Curriculum Vitae

1. **Name** : **Dr. A. Jesu Arockia Raj**

2. **Present Position** : Professor & Head (DBT - Ramalingaswami Fellow)
Department of Biotechnology
Faculty of Science and Humanities
SRM Institute of Science and Technology
Kattankulathur 603 203, Chengalpattu District
Tamil Nadu, India

3. **Permanent Address** : No. 97A, Senthil Nagar, 4th Street, Perungudi
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4. **Date of birth** : 11.06.1975
5. **Place of birth** : Vembar, Tuticorin (District), Tamil Nadu, India
6. **Nationality** : Indian

7. **Academic career:**

Degree	Subject	Institution	University	Yr. of Passing	Mark / Rank
Ph. D*	Zoology	St.Xavier's College (Autonomous) Palayamkottai	Manonmaniam Sundaranar University, Tirunelveli	Feb 2004	--------
M.Phil	Zoology	St.Xavier's College (Autonomous) Palayamkottai	Manonmaniam Sundaranar University, Tirunelveli	Apr 1998	I Class 71%, II Rank
M. Sc	Zoology	St.Xavier's College (Autonomous) Palayamkottai	Manonmaniam Sundaranar University, Tirunelveli	Apr 1997	I Class 77%, I Rank
B.Sc	Zoology	St.Xavier's College (Autonomous) Palayamkottai	Manonmaniam Sundaranar University, Tirunelveli	Apr 1995	I Class 73.5%, I Rank

* Ph. D thesis title: Conservation of threatened fish species by induced breeding techniques

8. Professional experience: [Nearly 25 years of research (academic* and industry§) and 23 years teaching experience in various aspects of Biosciences]

Positions Held	Period	University / Institution
*Professor and Head	June 2024 to till date	Dept. of Biotechnology, FSH, SRM Institute of Science and Technology, Kattankulathur 603 203, Tamil Nadu
*Professor	Nov 2021 to May 2024	Dept. of Biotechnology, Faculty of Science and Humanities (FSH), SRM Institute of Science and Technology, Kattankulathur 603 203, Tamil Nadu
*Professor	June 2018 to Oct 2021	SRM Research Institute, SRM Institute of Science and Technology, Kattankulathur 603 203, Tamil Nadu, India
*DBT-Ramalingaswami Fellow[1]	June 2012 to May 2018	Dept. of Biotechnology, Faculty of Science and Humanities, SRM Institute of Science and Technology, Kattankulathur 603 203, Tamil Nadu, India
*Postdoctoral Fellow[2]	Aug 2010 to May 2012	Institute of Biological Sciences, University of Malaya, 50603 Kuala Lumpur, Malaysia
*Postdoctoral Research Associate[3]	Aug 2009 to Apr 2010	Dept. of Biotechnology, JejuNationalUniversity, Jeju 690 756, South Korea
*Postdoctoral Fellow[4]	May 2007 to May 2009	Department of Dryland Biotechnologies, Ben-GurionUniversity of the Negev, Sede Boker Campus 84990, Israel
§Research Associate[5]	Jul 2005 to Apr 2007	Jovika Media Pvt.Ltd (BentoliAgriNutrition Inc., USA), 17 &18 Velachery By-pass Road, Velachery, Chennai – 600 042, India
*Postdoctoral Fellow[6]	Mar 2004 to Jun 2005	Department of Biology, Shantou University Shantou, Guangdong Province 515063, China
*Senior Research Fellow[7]	May 2000 to Feb 2004	St. Xavier's College, Palayamkottai, India
*Project Fellow[8]	Aug 1999 to Apr 2000	St. Xavier's College, Palayamkottai, India
*Junior Research Fellow[9]	May 1998 to Jul 1999	St. Xavier's College, Palayamkottai, India

[1]Construction of cDNA library and identification immune genes from commercially important freshwater fish striped murrel *Channa striatus* and freshwater giant prawn *Macrobrachium rosenbergii*.

[2]Identification of immune related genes and its expression from freshwater giant prawn *Macrobrachium rosenbergii* infected with infectious hypodermal and hematopoietic necrosis virus (IHHNV).

[3]Molecular cloning, characterization and expression on immune related genes of rock bream (*Oplegnathus fasciatus*) and olive flounder (*Paralichthys olivaceus*).

[4]The possible use of low salinity inland geothermal brackish water for marine fish systems in the desert.

[5]Probiotics as growth promoters and immuno-stimulants for fishes.

[6]Metabolism and regulation of fatty acids in cobia (*Rachycentron canadum*).

[7]Germplasm inventory, evaluation and gene banking of freshwater fishes.

[8]Cross breeding and intra-specific hybridization between the geographically isolated stocks of the spotted murrel *Channa punctatus.*

[9]Breeding and feeding physiology of the striped murrel *Channa straiatus.*

9. Publications & Research Progress:

Papers Published in Impact Factor Journals	**: 311**
- *Total Impact Factor*	**: 1203.933** (as on 06 August 2024)
- *Citation Number*	**: 6415** (as on 06 August 2024)
- *H-Index*	**: 42** (as on 06 August 2024)

Journal Proceeding	**: 7**
Chapters in Books	**: 5**
Book Published	**: 2**
Other General & Semi-Scientific Articles in Popular Journal/Magazines	**: 61**
Papers Presented in International Conferences	**: 82**
Papers Presented in National Conferences	**: 55**
Attended Workshops/Training Programs	**: 19**
Invited Talks	**: 21**
Programs Conducted	**: 11**
No. of Ph.D Students	**: 24**
No. of PDFs	**: 5**
Research Projects	**: 13**
Patent Granted	**: 2**
GenBank Sequence Submission	**: 285**

* in the publications denotes the designation of *Corresponding Author*

Papers Published in Impact Factor Journals: **311**

1. Aswinanand, B., Nayak, S.R.R., Madesh, S., Subbarayudu, S., Kaliraj, S., Rajagopal, R., Alfarhan, A., Kathiravan, M.K. and **Arockiaraj J***., 2024. Toxicity and therapeutic property of dioxopiperidin derivative SKT40 demonstrated in-vivo zebrafish model due to inflammatory bowel disease. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*, p.109990. https://doi.org/10.1016/j.cbpc.2024.109990 (IF – 3.9)

2. Ramamurthy, K., Thomas, N.P., Gopi, S., Sudhakaran, G., Haridevamuthu, B., Namasivayam, K.R. and **Arockiaraj J***., 2024. Is Laccase derived from Pleurotus ostreatus effective in microplastic degradation? A critical review of current progress, challenges, and future prospects. International *Journal of Biological Macromolecules*, p.133971. https://doi.org/10.1016/j.ijbiomac.2024.133971 (IF - 7.7)

3. Arya, C.G., Kishore, R., Gupta, P., Gondru, R., **Arockiaraj, J**., Pasupuleti, M., Chandrakanth, M., Punya, V.P. and Banothu, J., 2024. Identification of coumarin–benzimidazole hybrids as potential antibacterial agents: Synthesis, in vitro and in vivo biological assessment, and ADMET prediction. *Bioorganic & Medicinal Chemistry Letters*, p.129881. https://doi.org/10.1016/j.bmcl.2024.129881 (IF – 2.5)

4. Haridevamuthu, B., Nayak, S.R.R., Murugan, R., Sudhakaran, G., Pachaiappan, R., Manikandan, K., Chitra, V., Almutairi, M.H., Almutairi, B.O., Kathiravan, M.K. and **Arockiaraj J***., 2024. Co-

occurrence of azorubine and bisphenol A in beverages increases the risk of developmental toxicity: A study in zebrafish model. Food and Chemical Toxicology, p.114861. https://doi.org/10.1016/j.fct.2024.114861 (IF – 3.9)

5. Ramamurthy, K., Madesh, S., Priya, P.S., Ayub, R., Aljawdah, H.M., Arokiyaraj, S., Guru, A. and **Arockiaraj J***., 2024. Textile azo dye, Sudan Black B, inducing hepatotoxicity demonstrated in in vivo zebrafish larval model. *Fish Physiology and Biochemistry*, pp.1-19. https://doi.org/10.1007/s10695-024-01371-0 (IF - 2.5)

6. Chagaleti, B.K., Kumar, B.S., Rajagopal, R., Alfarhan, A., **Arockiaraj J***., Kumaradoss, K.M. and Namasivayam, S.K.R., 2024. Targeting cyclin-dependent kinase 2 CDK2: Insights from Molecular Docking and Dynamics Simulation-A systematic computational approach to discover novel cancer therapeutics. *Computational Biology and Chemistry*, p.108134. https://doi.org/10.1016/j.compbiolchem.2024.108134 (IF - 2.6)

7. Marunganathan, V., Guru, A., Panda, S.P. and **Arockiaraj J***., 2024. Exploring Therapeutic Potential: A Comprehensive Review of Antimicrobial Peptides in Oral Cancer Management. *International Journal of Peptide Research and Therapeutics*, 30(4), p.43. https://doi.org/10.1007/s10989-024-10621-x (IF - 2.0)

8. Umapathy, S., Pan, I., Issac, P.K., Kumar, M.S.K., Giri, J., Guru, A. and Arockiaraj, J., 2024. Selenium Nanoparticles as Neuroprotective Agents: Insights into Molecular Mechanisms for Parkinson's Disease Treatment. *Molecular Neurobiology*, pp.1-28. https://doi.org/10.1007/s12035-024-04253-x (IF - 4.6)

9. Shaik, M.R., Kandaswamy, K., Guru, A., Khan, H., Giri, J., Mallik, S., Shah, M.A. and **Arockiaraj J***., 2024. Targeted piperine-coated zinc oxide nanoparticle induces the biofilm inhibition of dental pathogens and apoptosis of oral cancer through the BCL-2/BAX/P53 signaling pathway. *BMC Oral Health*. https://doi.org/10.21203/rs.3.rs-3990413/v1 (IF – 2.6)

10. Priyanka, G.L., Mahalakshmi, N.C., Almutairi, M.H., Almutairi, B.O., Sudhakaran, G., Premkumar, B. and **Arockiaraj J***., 2024. Tanshinone IIA from Salvia miltiorrhiza alleviates follicular maturation arrest symptoms in zebrafish via binding to the human androgen receptors and modulating Tox3 and Dennd1a. *Tissue and Cell*, p.102404. https://doi.org/10.1016/j.tice.2024.102404 (IF – 2.7)

11. Kandaswamy, K., Subramanian, R., Giri, J., Guru, A. and **Arockiaraj J***., 2024. A Robust Strategy Against Multi-Resistant Pathogens in Oral Health: Harnessing the Potency of Antimicrobial Peptides in Nanofiber-Mediated Therapies. *International Journal of Peptide Research and Therapeutics*, 30(3), pp.1-17. https://doi.org/10.1007/s10989-024-10613-x (IF – 2.0)

12. Haridevamuthu, B., Sudhakaran, G., Pachaiappan, R., Kathiravan, M.K., Manikandan, K., Almutairi, M.H., Almutairi, B.O., Arokiyaraj, S. and **Arockiaraj J***., 2024. Daidzein ameliorates nonmotor symptoms of manganese-induced Parkinsonism in zebrafish model: Behavioural and

biochemical approach. *British Journal of Pharmacology*. https://doi.org/10.1111/bph.16382 (IF – 6.8)

13. Nayak, S.R.R., Boopathi, S., Chandrasekar, M., Yamini, B., Chitra, V., Almutairi, B.O., Arokiyaraj, S., Guru, A. and **Arockiaraj J***., 2024. Indole-3 acetic acid induced cardiac hypertrophy in Wistar albino rats. *Toxicology and Applied Pharmacology*, 486, p.116917. https://doi.org/10.1016/j.taap.2024.116917 (IF – 3.3)

14. Saravanan, M., **Arockiaraj, J**. and Belete, M.A., 2023. A commentary on" does the time interval between sentinel lymph node biopsy and completion lymph node dissection affect outcome in malignant melanoma? a retrospective cohort study": correspondence. *International Journal of Surgery*, pp.10-1097. https://doi.org/10.1097/JS9.0000000000001021 (IF – 12.5)

15. Sudhakaran, G., Kesavan, D., Selvam, M., Arasu, A., Guru, A. and **Arockiaraj J***., 2024. Gonorrhea caused due to antimicrobial-resistant bacteria Neisseria gonorrhoeae treated using probiotic peptide. *In Silico Pharmacology*, 12(1), pp.1-14. https://doi.org/10.1007/s40203-023-00185-x

16. Ramamurthy, K., Priya, P.S., Murugan, R. and **Arockiaraj J***., 2024. Hues of risk: investigating genotoxicity and environmental impacts of azo textile dyes. *Environmental Science and Pollution Research*, pp.1-22. https://doi.org/10.1007/s11356-024-33444-1 (IF – 5.8)

17. Madesh, S., Sudhakaran, G., Meenatchi, R., Guru, A. and **Arockiaraj J***., 2024. Interconnected environmental challenges: heavy metal–drug interactions and their impacts on ecosystems. *Drug and Chemical Toxicology*, pp.1-18. https://doi.org/10.1080/01480545.2024.2342956 (IF – 2.1)

18. Shanthakumar, B., Gopinath, P., Chagaleti, B.K., Saravanan, V., Kumar, P.S., Almutairi, S.M., Hussein, D.S., Eisa, Y.H., Kathiravan, M.K. and **Arockiaraj J***., 2024. Imidazooxazine moiety as polyketide synthase 13 inhibitors targeting tuberculosis. *Journal of King Saud University-Science*, p.103220. https://doi.org/10.1016/j.jksus.2024.103220 (IF – 3.7)

19. Packiapalavesam, S.D., Saravanan, V., Mahajan, A.A., Almutairi, M.H., Almutairi, B.O., **Arockiaraj, J**., Kathiravan, M. and Namasivayam, S.K.R., 2024. Identification of novel CA IX inhibitor: Pharmacophore modeling, docking, DFT, and dynamic simulation. *Computational Biology and Chemistry*, p.108073. https://doi.org/10.1016/j.compbiolchem.2024.108073 (IF – 2.6)

20. Kandaswamy, K., Guru, A., Panda, S.P., Antonyraj, A.P.M., Kari, Z.A., Giri, J., Almutairi, B.O., Arokiyaraj, S., Malafaia, G. and **Arockiaraj J***., 2024. Polystyrene nanoplastics synergistically exacerbate diclofenac toxicity in embryonic development and the health of adult zebrafish. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*, p.109926. https://doi.org/10.1016/j.cbpc.2024.109926 (IF – 3.9)

21. Nayak, S.R.R., Haridevamuthu, B., Murugan, R., Dhivya, L.S., Venkatesan, S., Almutairi, M.H., Almutairi, B.O., Kathiravan, M.K., Namasivayam, S.K.R. and **Arockiaraj J***., 2024. Furan-based chalcone protects β-cell damage and improves glucose uptake in alloxan-induced zebrafish diabetic

model via influencing Peroxisome Proliferator-Activated Receptor Agonists (PPAR-γ) signaling. *Process Biochemistry* 142, 149-161. https://doi.org/10.1016/j.procbio.2024.04.012 (IF – 3.7)

22. Priya D, Rubavathy SME, Narayanan J, Venkatesan S, Ramasamy T, Prakash M, Selvam C, Rajagopal R, Alfarhan A, Kathiravan MK, Arokiyaraj S, **Arockiaraj J***., 2024. Dual anti-inflammatory and anticancer activity of novel 1,5-diaryl pyrazole derivatives: Molecular modeling, synthesis, in vitro activity and dynamics study. *Biomedicines* 12, no. 4: 788. https://doi.org/10.3390/biomedicines12040788 (IF – 3.9)

23. Priya PS, Nandhini PP, Vaishnavi S, Pavithra V, Almutairi MH, Almutairi BO, Arokiyaraj S, Pachaiappan R, **Arockiaraj J*** (2024) Rhodamine B, an organic environmental pollutant induces reproductive toxicity in parental and teratogenicity in F1 generation in vivo. *Comparative Biochemistry and Physiology Part C* p. 109898. https://doi.org/10.1016/j.cbpc.2024.109898 (IF - 3.9)

24. Sudhakaran, G., Priya, P.S., Haridevamuthu, B., Murugan, R., Kannan, J., Almutairi, M.H., Almutairi, B.O., Guru, A. and **Arockiaraj J***., 2024. Mechanistic interplay of dual environmental stressors: Bisphenol-A and cadmium-induced ovarian follicular damage and hepatocyte dysfunction in vivo. *Science of the Total Environment*, 924, p.171706. https://doi.org/10.1016/j.scitotenv.2024.171706 (IF - 8.2)

25. Murugan, R., Nayak, S.R.R., Haridevamuthu, B., Priya, D., Chitra, V., Almutairi, B.O., Arokiyaraj, S., Saravanan, M., Kathiravan, M.K. and **Arockiaraj J***., 2024. Neuroprotective potential of pyrazole benzenesulfonamide derivative T1 in targeted intervention against PTZ-induced epilepsy-like condition in in vivo zebrafish model. *International Immunopharmacology*, 131, p.111859. https://doi.org/10.1016/j.intimp.2024.111859 (IF - 4.8)

26. Mohammed, V. and **Arockiaraj J***., 2024. Unveiling the trifecta of cyanobacterial quorum sensing: LuxI, LuxR and LuxS as the intricate machinery for harmful algal bloom formation in freshwater ecosystems. *Science of The Total Environment*, p.171644. https://doi.org/10.1016/j.scitotenv.2024.171644 (IF - 8.2)

27. Tayyeb, J.Z., Priya, M., Guru, A., Kishore Kumar, M.S., Giri, J., Garg, A., Agrawal, R., Mat, K.B. and **Arockiaraj J***., 2024. Multifunctional curcumin mediated zinc oxide nanoparticle enhancing biofilm inhibition and targeting apoptotic specific pathway in oral squamous carcinoma cells. *Molecular Biology Reports*, 51(1), p.423. https://doi.org/10.1007/s11033-024-09407-7 (IF - 2.6)

28. Murugan, R., Priya, P.S., Boopathi, S., Haridevamuthu, B., Kumar, T.T.A. and **Arockiaraj J***., 2024. Unraveling the etiology of shrimp diseases: a review through the perspectives of gut microbial dynamics. *Aquaculture International*, pp.1-24. https://doi.org/10.1007/s10499-024-01437-z (IF - 2.2)

29. Priya, P.S., Pavithra, V., Vaishnavi, S., Almutairi, B.O., Arokiyaraj, S., Dhanaraj, M., Seetharaman, S. and **Arockiaraj J***., 2024. Application of Bacillus Coagulans as Paraprobiotic Against Acute

Hepatopancreatic Necrosis Disease in Shrimp. *Probiotics and Antimicrobial Proteins*, pp.1-15. https://doi.org/10.1007/s12602-024-10230-6 (IF - 4.4)

30. Nehru, S., Guru, A., Pachaiappan, R., Hatamleh, A.A., Al-Dosary, M.A., Arokiyaraj, S., Sundaramurthy, A. and **Arockiaraj J***., 2024. Co-encapsulation and release of apigenin and ascorbic acid in polyelectrolyte multilayer capsules for targeted polycystic ovary syndrome. *International Journal of Pharmaceutics*, 651, p.123749. https://doi.org/10.1016/j.ijpharm.2023.123749 (IF – 5.3)

31. Thacharodi, A., Hassan, S., Meenatchi, R., Bhat, M.A., Hussain, N., **Arockiaraj, J**., Ngo, H.H., Sharma, A., Nguyen, H.T. and Pugazhendhi, A., 2024. Mitigating microplastic pollution: A critical review on the effects, remediation, and utilization strategies of microplastics. *Journal of Environmental Management*, 351, p.119988. https://doi.org/10.1016/j.jenvman.2023.119988 (IF – 8.0)

32. Saravanan, M., Ganugula, S., **Arockiaraj J***. and Dejene, T.A., 2024. A commentary on 'A systematic review and meta-analysis comparing negative pressure wound therapy to conventional wound dressings in the treatment of open fractures'. *International Journal of Surgery*, 110(4), pp.2444-2445. https://doi.org/10.1097/JS9.0000000000001055 (IF - 12.5)

33. Haridevamuthu, B., Raj, D., Chandran, A., Murugan, R., Seetharaman, S., Dhanaraj, M., Almutairi, B.O., Arokiyaraj, S. and **Arockiaraj J***., 2024. Sustainable food packaging: Harnessing biowaste of Terminalia catappa L. for chitosan-based biodegradable active films for shrimp storage. *Carbohydrate Polymers*, 329, p.121798. https://doi.org/10.1016/j.carbpol.2024.121798 (IF - 10.7)

34. Boopathi, S., Mendonca, E., Gandhi, A., Rady, A., Darwish, N.M., Arokiyaraj, S., Kumar, T.T.A., Pachaiappan, R., Guru, A. and **Arockiaraj J***., 2024. Exploring the combined effect of exercise and apigenin on aluminium-induced neurotoxicity in zebrafish. *Molecular Neurobiology*, pp.1-17. https://doi.org/10.1007/s12035-024-03913-2 (IF - 4.6)

35. Sudhakaran, G., Kesavan, D., Kandaswamy, K., Guru, A. and **Arockiaraj J***., 2024. Unravelling the epigenetic impact: Oxidative stress and its role in male infertility-associated sperm dysfunction. *Reproductive Toxicology*, p.108531.https://doi.org/10.1016/j.reprotox.2023.108531 (IF - 3.3)

36. Nayak, S.P.R.R., Basty, C., Boopathi, S., Dhivya, L.S., Alarjani, K.M., Gawwad, M.R.A., Hager, R., Kathiravan, M.K. and **Arockiaraj J***., 2024. Furan-based Chalcone Annihilates the Multi-Drug-Resistant Pseudomonas aeruginosa and Protects Zebra Fish Against its Infection. *Journal of Microbiology*, pp.1-15. https://doi.org/10.1007/s12275-024-00103-6 (IF – 3.3)

37. Saravanan M, **Arockiaraj J***, Belete MA ., 2024. A commentary on "The use of multilayer perceptron and radial basis function: an artificial intelligence model to predict progression of oral cancer": Correspondence. *International Journal of Surgery*. https://doi.org/10.1097/JS9.0000000000001058 (IF - 12.5)

38. Belete, M.A., Saravanan, M. and **Arockiaraj J***., 2024. A commentary on "Possible threat of the Omicron subvariant BF. 7 to FIH Hockey World Cup 2023 in particular and the South-East Asia Region in general". *International Journal of Surgery*, pp.10-1097. https://doi.org/10.1097/JS9.0000000000001090 (IF - 12.5).

39. Saravanan, M., Najimudeen, R.A., Rajesh, J.D.V.J., **Arockiaraj, J**. and Belete, M.A., 2024. A commentary on "potential of nanoemulsions for accelerated wound healing: innovative strategies". *International Journal of Surgery*, pp.10-1097. https://doi.org/10.1097/JS9.0000000000001089 (IF - 12.5)

40. Pan, I., Issac, P.K., Rahman, M.M., Guru, A. and **Arockiaraj J***., 2023. Gut-brain axis a key player to control gut dysbiosis in neurological Diseases. *Molecular Neurobiology*, pp.1-19. https://doi.org/10.1007/s12035-023-03691-3 (IF – 4.6)

41. Boopathi, S., Priya, P.S., Kesavan, D., Meenatchi, R., Murugan, R., Sudhakaran, G., Almutairi, B.O., Arokiyaraj, S. and **Arockiaraj J***., 2023. Unveiling nanotubes-mediated communication: Enterococcus faecalis countering Salmonella ser. Typhi-In vitro and In vivo insights. *Microbial Pathogenesis*, 184, p.106387. https://doi.org/10.1016/j.micpath.2023.106387 (IF – 3.3)

42. Sudhakaran, G., Babu, S.R., Mahendra, H. and **Arockiaraj J***., 2023. Updated experimental cellular models to study polycystic ovarian syndrome. *Life Sciences*, p.121672. https://doi.org/10.1016/j.lfs.2023.121672 (IF - 5.2)

43. Nayak, S.R.R., Boopathi, S., Priya, P.S., Pasupuleti, M., Pachaiappan, R., Almutairi, B.O., Arokiyaraj, S. and **Arockiaraj J***., 2023. Luteolin, a promising quorum quencher mitigates virulence factors production in Pseudomonas aeruginosa-In vitro and In vivo approach. *Microbial Pathogenesis*, *180*, p.106123. https://doi.org/10.1016/j.micpath.2023.106123 (IF - 3.3)

44. Sudhakaran, G., Rajesh, R., Almutairi, B.O., Arokiyaraj, S., Gopinath, P. and **Arockiaraj J***., 2023. Nimbin analogs stimulate glucose uptake and glycogen storage in the insulin signalling cascade by enhancing the IRTK, PI3K and Glut-4 mechanism in myotubes. *Tissue and Cell*, *82*, p.102104. https://doi.org/10.1016/j.tice.2023.102104 (IF - 2.7)

45. Murugan, R., Subramaniyan, S., Priya, S., Ragavendran, C., Arasu, M.V., Al-Dhabi, N.A., Choi, K.C., Guru, A. and **Arockiaraj J***., 2023. Bacterial clearance and anti-inflammatory effect of Withaferin A against human pathogen of Staphylococcus aureus in infected zebrafish. *Aquatic Toxicology*, *260*, p.106578. https://doi.org/10.1016/j.aquatox.2023.106578 (IF - 4.1)

46. Murugan, R., Mukesh, G., Haridevamuthu, B., Priya, P.S., Pachaiappan, R., Almutairi, B.O., Arokiyaraj, S., Guru, A. and **Arockiaraj J***., 2023. Plausible antioxidant and anticonvulsant potential of brain targeted naringenin-conjugated graphene oxide nanoparticles. *Biomass Conversion and Biorefinery*, pp.1-12. https://doi.org/10.1007/s13399-023-04343-1 (IF - 3.5)

47. Priya, P.S., Kumar, R.S., Gawwad, M.R.A., Alarjani, K.M., Elshikhe, M.S., Namasivayam, S.K.R. and **Arockiaraj J***., 2023. Azadiradione (AZD), neem biomass derived limonoid extraction, characterization, potential biological activities with special reference to anti-microbial and anti-cancer activities. *South African Journal of Botany*, *158*, pp.405-416. https://doi.org/10.1016/j.sajb.2023.05.042 (IF - 2.7)

48. Guru, A., Murugan, R. and **Arockiaraj J***., 2023. Histone acetyltransferases derived RW20 protects and promotes rapid clearance of Pseudomonas aeruginosa in zebrafish larvae. *International Microbiology*, pp.1-11. https://doi.org/10.1007/s10123-023-00391-9 (IF - 2.3)

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41. Rajesh P, Gopi P, Prasanth Bhatt, Venkatesh K, Thirumalai K, Mukesh Pasupuleti and **Jesu Arockiaraj**. Striped murrel *Channa striatus* serine protease I: Sequence analysis. 10th IAAM National Conference on 'Exploring the Potential of Microbes for Bioscience, Biotechnology & Medicine' (MICROCIENCIA-2012), 17-18 December 2012, SRM University, Chennai.

42. Kasi Marimuthu1, Timalata Kupusamy, Vengkades Rao, Xavier Rathinam, **Jesu Arockiaraj**, Sreeramanan Subramaniam. Studies on the non-specific innate immune components in the skin mucus of different freshwater fish species. 2nd National Conference on Fisheries Biotechnology 2-3 November 2012, CIFE, Mumbai.

43. **Jesu Arockiaraj,** Prasanth Bhatt, Muthupandian Saravananan and Kasi Marimuthu. Cathepsin B from striped murrel *Channa striatus*: Molecular characterization, gene expression and immune properties. 2nd National Conference on Fisheries Biotechnology 2-3 November 2012, CIFE, Mumbai.

44. **Jesu Arockiaraj,** Prasanth Bhatt, Muthupandian Saravananan and Kasi Marimuthu. Molecular cloning, characterization, gene expression and enzyme activity of prophenoloxidase from freshwater prawn *Macrobrachium rosenbergii*. 2nd National Conference on Fisheries Biotechnology 2-3 November 2012, CIFE, Mumbai.

45. **Jesu Arockiaraj,** Samuel Appelbaum. Marine fish culture in arid lands: a review. Proceedings of the National Conference on "Climate change, Biodiversity & Conservation", St. Andrew's College, Gorakhpur, U.P., India. Edited by Rajkumar, S. D., Samuel, C. O. & Lal, J. K. Gayathri Teknological Publication, Palayamkottai, India. 15-16 February 2012.

46. **Jesu Arockiaraj**, A and A. Victor Suresh. 2006. Treatment with Efinol® L improves the performance of fish fry after packing and transporting stress. In: Nat. Conf. Aquactic Resources, Aquaculture and Aqua show, St Xavier's College, Palayamkottai India (2006)

47. Haniffa, M.A., S. Seetharaman and A. **Jesu Arockiaraj**. Inter specific hybridization between threatened freshwater catfish *Ompokmalabaricus* X *O. bimaculatus*. In: Nat. Conf. Sustainable.....Fisheries, Cochin University of Science & Technology, Cochin, India (2005).

48. Haniffa, M.A., S. Seetharaman and A. **Jesu Arockiaraj**. Gamete viability of an endangered freshwater catfish *Horobrachusb rachisoma*. In: Nat. Sem. Technology and Management of Bioresources, St. Xavier's College, Palayamkottai, India (2005).

49. Haniffa, M.A, S. Seetharaman and A. **Jesu Arockiaraj**. Commercial catfish culture for small scale fish farmers and unemployed youths. In: Nat. Sem. on Rural Biotechnology for Sustainable Development, The Gandhigram Rural institute, Gandhigram, Tamil Nadu, India. P 71 (2004).

50. **Jesu Arockiaraj,** A., Haniffa, M.A, S. Seetharaman P.S Allen Benziger and Shybu Jacob. Artificial Fertilization and Hybridization in Native Catfish Species. In: State level Sem. on Animal Biotechnology, University Grants Commission at PSG College of Arts and Science, Coimbatore P 61 (2003).

51. **Jesu Arockiaraj**, A., Haniffa, M.A, P. Perumalsamy and S. Seetharaman. Artificial propagation of the native freshwater catfish *Mystus gulio*. In: State level Sem. on Animal Biotechnology, University Grants Commission, at PSG College of Arts and Science, Coimbatore P 60 (2003).

52. Haniffa, M.A, A. **Jesu Arockiaraj** and S. Seetharaman. Induced spawning and breeding behaviour of an endemic freshwater catfish *Mystus oculatus*. In: Nat. Sym. on Recent Trends in Biotechnology, Biotech Consorsia, Department of Biotechnology, Malankara Catholic College, Kaliakavilai p 73 (2003).

53. Haniffa, M.A, A. **Jesu Arockiaraj** and T. Arulmozhi Varma. Conservation of Threatened Freshwater Catfish *Mystus montanus* by Captive Breeding. In: State Level Sem. Recent Trends in Eco-Conservation, St. John's College, Palayamkottai p 50 (2002).

54. Haniffa, M.A, A. **Jesu Arockiaraj** and T. Arulmozhi Varma. Conservation of an Endangered Fish Species by Induced Spawning and Establishment of Captive Population. In: Nat. Sym. on Riverine and Reservoir Fisheries - Challenges and Strategies, the Society of Fisheries Technologists (India) at Central Institute of Fishery Technology, p FEM 7, Cochin, Kerala, India (2001)

55. Haniffa, M.A and A. **Jesu Arockiaraj**. Utilization of lipid as a dietary energy source for the fingerlings of striped murrel *Channa striatus* (Bloch). In: Nat. Sym. on Sustainable Development of Fisheries Towards 2020 AD - Opportunities and Challenges, Cochin p 68. (1999)

Attended Workshops/Training Programs: **19**

1. Participated in Workshop on 'Genomics for Personalized &Precision Medicine', Frontier Mediville – Dr. K.M. Cherian Heart Foundation, Chennai (2015)

2. Participated in "Genomics, Genotyping and Bioinformatics", University of Malaya-Academia Sinica HIR Symposium, Kuala Lumpur, Malaysia (2012)

3. Participated in "Chennai Aquaculture Technology Meet (CATEET 11)", organized by Tamil Nadu Veterinary and Animal Sciences University, Fisheries Research and Extension Center, Directorate of Center for Animal Health Studies, Chennai, India (2011)

4. Participated in the National Symposium and forum on "Proteomics", organized by Monash University, Sunway Campus, Kuala Lumpur, Malaysia (2011).

5. Participated in "RNA interference (RNAi) as a tool in shrimp functional studies workshop", Center for Biotechnology in Agriculture (CEBAR), Division of Genetics and Molecular Biology, Institute of Biological Sciences, Faculty of Science, University of Malaya, Kual Lumpur (2010).

6. Participated in the workshop on "Missing Links in the Coastal aquaculture Development", organized by Central Institute of Brackishwater Aquaculture (CIBA), Chennai, India (2006)

7. Underwent an advanced training on " Biodiversity and Stock Assessment of Marine Ornamental Fishes", organized by Tamil Nadu Veterinary and Animal Science University, Fisheries College and Research Station, Tuticorin, Tamil Nadu, India (sponsored by Indian Council of Agricultural Research - National Agricultural Technology Project, New Delhi) (2004).

8. Underwent a training programme on "Commercial Murrel Culture Training for Income Generation", organized by St. Xavier's College, Palayamkottai, Tamil Nadu, India (sponsored by Department of Biotechnology) (2003)

9. Attended a short-term course on "Electrophoresis Techniques", organized by the Research and Development Biotech Laboratory, Yercaud, Tamil Nadu, India (2002)

10. Underwent a training programme on "Age and Growth in Indian Freshwater Fishes", at National Bureau of Fish Genetic Resources, Lucknow, India (sponsored by NBFGR- NATP)) (2001)

11. Underwent a training programme on " Taxonomy of Western Ghats Fish Fauna", at Kerala Forest Research Institute (KFRI), Peechi, Kerala, India (sponsored by NBFGR- NATP) (2001)

12. Participated in the workshop on "Captive Breeding for Aquaculture and Fish Germ plasam Conservation", at National Bureau of Fish Genetic Resources, Lucknow, India (2001)

13. Participated in the National Agricultural Technology Project (NATP) Workshop on "Life History Traits as a Tool for Conservation and Management of Fish Population", jointly organized by Central Marine Fisheries Research Institute (CMFRI) Cochin, Kerala and National Bureau of Fish Genetic Resources (NBFGR), Lucknow, UP at CMFRI, Cochin, Kerala, India (2001)

14. Underwent a training programme on "Brood Stock Development in *Macrobrachium rosenbergii*", organized by Tamil Nadu Veterinary and Animal Science University, Fisheries College and Research Station, Tuticorin, Tamil Nadu, India (2000)

15. Participated in the National Seminar on "Recent Trends in Biotechnology and its Impact on the Socio-Economic Improvement of the Scheduled Caste and Scheduled Tribes", organized by Dr. G.R. Dhamodaran College, Coimbatore, Tamil Nadu, India (2000)

16. Participated in the UGC Regional Seminar on "Ecology, Environment and Development" organized by St. John's College, Palayamkottai, Tamil Nadu, India (1999)

17. Participated in the Seminar on "Recycling and Reuse of Domestic Wastes", organized by St. John's College, Palayamkottai, Tamil Nadu, India (1997).

18. Participated in the seminar on "ValarppuParavaikalMulamVarumanam", organized by All India Radio, Tirunelveli and Tamil Nadu Veterinary and Animal Science University, Chennai, India (1996)

19. Participated in the National Conference on Aquaculture "CONFAQUA 96" organized by St. Xavier's College, Palayamkottai, Tamil Nadu, India (1996)

Invited Talks: **21**

1. **Arockiaraj J** (2023) Trends and Advancements in Therapeutics and Nutraceuticals for Ornamental Fish Care, Centre for Peninsular Aquatic Genetic Resources- NBFGR, Kochi, Kerala, December 2023.

2. **Arockiaraj J** (2023) Zebrafish: A precursor in drug discovery, 53rd Annual Conference of Indian Pharmacological Society-IPSCON 2023, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, 14-16 December, 2023.

3. **Arockiaraj J** (2023) Future and Application of Microbiological Research. In: Future and Application of Microbiome Research, Adhiparasakthi College of Arts and Science, Kalavai. 26 November 2023.

4. **Jesu Arockiaraj** (2022) Postbiotics and lantibiotics: An emerging recent trend in aquaculture to control pathogenic infections. "UPDATE Knowledge on Aquaculture & AI Awards Presentation Programme, Chennai Trade Center, 6-8 April, 2022.

5. **Jesu Arockiaraj** (2022) Deciphering microRNA in shrimp pathogen interaction. 3rd International Conference on Genome Biology (ICGB 3) (Virtual) AND 53rdAnnual Aqua Terr Day. Madurai Kamaraj University, Madurai 28 Feb – 2 Mar, 2022.

6. **Jesu Arockiaraj** (2019) Walk through for a Researcher. Research Conclave 2021, Department of Commerce, SRM Institute of Science and Technology, 10-16 June, 2021.

7. **Jesu Arockiaraj** (2019) Potential antimicrobials as therapeutic agent in Aquaculture. In: Annual Technical meeting, Raibow Aqua, Eluru, Andhra Pradesh, 19-23 December, 2019.

8. **Jesu Arockiaraj** (2019) 'Potential peptides from aquatic resources. In: Indo-US Lecture Workshop on 'Zebra Fish in Biology and Medicine', Sathybama University, Chennai 17-18 October, 2019

9. **Jesu Arockiaraj** (2019) Recent development in Indian aquaculture. In: Annual Technical meeting, Biogreen Technologies, Eluru, Andhra Pradesh, 5 January, 2019.

10. **Jesu Arockiaraj** (2018) *De nova* asembly and comparative analysis of transcriptome dataset of freshwater murrel during epizootic ulcerative syndrome (EUS) infection. National Conference on Advances & Innovations in Biotechnology (NCAIB), National (Autonomous) college, Trichirapalli 19-20 February, 2018.

11. **Jesu Arockiaraj.** Fish immunology – A molecular approach. Refesher course on Aquatic Toxicology. Madurai Kamaraj University, Madurai 10, March 2017.

12. **Jesu Arockiaraj.** Aquatic antimicrobial peptides (AMPs): Natural templates for design new antimicrobial compounds. Indian Society of Chemists and Biologists (ISCB) – SRM University. 8-10. February 2017.

13. **Jesu Arockiaraj**. Indian Science: Opportunities and Challenges for Budding Scientists. In: Science Exhibition, St. Bedes Anglo-Indian Hr. Sec. School, 24 August 2016.

14. **Jesu Arockiaraj**. Solid waste management: An ecological perspective. In: National Environmental Awareness Campaign - 2014-15, Regional Workshop on Combating Desertification, Land Degradation and Drought. P.G & Research Department of Zoology, Government Arts College for Men (Autonomous), Nandanam, Chennai, 25 February 2015.

15. **Jesu Arockiaraj.** Construction of striped murrel *Channa* striatus cDNA library and identification of defense genes for molecular characterization. Dept. of Biotechnology, Faculty of Applied Sciences, AIMST University, Kedah Darul Aman, Malaysia, 24 June 2014.

16. **Jesu Arockiaraj.** cDNA profiling in targeting novel immune related genes in striped murrel *Channa striatus*. Dept. of Biotechnology, Bharath College of Science and Management, Thanjavur, 3 March 2014.

17. **Jesu Arockiaraj**. In house workshop: Quantitative real time polymerase chain reaction. Division of Genetics and Molecular Biology, Faculty of Science, University of Malaya, Kuala Lumpur, 19 January 2012.

18. **Jesu Arockiaraj**. Usage of online basic bioinformatics in applied research. Division of Genetics and Molecular Biology, Faculty of Science, University of Malaya, Kuala Lumpur, 13 July October 2011.

19. **Jesu Arockiaraj.** Induced breeding and artificial fertilization in fish and shellfish. Division of Genetics and Molecular Biology, Faculty of Science, University of Malaya, Kuala Lumpur, 30 September 2011.

20. **Jesu Arockiaraj.** Hormonal manipulation in aquaculture species. Division of Genetics and Molecular Biology, Faculty of Science, University of Malaya, Kuala Lumpur, 12 December 2011.

21. **Jesu Arockiaraj.** Genetic manipulation in animals & plants. Division of Genetics and Molecular Biology, Faculty of Science, University of Malaya, Kuala Lumpur, 25 October 2010.

Programs Conducted: **13**

1. **Jesu Arockiaraj -** CONVENER. Two-day workshop- Advanced Molecular Biology techniques.22nd – 23rd August 2024. Organized by the Departments of Biotechnology, SRM Institute of Science and Technology, Kattankulathur-603203, Chennai, India

2. **Jesu Arockiaraj -** CONVENER. Inauguration program for Department Club- BioFactor. 19th August 2024. Organized by the Departments of Biotechnology, SRM Institute of Science and Technology, Kattankulathur-603203, Chennai, India

3. **Jesu Arockiaraj -** CONVENER. Six days Faculty Development Program on Current Trends in Research Publications and Grant Acquisition. 5th – 10th August 2024. Organised by the Departments of Biotechnology, SRM Institute of Science and Technology, Kattankulathur-603203, Chennai, India
4. **Jesu Arockiaraj -** CONVENER. International Conference on Advancements in Understanding Life Below the Surface Through aquatic Explorations. In**:** 2nd International Conference on Higher Education Institutes' Challenges & Solutions for Sustainable Development Goals '23. 1st – 3rdNovember 2023. Organised by the Departments of Biotechnology, SRM Institute of Science and Technology, Kattankulathur-603203, Chennai, India

5. **Jesu Arockiaraj** - ORGANIZING SECRETARY Six - Day Virtual Faculty Development Programme on "Advancements in Science and Technology" organised by the Departments of Biotechnology and Biochemistry, SRM Institute of science and technology, Kattankulathur-603203, Chennai, India, 20 – 25 March 2023

6. **Jesu Arockiaraj** - ORGANIZING COMMITTEE Dr. Paarivendhar Research Colloquium 2021, 26 – 28 August, 2021, Directorate of Research, SRM Institute of science and technology, Kattankulathur-603203, Chennai, India

7. **Jesu Arockiaraj** - ORGANIZING COMMITTEE Dr. Paarivendhar Research Colloquium 2021, 3-5 March, 2021, Directorate of Research, SRM Institute of science and technology, Kattankulathur-603203

8. **Jesu Arockiaraj -** COORDINATOR "Integrated Biotechnological Tools and Concepts" (IBTC-2021), Dept of Biotechnology, College of Science and humanities, SRM Institute of science and technology, Kattankulathur-603203, Chennai, India, 23-24 Sept 2021.

9. **Jesu Arockiaraj -** COORDINATOR "102nd EC Meeting for Science & Technology for Women", Department of Science & Technology, Govt. of India – SRM University, 13-14 February, 2017.

10. **Jesu Arockiaraj** - ORGANIZING COMMITTEE "International Conference on Radiation Biology (ICRB 2016)", Center for Environmental Nuclear Research, Directorate of Research, SRM University, Chennai, India, 9-13November 2016.

11. **Jesu Arockiaraj** - ADVISORY MEMBER "Nellai Fish Food Festival 2013 (NEFFF-2013) for Freshwater Fish Production and Value-Added Products", Center for Aquaculture Research and Extension, St. Xavier's College (Autonomous), Palayamkottai, Tamil Nadu, India, Environmental Nuclear Research, Directorate of Research, SRM University, Chennai, India, 7-9 February 2013.

12. **Jesu Arockiaraj** - ORGANIZING SECRETARY "10th IAAM National Conference on Exploring the Potential of Microbes for Bioscience, Biotechnology and Medicine", Center for Environmental Nuclear Research, Directorate of Research, SRM University, Chennai, India, 17-18 December 2012.

13. **Jesu Arockiaraj** - FACILITATOR "Postgraduate workshop for animal breeding with Prof. Dr. Peter Mather", Quensland University of Technology, Australia-University of Malaya, Kuala Lumpur, Malaysia, 15-16 November 2010.

Details of Ph.D Scholars: **24**

S. No	Name of the Scholar	Title of the Thesis	Reg. Year	Status
1.	Prashanth Bhatt, N.	Gene profiling and characterization of chemokines from snakehead murrel *Channa striatus*	2012	Degree Awarded
2.	Rajesh, P.	Molecular functions of selected disease related genes from *Channa striatus*	2012	Degree Awarded
3.	Venkatesh, K.	Molecular cloning, characterization and gene expression of defense genes from striped murrel *Channa striatus* challenged with various immune stimulants	2013	Degree Awarded
4.	Abirami, K.	Fish antimicrobial peptides: Bioinformatic characterization, gene expression and recombinant protein activities	2013	Degree Awarded
5.	Akila, S.	Gene expression and biological activities of immune genes from *Channa striatus* infected with fungus (*Aphanomyces invadans*) and bacteria (*Aeromonad hydrophilla*)	2013	Degree Awarded
6.	Mukesh Kumar Chaurasia	Gene expression and characterization of a few immune genes from fresh water prawn (*Marcobrachium rosenbengii*)	2014	Degree Awarded
7.	Gayathri R. Chandran	Isolation, identification and molecular characterization antimicrobial peptides from murrel skin mucus	2014	Degree Awarded
8.	S. Anbazahan	Molecular characterization of selected antioxidant genes from spirulina and determination of its biological activities	2016	Degree Awarded
9.	M. Kasi Viswananthan	Development of feed additives and their performances for sustainable aquaculture practice	2016	Degree Awarded

10.	N. Prabha	Exploration of antimicrobial peptides (AMPs) from innate immune molecules of snakehead fish	2016	Degree Awarded
11.	Purabi Sarkar	Development of immunogenic peptides from virulence factors of oomycete fungus *Aphonomyces invadans* and its implication as vaccines against epizootic ulcerative syndrome	2018	Degree Awarded
12.	Stefi Raju	Discovery, validation and delivery of bioactive peptides from a teleost immune protein and their roles on antimicrobial and possible pharmaceutical application	2018	Degree Awarded
13.	Ajay Guru	Evaluation on Anti-adipogenic and Anti-diabetic activity of peptide (WL15) synthesized from *Channa* striatus using *in-vitro* and *in-vivo* model	2019	Degree Awarded
14.	Manikandan V	Molecular role of peptides possessed different immune properties synthesized from fresh water aquatic organism	2019	Degree Awarded
15.	Gokul. S	Biological activity of Nimbin derivatives and its molecular effect of anti-inflammatory and anti-diabetic activity using *in-vitro* and *in-vivo* models	2021	Degree Awarded
16.	B. Hari Deva Muthu	Fabrication of Poly-caprolactone based nano encapsulated Benzothiophene derivatives and evaluating its antioxidant and anticancer properties	2021	Degree Awarded
17.	Raghul. M	Antioxidant and anticancer activity of epoxyazadiradione loaded nanoparticle against renal cell carcinoma	2021	Degree Awarded
18.	Snega Priya. P	Evaluation of anti-osteoporotic effects of bioactive compounds in *in-vitro* and *in-vivo* model	2022	CV Completed
19.	Ramya Ranjan Nayak	Inhibition of *Pseudomonas aeruginosa* infection in zebrafish using novel bioactive compounds	2022	CV Completed
20.	Madesh. S	Exploring the combined toxicological impact of NSAIDs and cadmium through *in vitro* and *in vivo* model	2023	CV Completed
21.	Karthikeyan. R	Productive role of phytocompounds against dinoflagellate derived saxitoxin demonstrated using *in vivo* animal models	2023	CV Completed
22.	Sanjai Dharshan	Perfluorooctanoate-Polyethylene terephthalate Micro and Nanoplastics interaction: A comprehensive assessment of their metabolic, toxicological, and developmental implications	2023	1st DC Completed

23.	Aswinanand B	Investigating the impact of inorganic sulphur species on gut micro biome and gut-organ axes using zebrafish model	2024	1st DC Completed
24.	Sanjay G	Examining the protective potential effects of Gomisin-A against retinal degeneration induced by environmental stresses: Comprehensive study on UV radiations, cigarette smoke, heavy metal exposure through *in vitro* and *in vivo* model	2024	1st DC Completed

Details of PDFs: **5**

S. No	Name of the PDF	Nature of Work	Period
1.	Dr. Venkatesh, K. (SRMIST - PDF)	Virulence factor identification from fish pathogen, *Aphanomyces invadans*	2017 - 2019
2.	Dr. Praveen Kumar, I (SRMIST - PDF)	Molecular process of glucose uptake and glycogen storage due to phytocompounds via insulin signalling cascade in glucose metabolism	2019 - 2021
3.	Dr. Boopathi, S (SRMIST - PDF)	Animal model to evaluate the impact of gut microbes-derived metabolites in health and disease	2021 - 2023
4.	Dr. Meenatchi, R (UGC Dr. S. Kotahri PDF)	Unraveling the interkingdom signaling pathways and interaction mechanisms involved in coral (bacteria-Symbiodiniaceae) endosymbiosis	2021 - 2024
5.	Dr. Subburayadu, S (SRMIST - PDF)	Analyzing marine microbial samples to identify and investigate quorum quenchers (QQ) that combat food spoiling bacteria	2023 - 2025

Research Projects: **13**

PI = Pricipal Investigator; Co-PI = Co-Pricipal Investigator

S.No	Title of the project	Funding Agency	Role in the Project	Status	Amount (Rs. in lakh)
1.	cDNA profiling in targeting novel immune related genes in *epizootic ulcerative syndrome* (EUS) infected striped murrel *Channa striatus*	Department of Biotechnology, Government of India, New Delhi	PI	Completed (Jun 12 - May 18)	101.9
2.	Molecular and proteomic identification of immune related genes in freshwater prawn *Macrobrachium rosenbergii*	Science & Engineering Research Board (SERB), Department of Science & Technology, Government of India, New Delhi	PI	Completed (Aug 12 - Jul 15)	18.1

3.	102nd EC meeting on Science and Technology for Women	Science for Equity Empowerment and Development Division (SEED), Department of Science & Technology, Government of India, New Delhi	PI	Completed (Apr 16 - Mar 17)	10.29
4.	Research Seed Grant	SRMIST, Institute Fund.	PI	Completed (Oct 14 - Mar 17)	25.0
5.	Virulence factors identification in fish disease [epizootic ulcerative syndrome (EUS)] causing fungus *Aphanomyces invadans* by transcriptome approach	Department of Biotechnology, Government of India, New Delhi	PI	Completed (Oct 16 - Sep 19)	36.952
6.	*De nova* and coparative transcriptome profilling of nitrogen deprived blue-green alage: Pathway description and gene discovery for immune stimulants.	SRMIST, Selective Excellence Research Program 2016	PI	Completed (Feb 16 - Mar 18)	4.95
7.	Metagenomic analysis of gut bacteria in healthy and diseased gut, infected with white gut disease in white shrimp *Litopenaeus vannamei*	SRMIST, Selective Excellence Research Program 2021	PI	On going (Jan 22 - Dec 23)	4.25
8.	Unravelling the interkingdom signalling pathways and interaction mechanisms involved in coral (Bacteria-symbiodiniaceae) endosymbiosis	University Grants Commission	Mentor	Ongoing (Oct 21 - Sept 24)	22.44
9.	Genome sequencing and wastewater surveillance in open drains of Chennai City and the suburbs for predicting the future waves of COVID-19 pandemic	Science & Engineering Research Board (SERB), Department of Science & Technology, Government of India, New Delhi	Co-PI	Ongoing (Dec 22 - Nov 23)	42.51
10.	Unraveling the potentials of flavonoids as dietary supplements for effective osteoporosis management: Implications on targeting molecular pathways	Innovation in Science Pursuit for Inspired Research (INSPIRE), Department of Science & Technology, Government of India, New Delhi	Mentor	Ongoing (Sep 22 - Aug 27)	19.6

11.	Immunomodulatory properties of cryptic host defense peptides against brain residing microglia cells and their potential implications in neurodegenerative diseases	Science & Engineering Research Board (SERB), Department of Science & Technology, Government of India, New Delhi	Co-PI	Ongoing (Oct 23 - Sep 26)	47.29424
12.	Mining the deep ocean metagenomes: Exploration of quorum quenching enzymes as cryopreservative to prevent spoilage in food processing sector	Ministry of Earth Science (MoES), Government of India, New Delhi	PI	Ongoing (Oct 24 - Sep 26)	88.55
13.	Evaluation of antidiabetic nephropathy activity of natural products Withaferin A, limonoids and their analogs from the *Withania somnifera* and *Azadirachta indica* using *in vitro* and *in vivo* models	Department of Biotechnology (DBT) Government of India, New Delhi	PI	Ongoing (Aug 24 – Jul 27)	41.82

Patent Granted: **2**

- **Arockiaraj J** et al. (2024) A STABLE GEL-BASED SPIRULINA AQUAFEED AND METHOD FOR ITS PREPARATIONE. Patent. No. 525158
- Gopinath P, **Arockiaraj J** et al. (2024) NIMBIN DERIVATIVES AND A PROCESS FOR THEIR PREPARATION. Patent. No. 540080

10. Awards and Recognition:

- Elected Fellow of Eurasian Academy of Environmental Sciences (FEAES) (2023)
- Research Fellow, INTI International University, Malaysia
- International Award for Environmental Biotechnology (2023), Eurasian Academy of Environmental Sciences
- World Best Top 2% Researcher in 2021, 2022, 2023 & 2024 by Elsevier & Stanford University, USA
- India Research Excellence Citation Award 2021 in Biological Sciences by Clarivate (powered by the Web of Science)
- Visiting Professorship (September – December 2017), Universiti Putra Malaya, Malaysia.
- Visiting Professorship (2016), The World Academy of Science, Italy.

- Tamil Nadu Young Scientist Award 2014 in Biological Sciences, Academy of Science, Chennai.
- Young Scientist, Science and Engineering Research Board, Department of Science & Technology, Government of India, New Delhi.
- DBT Prestigious Ramalingaswami Re-entry Fellowship, Department of Biotechnology, Government of India, New Delhi.
- Distinguished Bright Spark Fellowship, University of Malaya, Malaysia (2011-2012).
- Postdoctoral Research Fellowship, University of Malaya, Malaysia (2010-2012).
- BK 21 Postdoctoral Research Fellowship (2009-2010), Jeju National University, South Korea.
- Jacob Blaustein Postdoctoral Fellowship (2007-2009), Ben-Gurion University of the Negev, Israel.
- Postdoctoral Fellowship (2004-2005), Shantou University, China.
- Budding Scientist (2002), All India Radio, Tirunelveli.
- ICAR-NATP Senior Research Fellowship (2000-2004) Indian Council of Agricultural Research-National Agricultural Technology Project, New Delhi.
- TNSCSCT Project Fellowship (1999-2000), Tamil Nadu State Council of Science and Technology, Directorate of Collegiate Education, Chennai.
- ICAR Junior Research Fellowship (1998-1999), Indian Council of Agricultural Research, New Delhi, New Delhi.

11. Research Activities:

- Studies on toxicological and pharmacological aspects of chemicals, drugs, and other substances, including small molecules, peptides and phyto compounds; to understand the mechanisms of action of these substances, determine their toxicities and evaluate their safety and efficacy for therapeutic purposes.
- Transcriptome construction to address infection in aquaculture organisms at molecular level.
- Gut microbiome metagenomic studies

12. Life Membership

- Indian Science Congress Association, Kolkata, India
- Indian Nano-Biologists Association (INBA), Chennai, India
- The Biotech Research Society, India
- Society for Biotechnologists, India
- Eurasian Academy of Environmental Sciences, India
- Society of Biological Chemists (India), Bangalore

13. Journal Reviewer

- Scientific reports, Elsevier, Springer, Wiley, MDPI, Frontiers, Hindawii, Francis & Taylor, etc.

14. Ph.D Examiner

- Manonmaniam SundaranarUniverstiy, Tirunelveli (TN), India
- Madurai Kamaraj University, Madurai (TN), India
- PRIST University, Thanjavur (TN), India
- AMET University, Kanathur (TN), India
- Kakathiya University, Warangal (AP), India
- Venkateswara University, Tirupathi (AP), India
- Vels University, Pallavaram (TN), India
- Universiti Putra Malaysia, Malaysia
- Universiti of Malaya, Malaysia

15. GenBank Sequence Submission (*NCBI & EMBL Database*):

- So far, **285 defense genes** have been identified and **sequenced** from **different commercially important aquatic organisms** for molecular characterization studies; and the sequences were submitted to **NCBI** or **EMBL** nucleotides database under various **GenBank Accession IDs.**

16. Responsibilities Held at the Institute

- Academic Council Member (2021 – 2026)
- Member, Internal Quality Assurance Cell (IQAC) (2023-2025)
- Board Member, Research Program and Policy Development Committee of the Research Development Cell (2022 – till date)
- Member, Intellectual Property Rights (IPR) Committee (2013 onwards)
- Steering Committee Member, National Assessment and Accreditation Council (NAAC) (2022 – till date)
- Nodal Officer, UGC, Research Internship for UG Students, FSH< SRMIST
- Member, Students' Grievance Redressal Committee (SGRC) (2023 – till date)
- Member, Chemical Disposal Committee (2023 – 2026)
- Member, Institute Animal Ethical Committee (2022 – 2025)
- Member, Internal Review Committee Member for Research Projects (2023 – 2025)
- Selection Committee Member, Selective Excellence Research Initiative (2016 – 2019)