

Dr.P.Abirami
Curriculum Vitae

PROJECTS UNDERTAKEN:

1. “Molecular and Genotoxic effect of Cisplatin in Swiss Albino mice”-Project submitted for the Bachelors programme in Zoolgy,(Spl.in.Biotechnology),Lady Doak College, 2008.
2. “Isolation and characterization of HSC, MSC and side population cells from human adipose tissue”-Project submitted for the Masters programme in Biotechnology, University of Madras, 2010.
3. “Screening and characterization of non-insecticidal *Bacillus thuringiensis* strains with specific cytotoxic action on human cancer cell lines”-Ph.D Research project funded by Department of Science and Technology, New Delhi.
4. “Biocompatibility of metal doped fluorophosphates bioglasses on osteosarcoma cell line, MG-63”

ACADEMIC QUALIFICATIONS:

Degree	University	Specialization	Percentage	Year
Ph.D	Madurai Kamaraj University, Madurai.	Microbiology	-	2017
PG Diploma	Madurai Kamaraj University, Madurai.	Bioinformatics	87%	2011
M.Sc	University of Madras, Chennai.	Biotechnology	72%	2010
B.Sc	Madurai Kamaraj University, Madurai	Zoology (Spl. in. Biotechnology)	85%	2008

SEQUENCES SUBMITTED:

1. **MW940878**- *Aeromonas dhakensis* strain DR1 16S ribosomal RNA gene, partialSequence. Rajalakshmi,D. and **Abirami,P.**
2. **MW960354** - *Klebsiella pneumoniae* strain DR2 16S ribosomal RNA gene, partialSequence. Rajalakshmi,D. and **Abirami,P.**

3. **MW960370** - *Aeromonas hydrophila* strain DR3 16S ribosomal RNA gene, partial Sequence. Rajalakshmi,D. and **Abirami,P.**
4. **MW929323** - *Bacillus subtilis* strain DR4 16S ribosomal RNA gene, partial sequence Rajalakshmi,D. and **Abirami,P.**
5. **MW981529** - *Klebsiella quasipneumoniae* strain DR5 16S ribosomal RNA gene, partial sequence Rajalakshmi,D., **Abirami,P.**, Yoga priya,P. and Ananthi,J.
6. **MW981580** - *Klebsiella quasipneumoniae* strain DR6 16S ribosomal RNA gene, partial sequence. Rajalakshmi,D. and **Abirami,P.**
7. **MH795521**-*Staphylococcus hominis* strain LDC108 RpoB-like gene, partial sequence. Rajeswari,V., **Abirami,P.**, MownaSundari,T., Sharmila Devi, M., Ashifa Sulthana ,J. and Shenbagarathai,R.
8. **MH482863.1**-*Bacillus thuringiensis* strain *B.t.*LDC532 16S ribosomal RNA gene, partial sequence. **Abirami,P.**, Jenifer Nisha,A., Suguna,P.andShenbagarathai,R.
9. **KP327716**-*Bacillus thuringiensis* strain *B.t.*LDC501 hypothetical protein gene, partial cds. **Abirami,P.**, Suguna,P. and Shenbagarathai,R.
10. **KJ802831**-*Bacillus thuringiensis* strain *B.t.*LDC501 RNA-dependent polymerase (rpoB) gene, partial cds. **Abirami,P.**, Suguna,P., Poornima,K., Binu Ramesh, C. and Shenbagarathai,R.
11. **KJ802830**-*Bacillus thuringiensis* strain *B.t.*A102RNA dependent polymerase (rpoB) gene, partial cds. Suguna,P., **Abirami,P.**, Binu Ramesh,C. and Shenbagarathai,R.
12. **KF779471**-*Bacillus thuringiensis* strain LDC507 16S ribosomal RNA gene, partial sequence. **Abirami,P.**, Suguna,P., Poornima,K., Binuramesh,C. and Shenbagarathai,R.
13. **KC250017**-Cytochrome oxidase subunit1 (COI) gene, mitochondrial partial CDS, Suganya,G., AsnetMary,J., **Abirami,P.** and R.Shenbagarathai.
14. **JQ988062**-*Bacillus thuringiensis* strain LDC501 16S ribosomal RNA gene, partial sequence. **Abirami,P.** and R.Shenbagarathai
15. **JQ319804**-*Bacillus thuringiensis* strain *B.t.*LDC-391 capsule biosynthesis protein CapA (capA) gene, partial cds. Poornima Kkani, **P.Abirami**, P.Selvanayagam and R.Shenbagarathai.
16. **DRA000604**-Indigenous *B.t.*LDC391 strain showing cytotoxic activity, Whole genome draft sequence, Shenbagarathai Rajaiah, Poornima Kkani, Saranya V, Suguna P, **AbiramiP.**

Guided M.Sc Projects: (2017-2023)

- Characterization of *Bacillus thuringiensis* strains with specific mosquitocidal activity
- Production of extracellular enzymes from *Bacillus thuringiensis* (B.t.LDC501)
- Phytochemical analysis, antioxidant activity and *in vitro* cytotoxic effects of leaves, stem bark and fruit extracts of Bael (*Aegle Marmelos*)
- Optimization and production of extracellular protease enzyme from *Bacillus thuringiensis* (B.t. LDC 501)
- PHB extraction from *Bacillus thuringiensis* A102 and larvicidal activity of silver nanoparticles from *Aegle marmelos*
- Phytochemical and *in silico* cytotoxic analysis of *Aegle marmelos*
- Isolation and characterization of bacteria from Petroleum oil contaminated soils
- Screening of extracellular enzymes from B.t.LDC 391
- Screening and characterization of the lactic acid producing bacteria from *Coccinia grandis* and *Carica papaya*
- Characterization of heavy metal tolerance and biosurfactant in *Bacillus subtilis* DR4 strain
- A study on the effective production of extracellular protease from B.t.LDC 501 strain
- Characterization of heavy metal tolerance from *Bacillus thuringiensis* strains
- Larvicidal activity of (B.t. LDC 507) on different mosquito strains
- Synthesis of silver nanoparticles from marine bacterial isolates with antioxidant and anti-inflammatory properties
- Isolation of heavy metal tolerant strains from industrial wastewater samples

ACADEMIC ACHIEVEMENTS/AWARDS

- Early Career Research Award for the academic year 2022-2023 by R & D cell, Lady Doak College, Madurai.
- Qualified GATE Exam in 2010.
- Qualified CSIR–NET Exam 2009 for Lectureship.
- Awarded PG Indra Gandhi Single Girl child Fellowship during Post graduation in 2009.
- Received Academic Certificate of Merit for the performance in academic and departmental activities from Lady Doak College, Madurai in 2008.
- Received Maruthu Pandiar Endowment Scholarship based on merit for securing 1st mark in B.Sc. Zoology in 2005.

- Presented a project entitled “Nowadays Cinema is a hazard to Society” in Fifth National Children Science Congress, Bhopal held during 1997.

EXTERNAL EXAMINER:

- The American College, Madurai
- Thassim Beevi Abdul Kadar College for women, Kilakarai

PAPERS PRESENTED: 15

RESEARCH PUBLICATIONS:

1. Sankaralingam, Pugalanthipandian, Poornimadevi Sakthivel, Priscilla AS, **Abirami Periyasamy**, Jenifa Begam Rahumathullah, and Vijayakumar Chinnaswamy Thangavel (2021) "Fluorophosphate Bio-Glass for Bone Tissue Engineering: In Vitro and In Vivo Study." *Bioinspired, Biomimetic and Nanobiomaterials*. 10 (4); 123-131.
2. Ponnusamy P. Suguna, Viswanathan V. Saranya, **Periasamy P. Abirami** & Rajaiah R. Shenbagarathai (2020) Optimization and Characterization of PHA (SCL-SCL) Copolymer by Indigenous *Bacillus thuringiensis* A102 Strain for Biomedical Applications. *Current Microbiology*. 77(12):3978-3989. IF: 2.343
3. Rajendran, Neelaveni; Nithya, Kamatchi; **Abirami, Periyasamy**; Vasantha, Solomon (2020) DNA Interaction, antibacterial and in vitro cytotoxic properties of copper(II) complexes bearing (E)-2-(2-(benzo[d]thiazol-2-ylthio)-1-phenylethylidene) thiosemicarbazone and diimine co-Ligands. *Journal of Coordination Chemistry*. 73; 969-985. IF: 1.703
4. Neelaveni Rajendran, **Abirami Periyasamy**, Nithya Kamatchi, Vasantha Solomon (2020) Synthesis and efficacy of copper(II) complexes bearing N(4)-substituted thiosemicarbazide and diimine co-ligands on plasmid DNA and HeLa cell lines. *Journal of Serbian Chemical Society*. 85 (3); 321-334. IF: 0.8284.
5. Neelaveni Rajendran, **Abirami Periyasamy**, Nithya Kamatchi and Vasantha Solomon (2019) Biological evaluation of copper(II) complexes on N(4) – substituted thiosemicarbazide derivatives and diimine co-ligands using DNA interaction, antibacterial and in vitro cytotoxicity. *Journal of Coordination Chemistry*. 72, 1937-1956. IF: 1.703
6. Suguna Ponnusamy, Saranya Viswanathan, **Abirami Periyasamy** and Shenbagarathai Rajaiah (2019) Production and characterization of PHB-HV

- copolymer by *Bacillus thuringiensis* isolated from *Eisenia foetida*. *Biotechnology and Applied Biochemistry*. 66(3):340-352. IF: 1.429.
7. **Periyasamy Abirami**, Poornima Kkani, Chandrasekaran Binuramesh, Ponnusamy Suguna, Viswanathan Saranya, Peter Selvanayagam, Rajaiah Shenbagarathai (2016) Screening and characterization of a non-insecticidal *Bacillus thuringiensis* strain producing parasporal protein with selective toxicity against human colon cancer cell lines. *Annals of Microbiology*. 66 (3), 1167–1178. IF: 1.667
 8. **Abirami, P.**, Kkani, P., Suguna, P., Saranya, V., Selvanayagam, P., & Shenbagarathai, R. (2016). Phenotypic characterization of an indigenous *Bacillus thuringiensis* strain (Bt LDC 501) expressing cancer cell killing protein. *Journal of Experimental Biology and Agricultural Sciences*, 4(2), 232-241.
 9. Saranya, V., Rajeswari, V., **Abirami, P.**, & Shenbagarathai, R. (2016). Polyhydroxy Propionate-Co-Hydroxy Dodecanoate-Co-Hydroxy Octadecanoate for in vitro Cell Culture. *International Journal of Polymeric Materials and Polymeric Biomaterials*. 66 (9), 425-431. IF : 2.127
 10. Saranya V., Rajeswari V., **Abirami P.**, Poornimakkani., Suguna P., Shenbagarathai R (2016) Statistical media design for efficient Polyhydroxyalkanoate production in *Pseudomonas* sp. MNNG-S. *Preparative Biochemistry and Biotechnology*. 6(5), 446-453. IF: 1.241
 11. P.Suguna, C. Binuramesh, **P. Abirami**, V. Saranya, Poornimakkani, V. Rajeswari & R. Shenbagarathai (2014) Immunostimulatory effect of PHB-HV from *Bacillus thuringiensis* in *Oreochromis mossambicus*. *Fish and Shellfish Immunology*. 36,90-97. IF:3.185
 12. Saranya.V., Poornimakkani., Krishnakumari.M.S., Suguna.P., Binuramesh.C., **Abirami.P.**, Rajeswari.V., Ramachandran.K.B. and Shenbagarathai.R (2012) Quantification of intracellular Polyhydroxyalkanoates by virtue of personalized flow cytometry protocol. *Current Microbiology*. 65(5), 589-594. IF:1.373
 13. Kkani Poornima, Viswanathan Saranya, **Periyasamy Abirami**, Chandrasekaran Binuramesh, Ponnusamy Suguna, Peter Selvanayagam, Rajaiah Shenbagarathai (2012) Phenotypic and genotypic characterization of B.t.LDC-391 strain that produce cytotoxic proteins against human cancer cells. *Bioinformatics*. 8(10): 461-465. IF:0.80

CONFERENCES/WORKSHOPS: 15

WEBINARS: 14**AS RESOURCE PERSON:**

- Hands on session in “Clinical Applications of Bioinformatics Tools” summer training organized by DBT-BIF centre, Lady Doak College, 14th to 25th May 2018.
- Hands on session in “Applications of Bioinformatics tools for molecular taxonomic studies” workshop organized by Department of Biotechnology, Lady Doak College, 20-23rd February, 2017.
- Hands on session in “Lecture cum Workshop on Animal cell culture” organized by Department of Biotechnology, Lady Doak College, Madurai, December 14-16, 2016.
- Guest lecture in “An Introduction to Biological Databases” and provided Hands on training in the Onsite workshop on “Bioinformatics-Tools and Applications” at Sri Adi Chunchanagiri Women’s College, Cumbum, February 24 & 25, 2014.
- Hands on session in “Biological Databases and Sequence Retrieval” during the workshop on “Bioinformatics-Tools and Applications” conducted at Lady Doak College, Madurai, September 24-28, 2012.

AS ORGANIZING SECRETARY:

- Organized a “National Level Workshop on Animal Cell Culture Techniques” sponsored and supported by Department of Biotechnology, New Delhi and Tamil Nadu State Council for Science and Technology, Chennai at Lady Doak College, Madurai, September 4-8, 2017.
- Organized a “Lecture cum Workshop on Animal Cell culture” sponsored and supported by Lady Doak College, Madurai, December 14-16, 2016.