitoes and galleria mellonella larvae. Journal of Cluster Science. IF: 1.715. <https://doi.org/10.1007/s10876-019-01564-> (Indexed in Web of Sci, UGC, Scopus)
7. G Balasubramani, K Induja, D Aiswarya, **P Deepak**, D Arul, M Kavitha, V Amutha, P Perumal. (2018) Isolation and characterisation of human foot crack associated bacterium, *Pseudomonas otitidis* and its biological propensity. Smart Science, <https://doi.org/10.1080/23080477.2018.1551305>. (Indexed in Web of Sci, UGC, Scopus)
8. **P Deepak**, B Balamuralikrishnan, Sung Kwon Park, R Sowmiya, G Balasubramani, D Aiswarya, V. Amutha and P Perumal. (2018) Phytochemical profiling of marine red alga, *Halymenia palmata* and its bio-control effects against dengue vector, *Aedes aegypti*. South African Journal of Botany. 121 (2019) 257–266. DoI: <https://doi.org/10.1016/j.sajb.2018.11.011> IF: 1.442. (Indexed in Web of Sci, UGC, Scopus)
9. D Aiswarya, C Kamaraj, R Raja, G Balasubramani, **P Deepak**, D Arul and P Perumal. (2018) Isolation and growth inhibition potential of entomopathogenic nematodes against three public health important mosquito vectors. Experimental Parasitology. 197 (2019) 76–84. DoI: <https://doi.org/10.1016/j.exppara.2018.11.001> IF: 1.821. (Indexed in Web of Sci, UGC, Scopus)
10. G Balasubramani, D Arul, C Kamaraj, **P Deepak**, D Aiswarya, K Jothimani, P Santhanam and P Perumal. (2018) Comparative extraction of *Salmonella bongori* derived metabolites and their toxicity on bacterial pathogens, mosquito-larvae, zebrafish-embryo and brine-shrimp: A modified approach. Ecotoxicology and Environmental Safety. 169: 192-206. <https://doi.org/10.1016/j.ecoenv.2018.11.012>. IF: 3.743. (Indexed in Web of Sci, UGC, Scopus)
11. G Balasubramani, **P Deepak**, D Aiswarya, R Karthik Raja, C Kamaraj and P Perumal. (2018) Multipurpose efficacy of the lyophilized cell-free supernatant of *Salmonella bongori* isolated from the freshwater fish, *Devario aequipinnatus*: toxicity against microbial pathogens and mosquito vectors. Environmental Science and Pollution Research 25(29): 29162–29180. <https://doi.org/10.1007/s11356-018-2838-9>. IF: 2.800. (Indexed in Web of Sci, UGC, Scopus)
12. **P Deepak**, V Amutha, R Sowmiya, G Balasubramani, D Aiswarya, R Birundha and P Perumal. (2018) Facile green synthesis of nanoparticles from brown seaweed, *Sargassum wightii* and its biological potential. Advances in Natural Sciences: Nanoscience and Nanotechnology. 9: 035019 (10pp). DoI: <https://doi.org/10.1088/2043-6254/aadc4a>. (Indexed in Web of Sci, UGC, Scopus)
13. C Kamaraj, **P Deepak**, G Balasubramani, S Karthi, D Arul, D Aiswarya, V Amutha, E Vimalkumar, D Mathivanan, S Renjitham Suseem, C K Muthu-Pandian, S Senthil-Nathan, P Perumal. Target and non-target toxicity of fern extracts against mosquito vectors and beneficial aquatic organisms. Ecotoxicology and Environmental Safety. 161:221-230. DoI: <https://doi.org/10.1016/j.ecoenv.2018.05.062>. IF: 3.743. (Indexed in Web of Sci, UGC, Scopus)
14. C Kamaraj, G Balasubramani, **P Deepak**, A Aiswarya, D Arul, V Amutha, S Karthi, P Perumal. (2018) Bio-pesticidal effects of *Trichoderma viride* formulated titanium dioxide nanoparticle and their physiological and biochemical changes on *Helicoverpa armigera* (Hub.). Pesticide Biochemistry and

- Physiology 149:26-36. DOI: 10.1016/j.pestbp.2018.05.005. IF: 2.590. (Indexed in Web of Sci, UGC, Scopus)
15. **P Deepak**, R Sowmiya, G Balasubramani, D Aiswarya, D Arul, M Diviya Josebin and P Perumal. (2017) Mosquito-larvicidal efficacy of gold nanoparticles synthesized from the seaweed, *Turbinaria ornata* (Turner) J. Agardh 1848. Particulate Science and Technology. 36 (8), 974–980. IF: 1.081: UGC J. No. 37033. DOI: 10.1080/02726351.2017.1331286 (Indexed in Web of Sci, UGC, Scopus)
  16. P Perumal, R Sowmiya, S Prasanna kumar, S Ravikumar, **P Deepak** and G Balasubramani. (2017) Isolation, structural elucidation and antiplasmodial activity of fucosterol compound from brown seaweed, *Sargassum linearifolium* against malarial parasite *Plasmodium falciparum*. Natural Product Research.; 32 (11), 1316–1319. IF: 1.05. DOI: 10.1080/14786419.2017.1342081 (Indexed in Web of Sci, UGC, Scopus)
  17. **P Deepak**, R Sowmiya, G Balasubramani and P Perumal. (2017) Phytochemical profiling of *Turbinaria ornata* and its antioxidant and anti-proliferative effects. Journal of Taibah University Medical Sciences, 12(4), 329-337. DOI: <http://dx.doi.org/10.1016/j.jtumed.2017.02.002>. (Indexed in Web of Sci, UGC, Scopus)
  18. G Sivaperumal, K Kannan, S Gnanavel, P Perumal, R Sowmiya and **P Deepak**. (2016) Extraction, Isolation, Characterization, Semi-Synthesis and Anti-Plasmodial Activity of *Justicia adathoda* Leaves. Bangladesh Journal of Pharmacology. 11: 878-885. IF: 1.052. DOI: <https://doi.org/10.3329/bjp.v11i4.28569> (Indexed in Web of Sci, UGC, Scopus)
  19. **P Deepak**, R Sowmiya, R Ramkumar, G Balasubramani, D Aiswarya and P Perumal. (2016) Structural characterization and evaluation of mosquito-larvicidal property of silver nanoparticles synthesized from the seaweed, *Turbinaria ornata* (Turner) J. Agardh 1848). Artificial Cells, Nanomedicine, and Biotechnology, 2016; 45(5):990-998. <http://dx.doi.org/10.1080/21691401.2016.1198365>. IF: 5.605. (Indexed in Web of Sci, UGC, Scopus)
  20. R Sowmiya, S Prasanna Kumar, **P Deepak**, R Ramkumar, G Balasubramani, D Aiswarya, P Perumal and S Ravikumar. (2016) *In vitro* antiplasmodial activity of native indian seaweed *Sargassum* sp. Asian Journal of Pharmaceutical and Clinical Research, Vol 9, Issue 2, 2016, 101-106. IF: 0.48. (Indexed in UGC)
  21. G Balasubramani, R Ramkumar, N Krishnaveni, R Sowmiya, **P Deepak**, D Arul and P Perumal. (2015) GC–MS analysis of bioactive components and synthesis of gold nanoparticle using *Chloroxylon swietenia* DC leaf extract and its larvicidal activity. Journal of Photochemistry and Photobiology B: Biology. 2015 Jul 31; 148:1-8. IF: 3.035. DoI: <https://doi.org/10.1016/j.jphotobiol.2015.03.016> (Indexed in Web of Sci, UGC, Scopus)
  22. G Balasubramani, **P Deepak**, R Sowmiya, R Ramkumar and P Perumal. (2014) *Antigonon leptopus*: a potent biological source for extermination of fish bacterial pathogens *Providencia* and *Aeromonas*. Natural Product Research. 2015;29(10):958-960. IF: 1.057. (Indexed in Web of Sci, UGC, Scopus)

#### National

1. **P Deepak**, R Sowmiya, C Kamaraj, M Diviya Josebin, D Aiswarya, G Balasubramani, V Amutha and P Perumal. (2018) GC-MS profiling, chemical characterization, antioxidant,  $\alpha$ -amylase and  $\alpha$ -glucosidase inhibition of selected seaweeds from southeast coast of India: An *In vitro* approach. Journal of Drug Delivery and Therapeutics. 8(2):60-72. DOI <https://doi.org/10.22270/jddt.v8i2.1665> (Indexed in UGC)
2. **P Deepak**, M Diviya Josebin, R Kasthuridevi, R Sowmiya, G Balasubramani, D Aiswarya and P Perumal. (2017) GC-MS Metabolite Profiling, Antibacterial, Antidiabetic and Antioxidant Activities of Brown Seaweeds, *Sargassum wightii* Greville Ex J. Agardh, 1848 and *Stoechospermum*

*marginatum* (C. Agardh) Kützing 1843. PTB Reports, 3(2):61-68. DOI:10.5530/PTB.2017.3.5. (Indexed in UGC)

3. D Aiswarya, R Karthik Raja, G Gowthaman, **P Deepak**, G Balasubramani and P Perumal. Antibacterial Activities of Extracellular Metabolites of Symbiotic Bacteria, *Xenorhabdus* and *Photorhabdus* Isolated from Entomopathogenic Nematodes. International Biological and Biomedical Journal Serial, Spring, Vol 3, No 2. URL: <http://ibbj.org/article-1-110-en.html> (Indexed in UGC)
4. R Sowmiya, G Balasubramani, **P Deepak**, D Aiswarya, S Ravikumar, S Prasannakumar, P Perumal. Characterization and screening of *In vitro* antimalarial and larvicidal activities of selected seaweeds from southeast coast of India against *Plasmodium falciparum* and *Anopheles stephensi*. Journal of Coastal Life Medicine 2017; 5(6): 242-248. DoI:<https://doi.org/10.12980/jclm.5.2017J7-35> (Indexed in Web of Sci, UGC, Scopus)
5. M Raja, R Karthik Raja, R Ramkumar, M Kavitha, D Aiswarya, **P Deepak** and P Perumal. First report on the occurrence of abnormal vertebrae- containing Giant Danio-fish, *Devario aequipinnatus* (McClelland, 1839) in Stanley Reservoir of Cauvery River, Tamil Nadu (India). International Journal of Fisheries and Aquatic Studies. 2016; 4(3) 528-531. (Indexed in UGC)

#### Other Publications: International / Book chapter

1. **P Deepak**, V Amutha, C Kamaraj, G Balasubramani, D Aiswarya and P Perumal. (2019). Ch Title: Chemical and green synthesis of nanoparticles and their efficacy on cancer cells. In "Green Synthesis, Characterization and Applications of Nanoparticles". Edited by Siavash Irvani. Elseiver. (ISBN: 978-0-08-102579-6). DOI: <https://doi.org/10.1016/B978-0-08-102579-6.00001-0>.

#### Book Publications

2. **P Deepak**, R Kasthuridevi and P. Perumal (2017). *In vitro* antibacterial and antioxidant activities of brown seaweeds. In: GC-MS Metabolite Profiling, Antibacterial & Antioxidant Activities of *Sargassum wightii* & *Stoechospermum marginatum*. Lambert Acaademic Publications, pp: 1-69. ISSN: 978-6-202-07765-1.
3. **P Deepak**, R Sowmiya and P. Perumal (2017). Bioactivities of *Turbinaria ornata* and its silver nanoparticles. In: Antibacterial, anticancer and larvicidal activities of biosynthesized silver nanoparticles of seaweed, *Turbinaria ornata*. Lambert Acaademic Publications, pp: 1-81. ISSN: 978-6-202-07119-2.

#### Presentations in Conference

##### International

1. Presented a paper entitled, “**Mosquito-larvicidal efficacy of gold nanoparticles synthesized from the seaweed, *Turbinaria ornata* (Turner) J.Agardh 1848**” in “International Conference on Environment and Health in Changing Climate” organized by Department of Environmental Biotechnology, Bharathidasan University, Tiruchirappalli on 14-16-Sep-16.

##### National

1. Presented a poster entitled, “**Identification of toxic shock syndrome gene from methicillin resistance, coagulase negative *Staph. aureus* from pus samples**” in National seminar on, Biotechnological invention in plant and microbial interaction for crop sustainability, on 30-Jan-13.

#### Poster presentations

1. Presented a poster entitled, “**Ethno pharmacology in Drug Discovery**”, in National symposium on “**Herbs: A Natural Wonder for Disease and Pest Control**”, organized by” Department of Biotechnology, Periyar University on 20-Aug-13.
2. Presented a poster in National seminar on “**Current Trends in Biology and Bio nanotechnology**” Department of Biotechnology, Periyar University on 11-Mar-13.
3. Presented a poster entitled, “**Identification of toxic shock syndrome gene from methicillin resistance, coagulase negative *Staph. aureus* from pus samples**” in National level seminar on “**Impact of Climate Change In Biodiversity**”, organized by Department of Zoology, Periyar University, Salem on 23-Jan-13.
4. Presented a poster entitled, “**Water Pollution by Agriculture**” in international level seminar on “**Emerging Trends in Life Science**” organized by Department of Biotechnology, Navarasam Arts and Science College, Erode on 18-Aug-11.
5. Presented a poster entitled, “**Human antibodies from transgenic animals**” in state level seminar on “**Frontiers in Biotechnology**” organized by Department of Biotechnology, Nandha Arts and Science College, Erode on 18-Feb-11.
6. Presented a poster entitled, “**Transgenic Animal Production**” in National Symposium Cum Workshop on Industry and Rural Biotechnology organized by Department of Biotechnology, SSM College of arts and science, Kumarapalayam entitled, on 06-Mar-10.

#### Participation in Seminars

1. Presented and won **second place of best oral presentation** a paper entitled, “**GC-MS profiling, chemical characterization, antioxidant,  $\alpha$ -amylase and  $\alpha$ -glucosidase inhibition of selected seaweeds from southeast coast of India, *in vitro* approach**” in National seminar on “Frontiers in Ecobiological Sciences and its applications-FESA-2018” organized by School of Life Sciences, Periyar University, Salem on 16-Feb-18.
2. Presented a paper entitled, “**Phytochemical profiling, mosquito-larvicidal activity of Indian borage, *Plectranthus amboinicus* (Lour.) Spreng against dengue vector, *Aedes aegypti*.**” In a **National Seminar on Bioresource for Sustainable Food and Energy production-BioSFEP-2018**” organized by Department of Botany, Periyar University, Salem on 1<sup>st</sup>-2<sup>nd</sup>-Feb-18.
3. Presented and won **first prize** a paper entitled, “**GC-MS Metabolite Profiling, Antibacterial, Antidiabetic and Antioxidant Activities of Brown Seaweeds, *Sargassum wightii* Greville Ex J. Agardh, 1848 and *Stoechospermum marginatum* (C. Agardh) Kützing 1843**” in a National seminar on “New Horizons in Plant Biotechnology” organized by Department of Biotechnology, Periyar University on 06-Dec-17.
4. Presented a poster entitled, “**Smokeless Tobacco - An Alternative for Tuberculosis Diagnosis**” in National seminar on, New Horizons in Biotechnology and Bionanomedicines, organized by Department of Biotechnology, Periyar University on 24-Sep-12.

#### Participation in Workshop

1. Participated in **13 days Science Academies Refresher Course on “Nanotechnology and its application**” organized by KSR college of Technology, Thiruchengodu, Tamil Nadu, on 16-28-Apr-18.

2. Participated and awarded “**Best Activity Performer-Art of Drafting Research Article Session**” in **3 days IV National Workshop on Research Methodology, organized by Chennai Medical College Hospital and Research Centre, Irungalur, Tiruchirapalli, Tamil Nadu**, on 22-24-Mar-18.
3. Participated in **2 days National level workshop on Nuclear Magnetic Resonance Spectroscopy, organized by** Department of Chemistry, The Gandhigram Rural Institute, on 8-9<sup>th</sup> March 2018.
4. Participated in **13 days workshop organized by School of Biological Sciences**, entitled “**XXIX Winter School on Research Methodology**” on 14-26-Nov-16.
5. Participated in one day workshop organized by Department of Biotechnology, Periyar University, entitled “**Molecular modeling & Biopharmaceutical Drug Design for Biotechnology Researchers**” on 05-Mar-15.
6. Participated in one day workshop organized by Department of Food science and Nutrition, Periyar University, entitled “**Principles & applications of GC-MS, GC-MS/MS**” on 07-Nov-14.
7. Participated in two days training program organized by Department of Food science and Nutrition & Computer Center, Periyar University, entitled “**Biostatistics using software packages**” on 30- 31-Sep-14.
8. Participated and **won 3<sup>rd</sup> prize** in quiz competition organized by Department of Environmental Biotechnology, Bharathidasan University, Tiruchirappalli entitled, “**Go Green with Environmental Biotechnology**” on 4-6-JUN-12.
9. Participated in Workshop organized by Center for Biotechnology Muthayammal College of Arts And Science, Rasipuram entitled, “**Animal Cell Culture Techniques**” on 9 & 10-Feb-12.
10. Participated in symposium cum Workshop organized by Department of Biotechnology, SSM College of arts and science, Kumarapalayam entitled, “**National Symposium Cum Workshop on Industry and Rural Biotechnology**” on 6-Mar-10.

#### Conference / Seminar / Workshop Organized

1. Participated in AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Drug Engineering through Bioprospecting" from 12-Jul-21 to 16-Jul-21 at Dr.N.G.P.Arts and Science College.
2. Participated in 2 days Corteva Plant Science symposia series on “Crop Genomics and Data Science: Challenges and opportunities-2019”, organized by Tamil Nadu Agricultural University and Corteva on 17-18-Oct-19.
3. Organized a one day Guest lecture Program on “**Advanced Immunization Technologies for Next Generation vaccines**” on 23-Sep-19 at Department of Biotechnology, Rathnavel Subramaniam College of Arts and Science, Sulur, Coimbatore.
4. Organized one day hands on training on Mushroom cultivation and Entrepreneurship opportunities on 18-03-21 at Department of Biotechnology, Dr. NGP arts and Science College, Coimbatore, India.
5. Organized a webinar entitled “Beware of Predatory and Cloned Journals” on 28-Dec-2021 at Department of Biotechnology, Dr. NGP arts and Science College, Coimbatore, India.
6. Organized a National Science Day Celebration (NSD) `22 on Scientific Ideation, Drawing and Photography on 28-Feb-2022 at Department of Biotechnology, Dr. NGP arts and Science College, Coimbatore, India.

**Awards / Honors**

<b>Awards / Honors</b>	<b>Agency / Institute</b>	<b>Year of Award</b>
PG Gold medalist (University First Rank)	Periyar University, Salem	2014
University Research Fellow	Dept. of Biotechnology, Periyar University, Salem	13.06.2017 to 19.11.2018