



Dr. S. Gowrishankar
Assistant Professor

Contact

Address : Department of Biotechnology
Science Campus
Alagappa University
Karaikudi - 630 003
Tamil Nadu, India

Employee Number : 54405

Date of Birth : April 09, 1986

Contact Phone (Office) : +91 4565 225215

Contact Phone (Mobile) : +91 9994933559

Contact e-mail(s) : gowrishankar.alu@gmail.com

Skype id : gowrishankar.alu@gmail.com

Academic Qualifications:

| Degree | Year of Passing | Subject | Class | Institution |
|---------------------|-----------------|--|------------------------------|---|
| B.Sc., | April 2007 | Microbiology | First class | Kongu College of Arts & Science, Karur - 639 006 |
| M.Sc., | May 2009 | Microbiology | First class with distinction | Bharathidasan University, Tiruchirappalli |
| Post M.Sc., Diploma | June 2010 | Advanced Diploma in Molecular Diagnostics (ADMD) | First class with distinction | Department of Biotechnology, Alagappa University, Karaikudi |
| Ph.D. | December 2016 | Biotechnology | | Alagappa University, Karaikudi |

Teaching Experience:

Since January 30, 2016

Research Experience:

Since October 11, 2010

Areas of Research

- ✚ Molecular characterization of methicillin resistant- *Staphylococcus aureus* with special emphasis on biofilm formation.
- ✚ Pathogenesis of biofilm forming Gram-positive pathogens and alternative strategies to combat their infections.

Research Supervision / Guidance

| Program of Study | | Completed | Ongoing |
|------------------|-------|-----------|---------|
| Research | Ph.D. | - | - |
| Project | PG | 02 | 02 |

Publications

| International | | National | | Others |
|---------------|-------------|----------|-------------|---|
| Journals | Conferences | Journals | Conferences | Books / Chapters / Monographs / Manuals |
| 15 | 16 | -- | 06 | 02 |

Cumulative Impact Factor (as per JCR) : 46.58 (Avg. IF: 3.105)
h-index : 07
i10 index : 05
Total Citations : 148

Funded Research Projects

Ongoing Projects

| S. No | Agency | Period | | Project Title | Budget (Rs. In lakhs) |
|-------|---|--------|------|--|-----------------------|
| | | From | To | | |
| 1 | University Grants Commission (UGC), New Delhi | 2017 | 2019 | "Deciphering the antivirulence mechanism of marine cyclic dipeptide cyclo(l-leucyl-l-prolyl) against <i>Listeria monocytogenes</i> through proteomic | 10.00 |

| | | | | | |
|---|---------------------|------|------|---|------|
| | | | | approach” | |
| 2 | AURF Start-Up Grant | 2018 | 2019 | Efficacy evaluation of phytochemical(s) from <i>Achyranthes aspera</i> L. (amaranthaceae) against various virulence traits of certain human pathogens | 1.00 |

Achievements / Awards

- 1) 2008 **State Eligibility Test** for Lectureship (**SET**) in Life sciences.
- 2) 2009 Awarded **Studentship** (Rs. 5000 per month for one year) by the Department of Biotechnology (DBT), Government of India for the Post M.Sc., Advanced Diploma in Molecular Diagnostics Programme (July 2009 to June 2010).
- 3) 2011-16 University Grants Commission-**Rajiv Gandhi National Fellowship**
- 4) 2012 **Second prize for poster presentation** in the International Conference on “Regulatory Network Architecture in Bacteria” held during March 9th - 11th, 2012 at Sastra University, Thanjavur, India.
- 5) 2013 **Best poster and cash award** in the “National Seminar on Microbes in Health, Agriculture and Industry” held during February 27th - March 1st, 2013 at Department of Biotechnology, Alagappa University, Karaikudi, India.
- 6) 2014 **First prize for oral presentation** in the National Conference on “Bioactive Peptides-Application in Veterinary, Medical and Food Sciences” held during December 18th - 19th, 2014 at Department of Animal Biotechnology, Madras Veterinary College, Chennai, India.
- 7) 2015 **International Travel Awards** from
 1. **Indian Council of Medical Research (ICMR)**
 2. **Centre for International Co-operation in Science (CICS)**
 (To attend the 25th European Congress of Clinical Microbiology and Infectious Diseases held during April 25th -28th, 2015 at Copenhagen, Denmark).
- 8) 2017 **Start-up Grant** for the newly joined faculties of Basic Sciences by **University Grants Commission**, New Delhi, March-2017.

Events Participated

Conferences / Seminars / Workshops: 08

Other Training Programs

- “ZEISS Microscopy Course” held between 21st and 23rd May, 2015 organized by Carl Zeiss India (Bangalore) Pvt. Ltd. at IIT Madras.

Overseas Exposure / Visits

- Visited **Copenhagen, Denmark** and presented poster in the 25th European Congress of Clinical Microbiology and Infectious Diseases (ECCMID 2015) during 25th -28th April, 2015.

Membership in Professional Bodies

1. Life Member : Biotech Research Society of India (BRSI) (LM:1672)
2. Life Member : Indian Initiative for Management of Antibiotic Resistance (IIMAR)

Others

Sequences submitted in

- GenBank : 42
- Multilocus sequence typing (MLST) : 33

Recent Publications

1. Rubini, D., FarisaBanu, S., Vellingiri, V., RamyaDevi, D., **Gowrishankar, S.**, Pandian, S.K., Nithyanand, P., 2018. Chitosan extracted from marine biowaste mitigates staphyloxanthin production and biofilms of Methicillin- resistant *Staphylococcus aureus*. *Food and Chemical Toxicology* [Elsevier, France] [**Impact Factor: 3.778**].
2. FarisaBanu, S., Rubini, D., Murugan, R., Vellingiri, V., **Gowrishankar, S.**, Pandian, S.K., Nithyanand, P., 2018. Exploring the antivirulent and sea food preservation efficacy of Essential oil combined with DNase on *Vibrio paraholyticusaem*. *LWT Food Science and Technology* [Elsevier, France] [**Impact Factor: 2.329**].
3. FarisaBanu, S., Rubini, D., Shanmugavelan, P., Murugan, R., **Gowrishankar, S.**, Pandian, S.K., Nithyanand, P., 2018. Effect of patchouli and cinnamon essential oil on biofilm and hyphae formation by *Candida* spp. *Journal of Medical Mycology* [Elsevier, France] pii: S1156-5233(17)30378-5 [**Impact Factor: 1.269**].

4. Satish, L[•], Santhakumari, S[•], **Gowrishankar, S[•]**, Pandian, S.K., Ravi, A.V., Ramesh, M., 2017. Rapid biosynthesized AgNPs from *Gelidiella acerosa* aqueous extract mitigates quorum sensing mediated biofilm formation of *Vibrio* species - An *in vitro* and *in vivo* approach. *Environmental Science and Pollution Research* [Germany (Berlin): Springer] [Impact Factor: 2.760]. DOI: 10.1007/s11356-017-0296-4.
•Equally Contributed.
5. Kannappan, A., **Gowrishankar, S.**, Srinivasan, R., Pandian, S.K., and Ravi, A.V., 2017. Antibiofilm activity of *Vetiveria zizanioides* root extract against methicillin-resistant *Staphylococcus aureus*. *Microbial Pathogenesis* [Elsevier, London] 110 (2017): 313e324 [Impact Factor: 2.009].
6. FarisaBanu, S., Rubini, D., Rakshithaa, S., Sekar, C.K., Wilson, A., **Gowrishankar, S.**, Pandian, S.K., and Nithyanand, P., 2017. Antivirulent properties of underexplored *Cinnamomum tamala* essential oil and its synergistic effects with DNase against *Pseudomonas aeruginosa* biofilms - an *in vitro* study. *Frontiers in Microbiology* [Lausanne: Frontiers Media SA] DOI: 10.3389/fmicb.2017.01144. [Impact Factor: 4.076].
7. **Gowrishankar, S** & Pandian, S.K, 2017. Modulation of *Staphylococcus epidermidis* (RP62A) extracellular polymeric layer by marine cyclic dipeptide-cyclo(L-leucyl-L-prolyl) thwarts biofilm formation. *Biochim Biophys Acta Biomembranes* [Elsevier, The Netherlands] 14;1859(7):1254-1262. [Impact Factor: 3.687].
8. Sivaranjani, M, Prakash, M, **Gowrishankar, S**, Nandhini, J.R, Pandian, S.K, 2017. *In vitro* activity of α -mangostin in killing and eradicating *Staphylococcus epidermidis* RP62A biofilms. *Applied Microbiology and Biotechnology*. [Springer International, New York] 101(8):3349-3359. [Impact Factor: 3.42].
9. **Gowrishankar, S.**, Kamaladevi, A., Balamurugan, K., and Pandian, S.K., *In vitro* and *in vivo* biofilm characterization of community-acquired methicillin-resistant *Staphylococcus aureus* from patients associated with pharyngitis infection. *BioMed Research International* [Hindawi Publishing Corp., New York] 2016, 1-14 Article ID 1289157 [Impact Factor: 2.134].
10. 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* [Elsevier, The Netherlands] 237, 73-82 [Impact Factor: 3.445].
11. **Gowrishankar, S.**, Sivaranjani, M., Kamaladevi, A., Ravi, A.V., Balamurugan, K., Pandian, S.K., 2016. Cyclic dipeptide cyclo(l-leucyl-l-prolyl) from marine *Bacillus*

amyloliquefaciens mitigates biofilm formation and virulence in *Listeria monocytogenes*. *Pathogens and Disease* [FEMS, Oxford University Press, USA] 74, 4, 49-60. [Impact Factor: 2.483].

12. **Gowrishankar, S.**, Kamaladevi, A., Ayyanar, K.S., Balamurugan, K., Pandian, S.K., 2015. *Bacillus amyloliquefaciens*-secreted cyclic dipeptide – cyclo(L-leucyl- L-prolyl) inhibits biofilm and virulence production in methicillin-resistant *Staphylococcus aureus*. *RSC Advances* [Royal Society of Chemistry, England] 5, 95788-95804. [Impact Factor: 3.840].
13. **Gowrishankar, S.**, Poornima, B., Pandian, S.K., 2014. Inhibitory efficacy of cyclo(L-leucyl-L-prolyl) from mangrove rhizosphere bacterium-*Bacillus amyloliquefaciens* (MMS-50) toward cariogenic properties of *Streptococcus mutans*. *Research in Microbiology* [Elsevier, New York, USA] 165, 278-289. [Impact Factor: 2.889].
14. **Gowrishankar, S.**, Thenmozhi, R., Balaji, K., Pandian, S.K., 2013. Emergence of methicillin-resistant, vancomycin-intermediate *Staphylococcus aureus* among patients associated with group A Streptococcal pharyngitis infection in southern India. *Infection, Genetics and Evolution* [Elsevier, New York, USA] 14, 383-389 [Impact Factor: 3.264].
15. **Gowrishankar, S.**, Mosioma, N.D., and Pandian, S.K., 2012, Coral-associated bacteria as a promising antibiofilm agent against methicillin-resistant and -susceptible *Staphylococcus aureus* biofilms. *Evidence-Based Complementary and Alternative Medicine* [Hindawi Publishing Corp., New York] 2012, 862374 doi:10.1155/2012/862374 [Impact Factor: 4.774].

Abstracts Published in Conferences

1. **Gowrishankar, S.**, and Pandian, SK., 2012, Inhibitory effect of coral-associated bacterial extracts on methicillin-resistant and susceptible *Staphylococcus aureus* biofilms. *Clinical Microbiology and Infection* 18(S3): R2416 [Wiley, Paris] DOI: 10.1111/j.1469-0691.2012.03803.x [Impact Factor 5.768].
2. Pandian, S.K., and **Gowrishankar, S.**, 2012, Molecular characterization of methicillin-resistant *Staphylococcus aureus* with emergence of epidemic clone of sequence type (ST) 772 and novel ST 2129 in southern India. *Clinical Microbiology and Infection* 18(S3): R2531 [Wiley, Paris] DOI: 10.1111/j.1469-0691.2012.03803.x [Impact Factor 5.768].

Book Chapters

1. **Gowrishankar, S.**, & Pandian, 2017. Flavonoids in the Treatment of Pulmonary Lung Diseases. In: *Recent Advances in the Molecular Mechanism of Flavonoids*, K Pandima Devi (Ed.) [Studium Press (India) Pvt. Ltd. ISBN: 978-93-85046-21-6].
2. Kamaladevi, A., **Gowrishankar, S.**, & Balamurugan, K., *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]. Chapter 33.

Faculty Profile as of 28th May, 2018