



## Dr. A. Kamala Devi

### Teaching Assistant

#### Contact

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#### Academic Qualifications

Degree	Institution	Year	Branch	Class
Ph. D.	Alagappa University	2017	Biotechnology	Highly Commended
M. Sc.,	Alagappa University	2009	Biotechnology	First
B. Sc.,	Seethalakshmi Ramaswamy college, ( <i>Affiliated to Bharathidasan University</i> )	2007	Biotechnology	First class with Distinction

#### Teaching Experience

Position	Institution	Duration
Adjunct Faculty	Department of Biomedical Science, Alagappa University	Since Dec., 2024

## Research Experience

Total Research Experience : 8 years

Position	Institution	Duration
UGC- Dr. S. Kothari Postdoctoral Fellow	Department of Animal Science, Bharathidasan University	2017-2021
DBT-Senior Research Fellow	Department of Biotechnology, Alagappa University	2011-2014
Alagappa University Research Fellow	Department of Biotechnology, Alagappa University	2010-2011

## Areas of Research

- Infectious diseases and Host (*C. elegans* and *R. norvegicus*)-Pathogen Interactions
- Genomic and Proteomic analyses during Host-Pathogen Interactions
- Understanding the molecular toxicity of pesticides in animal models
- Infection mediated host immune response, immunomodulation and
- Neurophysiological analyses in animal models.

## Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books/Chapters
15	11	-	2	8

**Total Citations** (as per google scholar till 11.12.24) : **592**

**h-index** : **12**

**i10 index** : **12**

**Cumulative Impact Factor** : **54.63**

**Average Impact Factor** : **4.2**

## Submission in Public Databases

- Nucleic acid sequence submitted in NCBI : 8
- Proteomics dataset submitted in ProteomeXchange Consortium : 1 (dataset ID -PXD007151)

## Academic Merits and Awards

- 2017 Awarded University Grants commission (UGC) **Dr. S. Kothari Postdoctoral Fellowship (2017-2020)**, Ministry of Human and Research Development, Govt. Of India
- 2017 Awarded - National Postdoctoral Fellowship, Department of Science and Technology (DST), Govt. Of India (Un-availed)
- 2013 Qualified **State Eligibility Test for Lectureship (SET)** in Life Sciences - 2013 Conducted by Bharathiyar University, Government of Tamil Nadu, India
- 2010 Awarded **Alagappa University Meritorious Fellowship** by securing **Rank-I** in the Pre- Ph.D. Entrance Examination by Alagappa University, Tamil Nadu, India
- 2009 Qualified **Graduate Aptitude Test in Engineering (GATE)** in Life Sciences, Indian Institute of Technology (IIT), Madras
- 2009 Awarded **Indian academy of Sciences (IASc)** Student fellowship

## Events Participated as Resource person

- “**International Conference cum Workshop on *Caenorhabditis elegans* based OMICS for Future Challenges**” during 09<sup>th</sup> to 13<sup>th</sup> September 2019 organized by the Department of Biotechnology, Alagappa University (as a part of the activities of RUSA 2.0), Karaikudi, Tamilnadu, India.

## Overseas Exposure/Visits

- Upon invitation, I have visited Konan University, Kobe, Japan and presented my research work to the University members during 10 July - 14 July, 2019 with regard to my JSPS application submission under the mentorship of Prof. Atsushi Kuhara. The travel, accommodation and visa fees were completely sponsored by Prof. Atsushi's lab, Department of Neuroscience, Konan University.

## Reviewer and Guest Editor in journals

- Invited **Reviewer** for SCI journals such as Frontiers in Cellular and Infection Microbiology, Frontiers in Microbiology, Scientific Reports, International Journal of Biological Macromolecules, Gene, Pathogen & Diseases, Journal of Medical Microbiology, Microbial Pathogenesis and Biocatalysis and Agricultural Biotechnology.

Awarded “*Certificate of outstanding contribution in reviewing-2018*” from the journal of Biocatalysis and Agricultural Biotechnology

## Membership in Professional Bodies

- Life Member : Biotech Research Society of India (BRSI) (LM:1672)
- Member : European Society of Clinical Microbiology and Infectious Diseases (ESCMID), (No. 456999).

## List of Research Articles / Recent Publications

1. Jothi R, **Kamaladevi A**, Muthuramalingal P, Malligarjunan Nambiraman, Karutha Pandian S, Gowrishankar S (2024). Untargeted metabolomics uncovers prime pathways linked to antibacterial action of citral against bacterial vaginosis-causing *Gardnerella vaginalis*: An in vitro and in vivo study. *Heliyon* [Cell Press] (**Impact factor: 4.0**). DOI: 10.1016/j.heliyon.2024.e27983.
2. **Kamaladevi A** and Emmanuvel Rajan K (2023). Antibiotic treatment during post-natal reverses behavioural and molecular alterations in experimental meningitis survivor rat model. *Neurotoxicology and Teratology* [Elsevier] (**Impact factor: 4.0**). DOI: 10.1016/j.ntt.2023.107178.
3. **Kamaladevi A**<sup>◉</sup>, Muthumanickam S<sup>◉</sup>, Boomi P, Gowrishankar S\* and Pandian SK (2021). Indian ethnomedicinal phytochemicals as promising inhibitors of RNA binding domain of SARS-CoV-2 nucleocapsid phosphoprotein: an in silico study. *Frontiers in Molecular Biosciences [Lausanne: Frontiers Media SA]*, 7, 393 [Frontiers Media SA] (**Impact factor: 5.246**). DOI: 10.3389/fmolb.2021.637329 (**In press**).

◉Equally Contributed \* Corresponding author

4. Gowrishankar S\*<sup>◉</sup>, Muthumanickam S<sup>◉</sup>, **Kamaladevi A**<sup>◉</sup>, Karthika C, Jothi R, Boomi P, Maniazhagu D, and Pandian SK (2021). Promising phytochemicals of traditional Indian herbal steam inhalation therapy to combat COVID-19 – an *in silico* study. *Food and Chemical Toxicology* [Elsevier, France] (**Impact Factor: 6.023**). DOI: [10.1016/j.fct.2020.111966](https://doi.org/10.1016/j.fct.2020.111966) (**In press**).

◉Equally Contributed \* Corresponding author

5. **Kamaladevi A** and Balamurugan K (2017). Global proteomics revealed *Klebsiella pneumoniae* induced autophagy and oxidative stress in *Caenorhabditis elegans* by inhibiting PI3K/AKT/TOR pathway during infection. *Frontiers in Cellular and Infection Microbiology*, 7, 393 [Frontiers Media SA] (**Impact factor: 5.293**) ISSN No. 2235-2988.
6. **Kamaladevi A**, Marudhupandiyam S, and Balamurugan K (2017). Model system based proteomic analysis against bacterial infections. *Molecular BioSystems (Currently renamed as Molecular OMICS)*, 13, 2489-2497 [Royal Society of Chemistry] (**Impact factor: 3.743**) ISSN No. 2515-4184.
7. **Kamaladevi A** and Balamurugan K (2016). *Lactobacillus casei* triggers TLR mediated RACK-1 dependent p38 MAPK pathway in *Caenorhabditis elegans* to resist *Klebsiella pneumoniae* infection. *Food and Function*, 7(7), 3211-3223 [Royal Society of Chemistry] (**Impact factor: 5.396**) ISSN No. 2042-650X.
8. Gowrishankar S, **Kamaladevi A**, Balamurugan K, and Pandian S. K (2016). *In vitro* and *in vivo* biofilm characterization of community-acquired methicillin resistant *Staphylococcus aureus* from patients associated with pharyngitis infection. *BioMed Research International*, Article ID 1289157, 1-14 [Hindawi Publishing Corp., New York] (**Impact Factor: 3.411**) ISSN No. 2314-6141.
9. Sivaranjani M, Gowrishankar S, **Kamaladevi A**, Pandian S. K, Balamurugan K, and Ravi A.V (2016). Morin inhibits biofilm production and reduces the virulence of *Listeria*

- monocytogenes*- An *in vitro* and *in vivo* approach. *International Journal of Food Microbiology*, 237, 73-82. DOI: 10.1016/j.ijfoodmicro.2016.08.021 [Elsevier, The Netherlands] (**Impact Factor: 5.277**) ISSN No. 0168-1605.
10. **Kamaladevi A** and Balamurugan K (2016). Lipopolysaccharide of *Klebsiella pneumoniae* attenuates host immune defense and evades by altering its supramolecular structure. *RSC Advances*, 6, 30070-30080, DOI: 10.1039/C5RA18206A [Royal Society of Chemistry] (**Impact factor: 3.361**) ISSN No. 2046-2069.
  11. **Kamaladevi A**, Ganguli A, Balamurugan K (2016). *Lactobacillus Casei* stimulates phase II detoxification system and rescues malathion induced neurophysiological impairments in *Caenorhabditis elegans*. *Comparative Biochemistry and Physiology Part-C Toxicology and Pharmacology*, 179, 19-28, DOI: 10.1016/j.cbpc.2015.08.004 [ELSEVIER, New York] (**Impact Factor: 3.228**) ISSN No. 1532-0456.
  12. Gowrishankar S, Sivaranjani M, **Kamaladevi A**, Ravi AV, Balamurugan K and Pandian SK (2016). Cyclic dipeptide-cyclo (L-leucyl-L-prolyl) from marine *Bacillus amyloliquefaciens* mitigates biofilm formation and virulence in *Listeria monocytogenes*. *Pathogens and Disease*, 74 (4), ftw017, DOI: 10.1093/femspd/ftw017 [FEMS, Oxford University Press] (**Impact Factor: 3.166**) ISSN No. 2049-632X.
  13. Gowrishankar S, **Kamaladevi A**, Sorimuthu Ayyanar K, Balamurugan K and Karutha Pandian S (2015). *Bacillus amyloliquefaciens*- secreted cyclic dipeptide-cyclo(L-leucyl-L-prolyl) inhibits biofilm and virulence production in methicillin-resistant *Staphylococcus aureus*. *RSC Advances*, 5, 95788-95804, DOI: 10.1039/c5ra11641d [Royal Society of Chemistry] (**Impact factor: 3.361**) ISSN No. 2046-2069.
  14. **Kamaladevi A** and Balamurugan K (2015). Role of PMK-1/p38 MAPK defense in *Caenorhabditis elegans* against *Klebsiella pneumoniae* infection during host-pathogen interaction. *Pathogens and Disease*, 73(5), 1-9, DOI: 10.1093/femspd/ftv021 [FEMS, Oxford University Press] (**Impact Factor: 3.166**) ISSN No. 2049-632X.
  15. **Kamaladevi A**, Ganguli A, Kumar M and Balamurugan K (2013). *Lactobacillus casei* protects malathion induced oxidative stress and macromolecular changes in *Caenorhabditis elegans*. *Pesticide Biochemistry and Physiology*, 105, 213-223, DOI: 10.1016/j.pestbp.2013.02.005 [ELSEVIER, New York] (**Impact Factor: 3.963**) ISSN No. 0048-3575.

## Book Chapters Published

1. Gowrishankar S, **Kamaladevi A**, and Pandian SK. 2021. MALDI-TOF analysis of Actinobacterial peptides with respect to MASCOT database. In: Methods in Actinobacteriology, D Dhanasekaran (Ed.) [Springer Protocols Handbook, Springer Nature, New York]. Chapter 09.
2. Gowrishankar S, **Kamaladevi A**, and Pandian SK. 2020. Prebiotics Mechanism of Action: An Overview In: Advances in Probiotics: Microorganisms in Food and Health, D Dhanasekaran (Ed.) [Elsevier Press, Cambridge MA]. Chapter 11.
3. Jothi R, Karthika C, **Kamaladevi A**, Satish L, Pandian SK, and Gowrishankar S. CRISPR

based bacterial genome editing and removal of pathogens. In: *Reprogramming of the Genome: Applications of CRISPR-Cas in non-mammalian systems Volume 180*, Vijaisingh (Ed.) [Elsevier Press, Cambridge MA]. Chapter 03.

4. Gowrishankar S, **Kamaladevi A**, and Pandian SK. 2020. Structure and functional role of microbiome associated with specific organs of healthy individuals. In: *Microbiome-Host Interactions*, D Dhanasekaran (Ed.) [CRC Press, Taylor and Francis Group, USA; ISBN 9780367479909]. Chapter 9; DOI: 10.1201/9781003037521-6.
5. **Kamaladevi A**, Gowrishankar S and Balamurugan, K. 2018. *Klebsiella* spp. as a pathogen: Epidemiology, pathogenesis, identification, treatment and prevention. In: *A bacterial infection Series, Handbook of Foodborne Diseases*, Dongyou Liu (Eds.) [CRC Press, Taylor and Francis Group, USA]. ISBN No. 9781138036307. DOI: 10.1201/b22030.
6. **Kamaladevi A** and Balamurugan K (2016). *Caenorhabditis elegans* as a laboratory model for *Klebsiella pneumoniae* infection. In: *Food Microbiology Series, Laboratory Models for Foodborne Infection*, Dongyou Liu (Eds.) [CRC press, Taylor and Francis Group, USA] ISBN No. 9781498721677. DOI: 10.1201/9781315120089.
7. **Kamaladevi A**, Sivamaruthi B, Durai S, Kesika P, Vigneshkumar B, JebaMercy G, and Balamurugan K (2015). Tug-of-war between host immunity and microbial pathogenesis using *Caenorhabditis elegans* as a model system. In: *Microbiology Book Series-5, The battle against microbial pathogens: basic science, technological advances and educational programs*" Vol. 2 Méndez-Vilas (Eds.) [Formatex Research Center, Spain] ISBN: 978-84-942134-7-2.
8. Balamurugan K, Sivamatuthi B, Durai S, Keika P, Vigneshkumar B, JebaMercy G, **Kamaladevi A**, Prasanth M Iyer, Marudhupandian S, Prithika U, Vigneshwari L and Karutha Pandian S (2014). Understanding innate immune defenses against pathogens using model organism *Caenorhabditis elegans*. In: *Microbiology Book Series-4, "Microbial pathogens and strategies for combating them: Science, technology and education"* Vol. 3 Méndez-Vilas (Eds.) [Formatex Research Center, Spain] ISBN: 978-84-942134-1-0.

### Abstract Published in Journals

1. Sanjey K Dey, Toyonji Joseph, Santosh Kumar, **Kamaladevi A**, Nabanita S, Thelma B. K, Balamurugan K and Suman K (2015). Novel antagonists of Dopamine- $\beta$ -hydroxylase identified and validated through structure based approaches to combat hypertension. *Hypertension*, 2015; 66: AP067, (**Impact Factor 10.190**).
2. **Kamaladevi A** and Balamurugan, K (2014). Response of *Caenorhabditis elegans* during *Klebsiella pneumoniae* pathogenesis. *BMC Infectious Diseases*, 14 (suppl 3):P8, (**Impact Factor 3.401**).
3. **Kamaladevi A** and Balamurugan, K (2014). Screening and characterization of indigenous lactic acid bacteria against malathion induced toxicity using model organism *Caenorhabditis elegans*. *Nutrients*, 6(10) 4115-64 (**Impact Factor 5.717**).
4. Sanjey K Dey, Toyonji Joseph, Santosh Kumar, **Kamaladevi A**, Nabanita S, Thelma B. K, Surajit Sarkar, Balamurugan K and Suman K (2014). Identification and validation of new

inhibitors based on rational design against Dopamine- $\beta$ -hydroxylase to combat hypertension. *Hypertension*, 64 (suppl 1): A267, (**Impact Factor 10.190**).