



Dr. A. Veera Ravi
Professor

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Academic Qualifications: M.Sc., Ph.D.,

Teaching Experience: 20 Years

Research Experience: 25 Years

Additional Responsibilities

- Swachh Bharat and Swasth Bharath Program Officer

Areas of Research

1. Bacterial cell to cell communication system – Quorum sensing.
2. Cataloguing of Quorum sensing inhibitor compounds producing marine microbes.
3. Selection and evaluation of probiotics for the prevention and control of aquaculture pathogens.
4. Molecular diagnosis of microbial pathogens among aquaculture organisms.
5. Molecular assessment of marine microbial diversity.
6. Screening for novel antimicrobial compounds from marine microbes.

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	NPDF	1	Nil
	Ph.D.	3	7
	M.Phil.	4	Nil
Project	PG	28	5
	UG / Others (ADMD)	1	Nil

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
35	55	13	40	03

Cumulative Impact Factor (as per JCR) :	84.7
H-index :	16
i10 index :	25
Total Citations :	1116

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	Tablets (India) Limited, Chennai	2015	2018	Studies on effective control of EMS in the culture of <i>Litopenaeus vannamei</i>	22.26
2	DBT, India	2012	2016	Antipathogenic potential of marine cyanobacteria in preventing quorum sensing dependent bacterial infections among aquaculture organisms.	55.09
3	UGC, India	2009	2012	Quorum quenching mediated attenuation of virulence genes expression of pathogenic <i>Vibrio harveyi</i> infection in <i>Penaeus monodon</i> .	10.26
4	UGC, India	2007	2008	Selection and evaluation of potential Probiotics for the commercial production of Mud Crab seeds (<i>Scylla serrata</i> , Portunidae).	1.00

Ongoing Projects

	Agency	Period		Project Title	Budget (Rs. in lakhs)
		From	To		
1	Evolva Biotech Private Limited, Chennai	2017	2020	Anti-infective and antipathogenic efficacy of resveratrol against quorum sensing mediated virulence and biofilm formation of aquatic pathogens: A promising alternative strategy to antibiotic use in aquaculture	30.00

Distinctive Achievements / Awards

- 1986-1988 : UGC's National Merit Scholarship during M. Sc.,
1991- 1994 : ICAR Senior Research Fellowship.
1996 : University Gold Medal for the best Ph. D., thesis.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 6

Events Participated (optional)

Conferences / Seminars / Workshops: 95

Other Training Programs: 2

1. Underwent UNU-UNESCO International Training Course on Biodiversity in Mangrove Ecosystems, 10-24 March, 2003, Centre of Advanced Study in Marine Biology, Annamalai University, Port Novo, Tamil Nadu, India.
2. Participated National Workshop on Techniques in Animal Cell Culture and In Vitro Toxicology Organized by Mahatma Gandhi-Doerenkamp Center (MGDC), Bharathidasan University, Tiruchirappalli, October 02-11, 2013.

Membership in

Professional Bodies

1. Life Member: Society of Biological Chemists, India (SBC)
2. Life Member: The Indian Science Congress Association
3. Life Member: Proteomics Society, India (PSI)
4. Life Member: Biotech Research Society, India (BRSI)
5. Life Member: Association of Microbiologists of India (AMI)

Academic Bodies (such as Board of Studies etc.,)

1. M. Sc., Microbiology, Alagappa University (2011-2014)
2. B. Sc., Microbiology (Chairman), Alagappa University (2011-2014)

3. B. Sc., Biotechnology, Alagappa University (2012-2015)
4. M. Phil., Biotechnology, Alagappa University (2013)
5. B. Sc., Advanced Zoology & Animal Biotechnology (2015-2017)
6. B. Sc., Biotechnology, Alagappa University (2015-2017)
7. Biotechnology, Jamal Mohamed College, Thiruchirappalli (2015-2017)

Resource persons in various capacities

Number of Invited / Special Lectures delivered: **22**

Others

1. No. of PhD Thesis evaluated : 07
2. No. of PhD Public Viva Voce Examination conducted : 07
3. Sequences submitted in GenBank: 112

Recent Publications

1. Santhakumari S, Jayakumar R, Logalakshmi R, Prabhu NM, Nazar AK, Pandian SK, **Ravi AV** (2018). *In vitro* and *in vivo* effect of 2, 6-Di-tert-butyl-4-methylphenol as an antibiofilm agent against quorum sensing mediated biofilm formation of *Vibrio* spp. [International Journal of Food Microbiology](#). (IF: 3.339).
2. Sivaranjani M, Srinivasan R, Aravindraja C, Pandian SK and **Ravi AV** (2018). Inhibitory effect of α -mangostin on *Acinetobacter baumannii* biofilms - an *in vitro* study. [Biofouling](#) (Accepted Article, In Press) (DOI: 10.1080/08927014.2018.1473387) (IF: 3.08).
3. Devi KR, Srinivasan S and **Ravi AV** (2018). Inhibition of quorum sensing-mediated virulence in *Serratia marcescens* by *Bacillus subtilis* R-18. [Microbial Pathogenesis](#) (Accepted Article, In Press) (DOI: 10.1016/j.micpath.2018.04.023) (IF: 2.009).
4. Srinivasan R, Kannappan A, Sivasankar C, Rathika S, Pandian SK and **Ravi AV** (2018). Biofilm inhibitory efficiency of phytol in combination with cefotaxime against nosocomial pathogen *Acinetobacter baumannii*. [Journal of Applied Microbiology](#) (DOI: 10.1111/jam.13741) [Society of Applied Microbiology, Wiley Online Library] (IF: 2.099).
5. Durgadevi R, Srinivasan R, Kannappan A, Ponraj GJ, Pandian SK and **Ravi AV** (2018). Phytosynthesized silver nanoparticles as anti-quorum sensing and antibiofilm agent against the nosocomial pathogen *Serratia marcescens*: an *in vitro* study. [Journal of Applied Microbiology](#) [Society of Applied Microbiology, Wiley Online Library] (DOI: 10.1111/jam. 13728) (IF: 2.099).
6. Srinivasan R, Vigneshwari L, Rajavel T, Durgadevi R, Kannappan A, Balamurugan K, Devi KP and **Ravi AV** (2017). Biogenic synthesis of silver nanoparticles using *Piper betle* aqueous extract and evaluation of its anti-quorum sensing and antibiofilm potential against uropathogens with cytotoxic effects: An *in vitro* and *in vivo* approach.

[Environmental Science and Pollution Research](#), 1-17. [Springer, The Netherlands] (IF: 2.741).

7. Srinivasan R, Mohankumar R, Kannappan A, Karthick Raja V, Archunan G, Pandian SK, Ruckmani K and **Ravi AV** (2017). Exploring the anti-quorum sensing and antibiofilm efficacy of phytol against *Serratia marcescens* associated acute pyelonephritis infection in Wistar rats. [Frontiers in Cellular and Infection Microbiology](#), 7, 498. (IF: 4.3).
8. Srinivasan R, Durgadevi R, Kannappan A and **Ravi AV** (2017). Inhibition of quorum sensing-dependent biofilm and virulence genes expression in environmental pathogen *Serratia marcescens* by petroselinic acid. [Antonie van Leeuwenhoek](#), 111(4), 501-515. (IF: 1.795)
9. Satish L, Santhakumari S, Gowrishankar S, Pandian SK, **Ravi AV** and 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](#), 24(35), 27254-27268. (IF: 2.741)
10. Santhakumari S, Nilofernisha NM, Ponraj JG, Pandian SK and **Ravi AV** (2017). *In vitro* and *in vivo* exploration of palmitic acid from *Synechococcus elongatus* as an antibiofilm agent on the survival of *Artemia franciscana* against virulent vibrios. [Journal of Invertebrate Pathology](#), 150, 21-31. (IF: 2.379).
11. Kannappan A, Sivaranjani M, Srinivasan R, Rathna J, Pandian SK and **Ravi AV** (2017). Inhibitory efficacy of geraniol on biofilm formation and development of adaptive resistance in *Staphylococcus epidermidis* RP62A. [Journal of Medical Microbiology](#), 66(10), 1506-1515. (IF: 2.159).
12. Kannappan A, Gowrishankar S, Srinivasan R, Pandian SK and **Ravi AV** (2017). Antibiofilm activity of *Vetiveria zizanioides* root extract against methicillin-resistant *Staphylococcus aureus*. [Microbial Pathogenesis](#), 110: 313-324 (IF: 2.009).
13. Srinivasan R, Santhakumari S and **Ravi AV** (2017). *In vitro* antibiofilm efficacy of *Piper betle* against quorum sensing mediated biofilm formation of luminescent *Vibrio harveyi*. [Microbial Pathogenesis](#), 110:232-239 (IF: 2.009).
14. Sivaranjani M, Prakash M, Gowrishankar S, Rathna @ Nandhini J, Pandian SK and **Ravi AV** (2017). *In vitro* activity of α -mangostin in killing and eradicating *Staphylococcus epidermidis* RP62A biofilms. [Applied Microbiology and Biotechnology](#) (Accepted Article) (IF: 3.376).
15. Edward GJG, Godfred PJ and **Ravi AV** (2017). Effect of Extramin on growth enhancement of white leg shrimp *Litopenaeus vannamei* (Boone, 1931) in low saline semi-intensive pond culture system. [International Journal of Fisheries and Aquatic Studies](#), 5(2): 479-486.
16. Srinivasan R, Rama Devi K, Kannappan A, Karutha Pandian S, **Ravi AV** (2016). *Piper betle* and its bioactive metabolite phytol mitigates quorum sensing mediated virulence factors and biofilm of nosocomial pathogen *Serratia marcescens* *in vitro*. [Journal of Ethnopharmacology](#), 193:592-603 (IF: 3.055).

17. Devi KR, Srinivasan R, Kannappan A, Santhakumari S, Bhuvaneshwari M, Rajasekar P, Prabhu NM and **Ravi AV** (2016). *In vitro* and *in vivo* efficacy of rosmarinic acid on quorum sensing mediated biofilm formation and virulence factor production in *Aeromonas hydrophila*. [Biofouling](#), 32(10):1171-1183 (IF: 3.000).
18. Sivaranjani M, Gowrishankar S, Kamaladevi A, Pandian SK, Balamurugan K, **Ravi AV** (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 (IF: 3.445).
19. 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*. [FEMS Pathogens and Disease](#), 74 (4): ftw017 (Impact factor: 2.483).
20. Sivaranjani M, Krishnan SR, Kannappan A, Ramesh M and **Ravi AV** (2016). Curcumin from *Curcuma longa* affects the virulence of *Pectobacterium wasabiae* and *P. caratovororum* subsp. *caratovororum* via quorum sensing regulation. [European Journal of Plant Pathology](#), 146(4): 793–806 (IF: 1.490).
21. Santhakumari S, Kannappan A, Pandian SK, Thajuddin N, Rajendran RB and **Ravi AV** (2015). Inhibitory effect of marine cyanobacterial extract on biofilm formation and virulence factor production of bacterial pathogens causing vibriosis in aquaculture. [Journal of Applied Phycology](#), 28 (1): 313-324 (IF: 2.492),
22. Annapoorani A, Kalpana B, Musthafa KS, Pandian SK, and **Ravi AV** (2013). Antipathogenic potential of *Rhizophora* spp. against the quorum sensing mediated virulence production in drug resistant *Pseudomonas aeruginosa*. [Phytomedicine](#), 20(11):956-63 (IF: 3.268).
23. Musthafa KS, Sahu SK, **Ravi AV** and Kathiresan K (2013). Anti-quorum sensing potential of the mangrove *Rhizophora annamalayana*. [World Journal of Microbiology and Biotechnology](#), 29(10):1851-8 (IF: 1.532).
24. Packiavathy IASV, Sasikumar P, Pandian SK, **Ravi AV** (2013). Prevention of quorum sensing mediated biofilm development and virulence factors production in *Vibrio* spp. by curcumin. [Applied Microbiology and Biotechnology](#), 97(23): 10177-87 (IF: 3.425).
25. Packiavathy IASV, Priya S, Pandian SK, **Ravi AV** (2012). Inhibition of biofilm development of uropathogens by curcumin – An anti-quorum sensing agent from *Curcuma longa*. [Food Chemistry](#), 148: 453-460 (IF: 3.655).
26. Musthafa KS, Sivamaruthi BS, Pandian SK and **Ravi AV** (2012). Quorum sensing inhibition in *Pseudomonas aeruginosa* PAO1 by antagonistic compound phenyl acetic acid. [Current Microbiology](#), 65: 475-480 (IF: 1.51).
27. Annapoorani A, Umamageswaran V, Parameswari R, Pandian SK, **Ravi AV** (2012). Computational discovery of putative quorum sensing inhibitors against LasR and RhlR receptor proteins of *Pseudomonas aeruginosa*. [Journal of Computer - Aided Molecular Design](#), 26: 1067-1077 (IF: 3.386).
28. Annapoorani A, Jabbar AKKA, Musthafa SKS, Pandian SK, **Ravi AV** (2012). Inhibition of quorum sensing mediated virulence factors production in urinary pathogen *Serratia*

- marcescens* PS1 by marine sponges. [Indian Journal of Microbiology](#), 52: 160-166 (IF: 0.938).
29. Annapoorani A, Parameswari R, Pandian SK and **Ravi AV** (2012). Methods to determine antipathogenic potential of phenolic and flavonoid compounds against urinary pathogen *Serratia marcescens*. [Journal of Microbiological Methods](#), 91: 208-211 (IF: 2.018).
 30. Musthafa KS, Balamurugan K, Pandian SK and **Ravi AV** (2012). 2, 5 – piperazinedione inhibits quorum sensing dependent factors production in *Pseudomonas aeruginosa* PAO1. [Journal of Basic Microbiology](#), 52:1–8 (IF:1.395).
 31. Packiavathy ISV, Agilandeswari P, Musthafa KS, Pandian SK and **Ravi AV** (2012). Antibiofilm and quorum sensing inhibitory potential of *Cuminum cyminum* and its secondary metabolite methyl eugenol against Gram negative bacterial pathogens. [Food Research International](#), 45: 85–92 (IF: 3.150).
 32. Musthafa KS, Pandian SK and **Ravi AV** (2012). Inhibition of quorum sensing dependent phenotypic expressions in *Serratia marcescens* by marine sediment *Bacillus* spp. SS4. [Annals of Microbiology](#), 62:443–447 (IF: 0.358)
 33. Packiavathy ISV, Agilandeswari P, Rajendran RB, Pandian SK and **Ravi AV** (2011). Anti-quorum sensing and antibiofilm potential of *Capparis spinosa*. [Archives of Medical Research](#), 42: 658–668 (IF:1.733).
 34. Musthafa KS, Saroja V, Pandian SK and **Ravi AV** (2011). Antipathogenic potential of marine *Bacillus* sp. SS4 on N-acyl homoserine lactone mediated virulence factors production in *Pseudomonas aeruginosa* (PAO1). [Journal of Biosciences](#), 36: 55 – 67 (IF: 1.956)
 35. Nithyanand P, Indhumathi T, **Ravi AV** and Pandian SK (2011). Culture independent characterization of bacteria associated with the mucus of the coral *Acropora digitifera* from the Gulf of Mannar. [World Journal of Microbiology and Biotechnology](#), 27:1399-1406 (IF: 1.082).
 36. Musthafa KS, **Ravi AV**, Annapoorani A, Packiavathy ISV and Pandian SK (2010). Evaluation of anti-quorum sensing activity of edible plants and fruits through inhibition of the N-acyl homoserine lactone system in *Chromobacterium violaceum* and *Pseudomonas aeruginosa*. [Chemotherapy](#), 56: 333-339 (IF: 1.554)
 37. Kadirvel K, Ramya S, Sudha TPS, **Ravi AV**, Rajasekaran C, Selvi RV and Jayakumararaj R (2010). Ethnomedicinal survey on plants used by tribals in Chitteri Hills. [Environment and We - An International Journal of Science and Technology](#), 5:35-46.
 38. Sivaperumal R, Ramya S, **Ravi AV**, Rajasekaran C and Jayakumararaj R. Ethnopharmacological studies on the medicinal plants used by tribal inhabitants of Kottur Hills, Dharmapuri, Tamilnadu, India. [Environment and We - An International Journal of Science and Technology](#), 5:57-64.
 39. Musthafa KS, **Ravi AV**, Annapoorani Jayakumararaj R, Pandian SK (2009). Cross species signal transfer mediated induction of antibiotic production in Actinomycetes against *Staphylococcus aureus*. [Journal of Pharmacy Research](#), 3: 397-400.

40. Sivaperumal R, Ramya S, **Ravi AV**, Rajasekaan C and Jayakumararaj R (2009). Herbal Remedies practiced by Malayali's to treat skin diseases, [Environment and We - An International Journal of Science and Technology](#), 4: 65 – 74.
41. **Ravi AV**, Musthafa KS, Jegathammbal G, Kathiresan K and Pandian SK (2007). Screening and evaluation of probiotics as a biocontrol agent against pathogenic Vibrios in marine aquaculture, [Letters in Applied Microbiology](#), 45: 219-223 (Impact factor: 1.64).
42. Kannupandi T, **Ravi AV** and Soundrapandian P (2006). Biochemical changes in relation to larval development of the Portunid crab *Charybdis lucifera* (Fabricius). [Indian Journal of Fisheries](#), 53: 225-230.
43. Babu TG, Nithyanand P, Kannapiran E, **Ravi AV** and Pandian SK (2004). Molecular identification of bacteria associated with the coral reef ecosystem of Gulf of Mannar Marine Biosphere Reserve using 16S rRNA sequences. [Proceedings of MBR on New Frontiers in Marine Bioscience Research](#), pp 47-53.
44. Kannupandi T, **Ravi AV** and Soundrapandian P (2003). Efficacy of enriched diets on the larval development and survival of an edible crab *Charybdis lucifera* (Fabricius). [Indian Journal of Fisheries](#), 50: 21-23.
45. Godfred J, **Ravi AV** and Kannupandi T (1997). Larval feed preference of the estuarine edible Portunid crab *Thalamita crenata*. [Indian Journal of Fisheries](#), 44: 69-74.
46. Godfred J, **Ravi AV** and Kannupandi T (1995). Seed production of the edible estuarine Portunid crab *Thalamita crenata*. [Indian Journal of Aquaculture Tropics](#), 10: 213-219.
47. **Ravi AV** and Kathiresan K (1990). Seasonal Variation in gallotannins. [Indian Journal of Marine Science](#), 19: 224-225.
48. Kathiresan K and **Ravi AV** (1990). Seasonal changes in the content of mangrove leaves. [The Indian Forester](#), 116: 390-392.

Book Chapters.

1. Devi KR, Bhuvaneshwari M, Pandian SK and **Ravi AV** (2017). *In vitro* efficiency of Flavonoids on inhibiting hemolysin production in *Aeromonas hydrophila*. [Revamping Microbial Biotechnology](#), ISBN: 978-93-81402-35-1.
2. Srinivasan R, Abirami G, Karthikayan P and **Ravi AV** (2017). Quorum quenching enzyme produced by marine bacterial isolate mitigates the quorum sensing controlled virulence factors production in *Serratia marcescens*. [Life Science: Research, Practices and Application for Sustainable Development](#). Macmillan Publishers India Pvt. Ltd, 649-660 (International ISBN: 9789387000070).
3. **Ravi AV**, Santhakumari S and Ponraj JG (2017). Quorum sensing inhibitors from natural resources as an alternate to antibiotics in aquaculture. [Impact of ecological changes on public health: A sustainable approach through green technologies](#). Springer Publishers (Accepted for publication).

Patents

S.No	Title	Inventors	Patent Number	Filing Date	Current Status
1.	Phytochemical formulations against early mortality syndrome (EMS)	Ravi AV , Santhakumari S, Durgadevi R and Pandian SK	Application No. 201741009817	21.03.2017	Filed
2	Phytochemical formulations against early mortality syndrome (EMS)	Ravi AV , Santhakumari S, Durgadevi R and Pandian SK	Application No. 201741009824	21.03.2017	Filed