Individual Biodata



Name : Dr. V. Kaliyamurthi

Designation : Assistant Professor

Address : IFPGS, OMR Campus
Vaniyanchavadi
Chennai-603103

Contact

Telephone (O) : 044 2747 0696
Telephone (R) : 044 3141 4922
Mobile : 9176385442
Email : kaliyamurthi@tnfu.ac.in

Qualification : M.Sc., Ph.D., PDF.

Field of Specialization : Protein chemistry

Major : Biochemistry

Specializing field : Proteins / inflammatory

Experience (in years) : 10 years 08 months (TNJFU)

Citations	1548
h-index	15
i10-index	18

Academic Qualification

S.No	Institution Place	Degree awarded	Year	Field of study
	University of Texas Health Science Centre at Sanantonio, Texas, USA	Postdoctoral Fellow	Jun-2007-Dec-2010	Medicine/Cardiology
	University of Madras, Chennai, Tamil Nadu, India	Ph.D.,	2002-2006	Biochemistry
	Bharathidasan University, Trichy, Tamil Nadu, India	M.Sc.,	1998- 2000	Biochemistry
	Bharathidasan University, Trichy Tamil Nadu, India	B.Sc.,	1995- 1998	Zoology

Ongoing - projects

Sl. No.	Title of the Project	Year	PI / Co- PI of the Project	Funds (in Rs)	Funding Agency
1	Understanding the Mechanism of Resveratrol and IL-17 Knock-	2023-2026	PI	42,20,215	DST-SERB

	down on Macrophage via NFkB Signalling Pathway Under Metabolic Stress Conditions.				
2.	Exploration of the Notch signaling pathway in regulating macrophage differentiation and IL-6 expression in deep vein thrombosis: Insights from Notch knockdown studies.	2024-2027	Co-PI	67,65,190	ICMR- IIRP

Research Publications

2026

1) Piyushbhai MK, Binesh A, Venkatachalam K. Gallic Acid Protects Against LPS-Induced Cardiac Dysfunction by Modulating Inflammatory Responses and Notch Signaling in Zebrafish Embryo Larvae. J Biochem Mol Toxicol. 2026 Feb;40(2):e70729. doi: 10.1002/jbt.70729. PMID: 41642019.

2) Prasannan A, Venkatachalam K, Joy S, Yadav S, Binesh A. Could IL-6 inhibitors be the future of DVT therapy? A new era in therapeutic strategies. Immunopharmacol Immunotoxicol. 2026 Feb;48(1):111-121. doi: 10.1080/08923973.2025.2608137. Epub 2026 Jan 12. PMID: 41521927.

2025

1) Binesh, A and **Venkatachalam K**. IL 6 Cascade in Post COVID cardiovascular complications: A Review of Endothelial Injury and Clotting Pathways. Cardiovasc Hematol Disord Drug Targets, 2025 (in Press).

2) Joy S, Prasannan A, **Venkatachalam K** and Binesh A. Molecular Mechanism of Notch Signaling and Macrophages in Deep Vein Thrombosis: A Comprehensive Review. Cell Biochemistry and Biophysics, 2025 (in Press).

3) Ramalingam R, **Venkatachalam K** and Binesh A. Exploring Anti-Inflammatory Compounds from Kappaphycus alvarezii in High Cholesterol-Induced Zebrafish Larvae: Revealing Cardiovascular Potential. Anti-inflamm Antiallergy Agents Med Chem. 2025 (in Press).

4) Binesh A, **Venkatachalam K***, Saravanan R (2025). Investigating the Therapeutic Potential of Gracilaria edulis Extract in Copper-exposed Zebrafish Embryos: An Anti-inflammatory Perspective, ***The Natural Products Journal***, 15 (5) : e22103155294834. DOI: 10.2174/0122103155294834240607054701.

5) Yadav S, Prasannan A, **Venkatachalam K**, Binesh A (2025). Exploring the mechanism and crosstalk between IL-6 and IL- 1β on M2 macrophages under metabolic stress conditions. ***Cytokine***, Feb;186:156852. doi: 10.1016/j.cyto.2024.156852.

2024

1) **Kaliyamurthi V**, Binesh A. Power of Portieria hornemannii: influence on zebrafish antioxidant system-inflammatory cascade by combatting copper-induced inflammation. ***Nat Prod Res.*** 2023 Nov 11:1-5. doi:10.1080/14786419.2023.2280166.

2) Piyushbhai, M. K., Sharma, P., Ramalingam, R., Binesh, A., & **Venkatachalam, K***. (2024). A Comprehensive Review on Integrated Approach for Discovery and

Development of Novel Bioactive Compounds: From Natural Resources to Targeted Therapeutics. ***Current Bioactive Compounds***, e15734072327345.

3) Binesh, A., **Venkatachalam, K***. (2024). Copper in Human Health and Disease: A Comprehensive Review. ***Journal of biochemical and molecular toxicology***, 38(11), e70052.

4) Ramalingam R, **Venkatachalam K**, Bhai MKP, Sharma P and Binesh A. Macrophages: Balancing Inflammation and Homeostasis in Health and Disease. ***Current Biotechnology***, 2024, 13 (2): 71 – 82.

5) Sharma P, **Venkatachalam K**, Binesh A. Decades Long Involvement of THP-1 Cells as a Model for Macrophage Research: A Comprehensive Review. ***Anti inflamm Antiallergy Agents Med Chem.*** 2024 ; 23 (2) : 85 - 104. doi:10.2174/0118715230294413240415054610.

6) Sharma P, Piyushbhai MK, **Venkatachalam K**, Binesh A. Exploring the Role of Secondary Metabolites from Plants and Microbes as Modulators of Macrophage Differentiation. **Cardiovasc Hematol Disord Drug Targets**, 2024, 23 (4): 134- 150. doi:10.2174/011871529X327064241003072202.

7) Piyushbhai MK, Binesh A, Shanmugam SA, **Venkatachalam K***. Effects of mercury chloride on antioxidant and inflammatory cytokines in zebrafish embryos. ***J Biochem Mol Toxicol.*** 2024;38(1):e23589. doi:10.1002/jbt.23589.

8) Rajagopal Ramya, Seerappalli Aran Shanmugam, Ayyathurai Kathirvelpandian, Ayyaru Gopalakannan, Albin Jemila Thangarani, **Venkatachalam Kaliyamurthi** & Mariappan Balaganesan. Enhancement of C-phycoerythrin content by mixotrophic cultivation of Phormidium sp. isolated from the Indian coast. January 2024 ***Journal of Applied Phycology*** DOI: 10.1007/s10811-023-03162-1.

2023

1) Akshaya, L., Sarathchandra, G., Shanmugam, S.A., Felix, N. and **Kaliyamurthi, V.** (2023). Microbial Screening of Antibiotic Residues in Soil and Water of Cultured Fish Farms in Tamil Nadu. ***Indian Journal of Animal Research***. doi: 10.18805/IJAR.B-5063**.**

2) Akshaya, L., Sarathchandra, G., Shanmugam, S.A., Felix, N. and **Kaliyamurthi, V.** (2023). Adverse Effects of Oxytetracycline Hydrochloride, Florfenicol, Sulphadimethoxine and Ormetoprim in Tilapia (Oreochromis niloticus) at Therapeutic Dose and Maximum Residual Limit (MRL) Level. ***Indian Journal of Animal Research***. doi: 10.18805/IJAR.B-5073**.**

3) Mariappan B, **Kaliyamurthi V**, Binesh A. Medicinal plants or plant derived compounds used in aquaculture. ***Recent advances in aquaculture microbial technology***, Academic press, 2023, 153 -207.

2022

1) Piyushbhai MK, Binesh A, Shanmugam SA, **Venkatachalam K.** Exposure to low-dose arsenic caused teratogenicity and upregulation of proinflammatory cytokines in zebrafish embryos. ***Biol Trace Elem Res.*** 2023;201(7):3487-3496.

2) Hemamalini, N., Shanmugam, S.A.,Kathirvelpandian, A., Deepak, A., **Kaliyamurthi, V**. and Ezhilmathi, S. (2022). Prevalence, Antimicrobial Resistance and Resistance Gene Cassettes Detection in Bacterial Pathogens Isolated from Freshwater Ornamental Fishes. ***Indian Journal of Animal Research*.**

3) Hemamalini, N., Shanmugam, S.A., Kathirvelpandian, A., ...Suresh, E., Ezhilmathi, S. Prevalence, Antimicrobial Susceptibility and Resistance Gene Detection in Bacteria Isolated from Goldfish and Tiger Barb from Ornamental Fish Farms of Tamil Nadu. ***Indian Journal of Microbiology.*** 2022.

4) Hemamalini Nallaiah, Shanmugam Seerappalli Aran, Kathirvelpandian Ayyathurai, Deepak Agarwal, **Kaliyamurthi Venkatachalam**, Suresh Eswaran. A critical review on the antimicrobial resistance, antibiotic residue and metagenomics-assisted antimicrobial resistance gene detection in freshwater aquaculture environment. ***Aquaculture Research*** *2022, 53(2), 344–366*.

Research Guidance (PG and Ph.D.)

1. Name : Abdullah M Hasbullah
   E mail : (amhmails456@gmail.com)
   Degree : M.F.Sc. (Fish Biotechnology)
   Title : Evaluation of the effect of resveratrol on high glucose induced macrophage modulation and inflammatory cytokines in zebrafish and THP-1 cells.

2. Name : K.R. Karthick Ram Narayanan
   E mail : (karthickkr2002@gmail.com)
   Degree : M.F.Sc. (Fish Biotechnology)
   Title : Isolation and structural elucidation of bioactive secondary metabolites from Portieria hornemannii as NFkB inhibitor.

3. Name : Modi Kiran Piyushbhai
   E mail : (modikiran007@gmail.com)
   Degree : M.F.Sc. (Fish Biotechnology)
   Title : Heavy metals immunotoxicity- Effect of Mercury and Arsenic on antioxidants and immune related cytokines expression on zebrafish Embryos and Larvae

4. Name : Daril Deehen
   E mail : (darildeehen144@gmail.com)
   Degree : Ph.D. (Life Sciences)
   Title : Understanding the Mechanism of Resveratrol and IL-17 Knock-down on Macrophage via NFkB Signalling Pathway Under Metabolic Stress Conditions.

5. Name : Modi Kiran Piyushbhai
   E mail : (modikiran007@gmail.com)
   Degree : Ph.D. (Fish Biotechnology)
   Title : Investigation of cardioprotective effects of multi-targeting compounds (fucoidan, gallic acid, vanillic acid) on lipopolysaccharide stimulated zebrafish model via notch signalling pathway.