

Dr. S. GOWRISHANKAR, M.Sc., Ph.D., (SET)

## 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 223327 Contact Phone (Mobile) : +91 9994933559

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

gowrishankars@alagappauniversity.ac.in

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	First class with Distinction	Dept. of Biotechnology, Alagappa University, Karaikudi
Ph.D.	December 2016	Biotechnology	Highly Commended	Dept. of Biotechnology, Alagappa University

## TEACHING EXPERIENCE: 10 YEARS

Position	Institution	Duration
Assistant Professor (Academic Level 10)	Department of Biotechnology	Jan 30, 2016 to Jan 30, 2020
Assistant Professor (Academic Level 11)	<b>Alagappa University</b> , Karaikudi 630 003.	Jan 31, 2020 to Till Date

### **RESEARCH EXPERIENCE: 15 YEARS**

Position	Institution	Duration
Junior Research Fellow in Department of Biotechnology (DBT), Govt. of India, Sponsored project "Bioprospecting marine microbial wealth through metagenomics" (Project reference: BT/PR/99114/NDB/52/134/2009)	Department of Biotechnology <b>Alagappa</b>	Oct, 2010 to May, 2011
UGC- Rajiv Gandhi National - Junior Research Fellow	University, Karaikudi 630 003.	June, 2011 to May, 2013
UGC- Rajiv Gandhi National - Senior Research Fellow		June, 2013 to Jan, 2016

## ADDITIONAL ACADEMIC & ADMINISTRATIVE RESPONSIBILITIES

S.	Position	University Pedies	Peri	od
No	rosition	University Bodies	From	To
1	Coordinator	Department level IQAC and NIRF Coordinator	Since 2018	Till Date
2	Coordinator	Department level Village Extension Programme (VEP) Coordinator	Since 2016	Till Date
3	Coordinator	Department level SWACHH BHARAT Coordinator	Since 2018	2023
4	Coordinator	Department level Placement Coordinator	Since Jan 2017	Till Date
5	Deputy Warden	Post Graduate Men's Hostel	22.02.2021	01.06.2023
6	Deputy Warden	International Students' Hostel	26.09.2023	01.06.2023
7	Faculty level Coordinator	Entrepreneurship Innovation & Career (EIC) Hub for the Faculty of Science	August, 2021	Till Date
8	Department level Coordinator	Cultural Club	Since 2016	Till Date
9	Department level Coordinator	Department level Non-Major Elective (NME) Course, MOOCs, SWAYAM & NAD Coordinator	Since Dec, 2019	Till Date

#### AREAS OF RESEARCH

- Molecular Epidemiology: Molecular characterization of multidrug resistant clinical pathogens, especially MRSA.
- Antivirulence Therapy "Pathoblockers": An alternative approach to combat AMR.
- Molecular insights into the mode of action of antivirulence agents through OMICS approach.
- Phage Therapy: Therapeutic characterization of phages and lysins against human and aquaculture pathogens.
- Antifungal Drugs: success through synergistic combination with antivirulence agents.

### RESEARCH SUPERVISION / GUIDANCE

Progran	ı of Study	Completed	Ongoing
Research	Ph.D.	02	04
Project	PG	31	05
Summer Interns	(M.Sc., / B.Tech., /B.Sc.)	08	

#### **PUBLICATIONS**

International		Na	Others	
Journals	Journals Conferences		Conferences	<b>Book Chapters</b>
54	31		12	08

#### **RESEARCH ACHIEVEMENTS**

• No. of Research Publications : 55

• Cumulative and Average Impact Factor :244.11 (Avg. IF: 4.44)

h-index (As per Google Scholar Citation Index)
i-10 index
:29
:40

• Total Citations ((*As per Google Scholar Citation Index*):**2046** (*As on 03.11.2025*)

• Scopus Author ID :55372051100

• Orcid ID :0000-0001-5728-6837

No. of Conferences Attended
No. of Seminars and Workshops Attended
:15

### **PATENTS**

S. No	Title	Inventors	Patent Number	Filing Date	Current Status
1	Anti-biofilm	Jothi R,	Application	17.06.2021	Granted on
	composition and	Gowrishankar S,	No.:		27.03.2025
	method of preparation	Prasath KG,	202141026689		Patent No.
	thereof	Pandian SK	Published		564095
			16.12.2022		

2	Anti-bacterial	Sangavi, R,	Application	01.03.2022	Published
	composition, process for	Jothi R,	No.:		01.09.2023
	preparing and	Gowrishankar S,	202241011110		
	implementation thereof	Pandian SK			

## Ph.D. SCHOLAR DETAILS

S. No	Name	Date of Registration	Ph.D. Title	Date of Viva Voce
1	C. Karthika	05.12.2018	Therapeutic efficacy evaluation of environmental phages against certain Gram-negative bacterial pathogens	02.05.2025
2	Dr. R. Jothi	27.09.2019	Therapeutic Alternatives and their Sub-Clinical Evaluation through Topical Formulations for Treatment of Bacterial and Fungal Vulvovaginitis	11.01.2024
3	R. Sangavi	02.02.2021	Exploration of natural anticariogenic agents, in synergism with antimicrobials, and their incorporation in dental restorative material(s) for effective control of dental caries	Pursuing
4	N. Malligarjunan	07.12.2021	Molecular characterization of bacteriophage(s)-derived lysins, and their <i>in vitro</i> and <i>in vivo</i> anti-infective efficacy evaluation against Grampositive and Gram-negative pathogens	Pursuing
5	R. Kanimozhi	01.10.2023	Prophylactic and therapeutic role of Probiotics in understanding the pathophysiology and immune response of Galleria mellonella to enteric bacterial pathogen(s)	Pursuing
6	B. Sriram	01.08.2025	Phage therapy and lysin as precision antibacterials against multidrugresistant Gram-positive and Gramnegative pathogens	Pursuing

## FUNDED RESEARCH PROJECTS

## **Completed Projects**

		Per	iod		Budget (Rs. In
S. No	Agency	From	То	Project Title	lakhs)
1	University Grants Commission (UGC), New Delhi	22/01 2018	21/01/2020	"Deciphering the antivirulence mechanism of marine cyclic dipeptide cyclo(l-leucyl-l-prolyl) against <i>Listeria monocytogenes</i> through proteomic approach"	<b>8,00,000</b> [As the only PI]
2	AURF Start-Up Grant (AURF)	2018	2019	Efficacy evaluation of phytochemical(s) from <i>Achyranthes aspera</i> L. (amaranthaceae) against various virulence traits of certain human pathogens	<b>1,00,000</b> [As the only PI]
3	Department of Science & Technology (DST), SERB, New Delhi	22/12 /2020	21/12 /2023	Refocusing Nature's destroyer of bacteria -Phages and their lysins as promising therapy against infections associated with ESKAPE pathogens	<b>32,60,000</b> [As the only PI]
4	Indian Council of Medical Research (ICMR), New Delhi	01/11/2021	31/10 /2024	Identification of potential drug target(s) in <i>Streptococcus mutans</i> : an essential step for developing improved dental care products	<b>21,09,040</b> [As the only PI]

# **Ongoing Projects**

S. No.	Agency	Agency Period		Project Title	Budget (in
110.	8 7	From	To	- <b>,</b>	Rs.)
1	Chief Minister's Research Grant (CMRG) 2023-24 Student Project scheme	16/12 /2024	15/12 /2027	Anticariogenic Mouthwash for Improved Oral Hygiene: A promising alternative to antimicrobials-based mouthrinse	15,64,500 [As Co-PI & my Ph.D., Scholar being PI]
2	Anusanthan National Research Foundation (ANRF) [erstwhile DST SERB]	21/05 /2025	20/05 /2028	Development of engineered endolysin-loaded liposomal aerosol with enhanced antipathogenic and immunomodulatory potency for effective treatment of diabetic foot ulcer	<b>53,11,440</b> [As the only PI]
3	Ministry of Earth Science (MoES), Deep Ocean Mission (DOM) Project	2025	2027	Biodiversity assessment of intertidal hard substratum communities	40,40,000 [Co-PI – Multi- Institutional Network project]

## ACHIEVEMENTS / AWARDS

S. No.	Name of Award	Awarding Agency	Field/Category for which the award was given	Year of Award
18	Academic and Research Excellence Award - 2025	Alagappa University	Outstanding Academic and Research Excellence during 2024-2025	08 <sup>th</sup> Sept 2025
17	INTERNATIONAL TRAVEL AWARD	Anusanthan National Research Foundation (ANRF) SERB ITS	To participate and present my research work in the American Society for Microbiology (ASM)- MICROBE-2024 Int. Conf. held during June 13th -17th, 2024 at Atlanta, USA.	May, 2024
16	Academic and Research Excellence Award - 2024	Alagappa University	Outstanding Academic and Research Excellence during 2023-2024	05 <sup>th</sup> Sept 2024
15	BEST ORAL PRESENTATION AWARD	Centre of Excellence in Life Sciences, PSGR Krishnammal College for Women, Coimbatore	International Conclave on "Antimicrobial Resistance"	March 04 <sup>th</sup> & 5 <sup>th</sup> , 2024.
14	BEST ORAL PRESENTATION AWARD (secured First Position)	Department of Microbiology, Bharathidasan University, Trichy	International Conference of Algae: FOOD, FEED, FUELS & FINE CHEMICALS - ICA-F <sup>4</sup> 23	September 06 <sup>th</sup> to 8 <sup>th</sup> , 2023
13	Appreciation Award	Alagappa University	Outstanding Academic and Research Excellence in acquiring the Patent & Projects during the Academic Years through 2020-21 to 2022-23	Sept 5 <sup>th</sup> , 2023
12	Promising Researcher Award	Alagappa University	In recognition of the contribution made towards 'EXCELLENCE IN RESEARCH'	Sept 5th, 2022
11	Vallal Alagappa Research Recognition Award	Alagappa University	In recognition of contribution towards the enhancement of Research Outcome of the University in the form of 'h' index.	2020
10	Dr. APJ Abdul Kalam Award	MARINA LABS, Reserach & Development, Chennai.	Young Scientist Award	24 <sup>th</sup> Nov, 2019

9	Outstanding Researcher Award - 2019	Saveetha Dental College & Hospitals, SIMATS, Chennai	At the International Conference "Horizon 2019"-The Epitome of Biomedical Research	28 <sup>th</sup> February to 1 <sup>st</sup> March 2019.
8	Start-up Grant	UGC, New Delhi	( <i>Rs. 10 lakhs</i> ) for the newly joined Faculties of Basic Sciences	2017
7	International Travel Awards	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).	2015
6	First prize for oral presentation	Department of Animal Biotechnology, Madras Veterinary College, Chennai, India	In the National Conference on "Bioactive Peptides- Application in Veterinary, Medical and Food Sciences"	December 18 <sup>th</sup> - 19 <sup>th</sup> , 2014
5	Best poster and cash award	Department of Biotechnology, Alagappa University, Karaikudi,	In the "National Seminar on Role of Microbes in Health, Agriculture and Industry"	26 <sup>th</sup> - 27 <sup>th</sup> - March 2012
4	Poster presentation Awrd	Sastra University, Thanjavur, India	Second prize for poster presentation in the International Conference on "Regulatory Network Architecture in Bacteria"	March 9 <sup>th</sup> - 11 <sup>th</sup> , 2012
3	Rajiv Gandhi National Fellowship	UGC, New Delhi	For pursuing PhD Program (JRF: 2yrs & SRF: 3yrs)	2011-2016
2	Awarded <b>Studentship</b> (Rs. 5000 per month for one year)	Department of Biotechnology (DBT), Government of India	For pursuing Post M.Sc., Advanced Diploma in Molecular Diagnostics Programme	July 2009 to June 2010
1	State Eligibility Test (SET)	Bharathiar University, Government of Tamil Nadu.	Lectureship (SET) in Life sciences	2008

#### **EXTERNAL MEMBER IN BoS**

- **Srimad Andavan Arts and Science College**, Tiruchirappalli (UG, PG Biotechnology) (since 2021 to till date)
- JJ College of Arts and Science, Pudukkottai (UG, PG Biotechnology) (since 2021)
- Thassim Beevi Abdul Kader College for Women (UG, PG Microbiology & UG Biotechnology) (Autonomous), Kilakarai (since 2023) (University Nominee)

- Holy Cross College (UG, PG Biotechnology) (Autonomous), Tiruchirappalli (since 2023).
- Department of Microbiology, Bharathidasan University, Trichy (PG Microbiology) (since 2022)
- Bharathidasan University, Trichy (UG & PG Biotechnology) (since 2024) (University Nominee)

#### OVERSEAS EXPOSURE/VISITS

Visited Copenhagen, Denmark to participate and present my research work as poster in the 25<sup>th</sup> European Congress of Clinical Microbiology and Infectious Diseases (ECCMID 2015) during 25<sup>th</sup> -28<sup>th</sup> April 2015.

Visited Atlanta, USA to participate and present my research work as poster in the *American Society for Microbiology (ASM) MICROBE-2024* International Conference during 13th -17th June 2024.

#### MEMBERSHIP IN PROFESSIONAL BODIES

1. Life Member : Microbiologists Society, India (MBSI) (MS/LM/476)

2. Life Member : Proteomic Society, India (PSI) (Reg. No. 458)

3. Life Member : Biotech Research Society of India (BRSI) (LM:1672)

4. Global Outreach - Contributing Membership: American Society for Microbiology (ASM)

#### RESOURCE PERSON IN VARIES CAPACITIES

- Served as a Member of Organizing Committee and a Resource Person for the Three Days Skill Training Workshop on "Recent Techniques in Biotechnology - 2025" organised by the Department of Biotechnology, Alagappa University, Karaikudi on 29.10.2025.
- 2. Delivered a Special Lecture on the title "Metagenomics: "Exploring the unseen microbial world" in the Seminar on 'Recent Innovations in Metagenomics' organised by the Department of Microbiology under DBT Star College Scheme at Thassim Beevi Abdul Kader College for Women- Autonomous, Kilakarai, Ramanathapuram on 28.10.2025.
- 3. Chaired a Session in the Three Days (23<sup>rd</sup> 25<sup>th</sup> Oct 2025) Workshop on "Recent Trend in Sustainable Methods of Food Preservation" organised by the Department of Nutrition and Dietetics, Alagappa University, Karaikudi, Tamil Nadu on 25<sup>th</sup> October, 2025.
- 4. Chaired a Session in the Two Days (29th 30th Sept 2025) International Conference on "FutureBio 2025: Smart Technologies and Sustainable Strategies in Biosciences" (FSTSSB 2025)" organised by the Department of Animal Health and Managment, Alagappa University, Karaikudi, Tamil Nadu.
- 5. Delivered a Technical Lecture on the title "Redefining Antimicrobial Therapy: "Biotechnological Advances in Alternatives to Conventional Antibiotics" in 'International Conference on Recent Innovation in Molecular Biotechnology' organised by K.M.G. College of Arts and Science (Autonomous), Gudiyattam, Vellore on 24.09.2025.
- 6. Delivered a Lecture on the title "The Nobel Prize in Physiology or Medicine 2024: "Discovery of microRNA and its role in post-transcriptional gene regulation" in 'The Nobel Day Celebration 2024' Lecture series organised by CSIR-Central Electrochemical Research Institute, Karaikudi on 10.03.2025.

- 7. Served as a Resource Person for the Seminar on "Beyond Antibiotics- Advancing Novel Strategies to Combat AMR" organised by the Department of Microbiology under DBT Star College Scheme at Thassim Beevi Abdul Kader College for Women- Autonomous, Kilakarai, Ramanathapuram on 07.02.2025.
- 8. Delivered a Special Lecture on the title "Advancing Strategies to Envision 'Alternative to Antibiotics'" in the Two-Day National Conference on 'Advanced Bio-Chem Development' (ABCD-2024) organised by the Department of Biochemistry and Department of Biotechnology, Sri Sarada Niketan College for Women, Amaravathipudur, Karaikudi on 01.02.2024.
- 9. Chaired a Session in a "National Symposium on Promoting Nutritional Diets through Millets" organised by the Department of Nutrition and Dietetics, Alagappa University, Karaikudi, Tamil Nadu on 12th April, 2024.
- 10. Delivered a Special Lecture on the title "Advancing Strategies to Envision 'Alternative to Antibiotics'" in the Two-Day National Conference on 'Advanced Bio-Chem Development' (ABCD-2024) organised by the Department of Biochemistry and Department of Biotechnology, Sri Sarada Niketan College for Women, Amaravathipudur, Karaikudi on 01.02.2024.
- 11. **Chaired a Session** in an International Conference of Algae: FOOD, FEED, FUELS & FINE CHEMICALS ICA-F<sup>4</sup> 23 organised by the Department of Microbiology, Bharathidasan University, Trichy during September 06<sup>th</sup> to 8<sup>th</sup>, 2023.
- 12. Delivered Inaugural Address and Technical Lecture in the "International Symposium on Innovations in Life Sciences" organized by School of Life Sciences, PG & Research Department of Zoology, Holy Cross College (Autonomous), Trichy on 31st January 2023.
- 13. Delivered a Special Lecture on the title "**The Future of Biotechnologist**" in the Induction Programme for UG and PG students of Biotechnology organized by Wilmut Club of PG and Research Department of Biotechnology, J.J. College of Arts and Science, Pudukottai on 25.11.2021.
- 14. Participated as Resource Person and Delivered a talk on "Intellectual Property Rights with Special Reference to Indian Patents" in the One Day Webinar on 'Intellectual Property Rights' organized by the Internal Quality Assurance Cell (IQAC), Nirmalagiri College, Kuthuparamba, on 20th of October 2021.
- 15. Lead an online session as *Lead Moderator* on the title "**How to write an abstract and improve your article**" in a Faculty Development Program- "Gearing up for Research & Research Writing" organized by Department of Biotechnology, School of Bio and Chemical Engineering, Kalasalingam Academy of Research and Education, Krishnankoil on 23<sup>rd</sup> May, 2020.
- 16. Invited lecture delivered on the title "Post Translational Modification and Folding of Newly Assembled Polypeptides" (online session) on 06<sup>th</sup> May, 2020 organized by Department of Biotechnology, AJK College of Arts and Science, Coimbatore 641 105.
- 17. Invited lecture delivered on the title "Half a decade journey that links blue, red and white Biotechnology" at Srimad Andavan Arts and Science College, Tiruchirappali on 21st Feb, 2020.

#### **EVENTS PARTICIPATED**

#### Conferences / Seminars / Workshops: 29/01/11

#### **OTHERS**

#### • Reviewer for SCI journals such as;

Biotechnology Advances, Drug Discovery Today, Journal of Nanobiotechnology, Pharmaceutical Biology, BMC Microbiology, Scientific Reports, Current Medical Science, Journal of Cellular and Molecular Medicine, Future Microbiology, PLoS ONE, Heliyon, Current Pharmaceutical Design, Microbial Drug Resistance, Probiotics and Antimicrobial Proteins, Current Microbiology, Journal of Medical Microbiology, Microbial Pathogenesis, Frontiers in Microbiology, Frontiers in Pharmacology, Frontiers in Medicine, International Journal of Biological Macromolecules, Journal of Environmental Science and Health, Part A, Pharmacological Research, Frontiers in Pharmacology, Biocatalysis and Agricultural Biotechnology, South African Journal of Botany & Gene Reports.

#### • Sequences submitted in Public Databank

GenBank : 56
 Multilocus sequence typing (MLST) : 33
 Whole Genome of Novel Phages : 02

### **PUBLICATIONS IN SCI JOURNALS**

S. No.	Authors, Title and Journal details	Impa ct Facto r
55.	Kanimozhi, R., Sangavi, R., Malligarjunan, N., and Gowrishankar, S. 2025. Screening, isolation, identification and evaluation of bacteria with probiotic potential from traditional Palmyra palm nectar. <i>Frontiers in Cellular and Infection</i> <a href="https://www.frontiersin.org/articles/10.3389/fcimb.2025.1685639">https://www.frontiersin.org/articles/10.3389/fcimb.2025.1685639</a>	4.8
54.	Jothi, R., Malligarjunan, N., Vidhya, K., Sangavi, R., Kamaladevi., A, Raja, V., Kannan, RRK., Pandian, S.K. and Gowrishankar, S*., (2025) Lupeol mitigates biofilm formation and attenuates virulence dimorphism in <i>Candida albicans Microbial Pathogenesis</i> <a href="https://doi.org/10.1016/j.micpath.2025.107989">https://doi.org/10.1016/j.micpath.2025.107989</a>	3.5
53.	Sangavi, R., Malligarjunan, N., Pandian, S.K. and Gowrishankar, S*.,. (2025) Marine-Derived Cyclo(l-Leucyl-l-Prolyl) Targets d-Alanylation of Lipoteichoic Acid to Combat <i>Streptococcus mutans</i> UA159 Mediated Dental Cariogenesis. <i>Molecular Oral Microbiology</i> , e70000. DOI: https://doi.org/10.1111/omi.70000	2.8
52.	Karthika, C., Malligarjunan, N., Hari, N. P., Pandian, S.K. and Gowrishankar, S*., Phage (cocktail)-antibiotic synergism: A new frontier in addressing <i>Klebsiella pneumoniae</i> resistance. (2025) <i>Frontiers in Microbiology</i> DOI: <a href="https://doi.org/10.3389/fmicb.2025.1588472">https://doi.org/10.3389/fmicb.2025.1588472</a>	4.0
51.	Kousi, F., Maheshwaran, G., Suganya, S., Sambasivam, S., Mohamed, A., Ranjithkumar, R., Gowrishankar, S., Sudhahar, S. 2025 Graphitic carbon nitride quantum dot embedded with MoO3-GO nanosheets as electrode material for enhanced supercapacitor	9.8

	performance. Journal of Energy Storage Volume 113, 30 March 2025, 115743	
50.	Karthika, C., Malligarjunan, N., Pandian, S.K. and Gowrishankar, S*., Chitosan-encapsulated bacteriophage cocktail as promising oral delivery system to surpass gastrointestinal infection caused by <i>Klebsiella aerogenes</i> . <i>International Journal of Biological Macromolecules</i> DOI: <a href="https://doi.org/10.1016/j.ijbiomac.2024.139236">https://doi.org/10.1016/j.ijbiomac.2024.139236</a> (2024)	8.5
49.	Sangavi, R., Jothi, R., Malligarjunan, N., Raja, V. and Pandian, S.K. and Gowrishankar, S*. Cetyltrimethylammonium chloride (CTAC) and its formulated mouthwash reduce the infectivity of <i>Streptococcus mutans</i> and <i>Candida albicans</i> in mono and dual state. <i>Applied Biochemistry and Biotechnology</i>	3.1
	[Accepted](2024)	
48.	Sangavi, R., Malligarjunan, N., Satish, L., Raja, V., Pandian, S.K. and Gowrishankar, S*., Anticariogenic activity of marine brown algae <i>Padina boergesenii</i> and its active components towards <i>Streptococcus mutans</i> . <i>Frontiers in Cellular and Infection Microbiology</i> DOI: <a href="https://doi.org/10.3389/fcimb.2024.1458825">https://doi.org/10.3389/fcimb.2024.1458825</a> Front. Cell. Infect. Microbiol., 25 November 2024	4.8
47.	Dhatchanyani, M., Aarti, D., Akila, C., Abhishek, S. S., Neetika, S., Satish, L., Gowrishankar, S., Tulika, S., Shailendra, K. S., & Anand, M.S., 2024. A facile approach for growing Ag nano-dendrites employing towards <i>E. Coli.</i> cells monitoring using SERS: a proof-of-concept study. <i>Nano Express</i> [IOP Publishing Ltd] (Accepted)	2.7
46.	Thasnim P. M., Abinaya S. T., Jothi, R., Gowrishankar, S, Marappan V., Suman P., and Sankaralingam M *., 2024. Investigation of the inherent characteristics of copper(II) Schiff base complexes as antimicrobial agents. <i>New Journal of Chemistry</i> [Royal Society of Chemistry, England] (Accepted)	3.3
45.	Jothi, R., and Gowrishankar, S*., 2024. Synergistic anti-virulence efficacy of citral and carvacrol against mixed vaginitis causing <i>Candida albicans</i> and <i>Gardnerella vaginalis</i> : An <i>in vitro</i> and <i>in vivo</i> study. <i>The Journal of Antibiotics</i> [Nature Publishing Group, UK] (Accepted).	3.3
44.	Jothi, R., Kamaladevi, A., Malligarjunan, N., Muthuramalingam, P., Pandian, S.K. and Gowrishankar, S*., 2024. Untargeted metabolomics uncovers prime pathways linked to antibacterial action of citral against bacterial vaginosis-causing <i>Gardnerella vaginalis</i> : an <i>in vitro</i> and <i>in vivo</i> study. <i>Heliyon</i> [Cambridge, MA 02139, USA: Cell Press] <a href="https://doi.org/10.1016/j.heliyon.2024.e27983">https://doi.org/10.1016/j.heliyon.2024.e27983</a> (Accepted).	4.0
43.	Jothi, R., Hong, ST., Enkhtsatsral, M., Pandian, S.K. and Gowrishankar, S*., 2023. ROS mediated anticandidal efficacy of 3-Bromopyruvate prevents vulvovaginal candidiasis in mice model. <i>PLoS ONE</i> 2023 Dec 28;18(12):e0295922. [San Francisco, CA: Public Library of Science]	3.752
	https://doi.org/10.1371/journal.pone.0295922	
42.	Sangavi, R., Muthumanickam, S., Malligarjunan, N., Jothi, R., Boomi, P., Arivudainambi S., Raman, M., Joshi, CG., Pandian, S.K. and Gowrishankar, S*., 2023. <i>In silico</i> analysis unravels the promising anticariogenic efficacy of fatty acids against dental caries causing <i>Streptococcus mutans</i> . <i>Journal of Biomolecular Structure &amp; Dynamics</i> [Taylor & Francis] <a href="https://doi.org/10.1080/07391102.2023.2283155">https://doi.org/10.1080/07391102.2023.2283155</a>	5.2
41.	Karthika, C., Malligarjunan, N., Jothi, R., Kasthuri, T., Ravi, AV., Pandian, S.K. and Gowrishankar, S*., 2023. Two novel phages PSPa and APPa inhibit planktonic, sessile and persister populations of <i>Pseudomonas aeruginosa</i> , and mitigate its virulence in Zebrafish model. <i>Scientific Reports</i> [Springer Nature]. <a href="https://doi.org/10.1038/s41598-">https://doi.org/10.1038/s41598-</a>	4.996
	<u>023-45313-x</u>	

40.	Athulya, D., Sangavi, R., Gowrishankar, S., Kumar, R., Sankaralingam, M., 2023. Deciphering the Mechanism of MRSA Targeting Copper(II) Complexes of <i>NN</i> Pincer Type Ligands. <i>Inorganic Chemistry</i> . <a href="https://doi.org/10.1021/acs.inorgchem.3c02480">https://doi.org/10.1021/acs.inorgchem.3c02480</a>	4.6
39.	Kannappan, A.,# Jothi, R#., Tian, X., Pandian, SK., <i>Gowrishankar</i> , S.,* Chunle, S.,* 2023. Antibacterial activity of 2-hydroxy-4-methoxybenzaldehyde and its possible mechanism against Staphylococcus aureus. <i>Journal of Applied Microbiology</i> . <a href="https://doi.org/10.1093/jambio/lxad144">https://doi.org/10.1093/jambio/lxad144</a> .	4.0
38.	Jothi, R., Sangavi, R., Raja, V., Kumar, P., Pandian, S.K. and Gowrishankar, S*., 2023. Alteration of Cell Membrane Permeability by Cetyltrimethylammonium Chloride Induces Cell Death in Clinically Important <i>Candida</i> Species. <i>International Journal of Environmental Research and Public Health</i> . 20(1), p.27. DOI: <a href="https://doi.org/10.3390/ijerph20010027">https://doi.org/10.3390/ijerph20010027</a> .	4.6
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#### ABSTRACTS PUBLISHED IN CONFERENCES

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#### **BOOK CHAPTERS**

- 1. Malligarjunan, N.,Ψ, Sangavi, R Ψ., and Gowrishankar, S\*. (2023) Antibiofilm activity of Postbiotics. In: Dharumadurai D. (eds) "Protocol Book on POSTBIOTIC". Springer Nature Publications.
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- 2. **Gowrishankar**, **S\***., Kamaladevi, A., Pandian, S.K. (2022) MALDI-TOF Analysis of Actinobacterial Peptides with Respect to MASCOT Database. In: Dharumadurai D. (eds) *Methods in Actinobacteriology*. Springer Protocols Handbooks. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-1728-1\_36.
- 3. Jothi, R., Karthika, C., Kamaladevi, A., Satish, L., Pandian, S.K., 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.
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- Gowrishankar, S\*., Kamaladevi, A., & Pandian, S.K., 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.
- 6. **Gowrishankar**, **S\*.**, Kamaladevi, A., & Pandian, S.K., 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]. Chapter 33.

- 7. Kamaladevi, A., **Gowrishankar**, **S.**, & Balamurugan, K., 2017. *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.
- 8. **Gowrishankar, S.**, & Pandian, S.K., 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].
  - \* Corresponding author

#### PAPERS & POSTERS PRESENTED IN NATIONAL & INTERNATIONAL CONF.

- 1. Presented a poster entitled "Chitosan encapsulated bacteriophage cocktail: a promising strategy for managing gastrointestinal infections caused by *Klebsiella aerogenes*" at the **American Society for Microbiology (ASM)-MICROBE-2024**, an International Conference held during June 13th -17th, 2024 at Georgia World Congress Centre (GWCC) Atlanta, USA.
- 2. Presented and won **Best Oral Presentation Award** for the paper entitled "Unravelling the anticariogenic mechanism of cyclo(L-leucyl-L-prolyl) in dental caries causing *Streptococcus mutans* through proteomic approach" in the **International Conclave on** "**Antimicrobial Resistance**" organised by the Centre of Excellence in Life Sciences, PSGR Krishnammal College for Women (Autonomous), Affiliated to Bharathiar University, Coimbatore between March 04<sup>th</sup> & 5<sup>th</sup>, 2024.
- 3. Presented a paper entitled "Harnessing chitosan-encapsulated phage cocktail: an alternative approach to combat *Klebsiella aerogenes* mediated gastrointestinal infections" in the 5<sup>th</sup> International Conference on "**Recent Trends in Microbiology 2024**" organized by the Department of Microbiology, Alagappa University, Karaikudi between 26<sup>th</sup> & 27<sup>th</sup> February 2024.
- 4. Presented and won Best Oral Presentation Award for the paper entitled "Exploring Brown Seaweeds as Promising Anticariogenic Agent in Attenuating Virulence of Oral Pathogen -Streptococcus mutans" at the International Conference on "Algae: FOOD, FEED, FUELS & FINE CHEMICALS ICAF<sup>4</sup> 23" organized by the Department of Microbiology, Bharathidasan University, Tamil Nadu during September 06th & 08th, 2023.
- 5. Participated and own **Outstanding Researcher Award -2019** at the International Conference "**Horizon 2019**" *The Epitome of Biomedical Research*, held during 28<sup>th</sup> February to 1<sup>st</sup> March 2019 organized by Saveetha Dental College & Hospitals, SIMATS, Chennai.
- 6. Presented a poster on "A marine cyclic dipeptide -cyclo(L-leucyl-L-prolyl) quenches the quorum sensing controlled virulence traits in uropathogen -Serratia marcescens" at the 2<sup>nd</sup> International conference on "Contemporary Antimicrobial Research" organized by Department of Biotechnology, Indian Institute of Technology Kharagpur, Kolkata on 15<sup>th</sup> to 17<sup>th</sup>, December 2018.
- 7. Presented a poster on "Understanding the proteome changes in *Listeria monocytogenes* upon treatment with marine cyclic dipeptide-cyclo(l-leucyl-l-prolyl)" at the (10<sup>th</sup> Annual Meeting of the Proteomic Society, India (PSI)) **International conference on**

- "Proteomics for Cell Biology and Molecular Medicine" organized by National Centre for Cell Science, Pune on 12<sup>th</sup> to 14<sup>th</sup>, December 2018.
- 8. Presented a poster on "Comparative evaluation and optimization of a simple method for lipid extraction from marine macroalgae for biodiesel production" at the "International Conference on Current Trends in Biotechnology (ICCB-2016)" held between 8<sup>th</sup> and 10<sup>th</sup> December 2016 at Vellore Institute of Technology (VIT), Vellore, India.
- 9. Presented a paper on "Marine cyclic dipeptide-cyclo(L-leucyl-L-prolyl) disrupts *Staphylococcus epidermidis* (RP62A) biofilm integrity by modifying its exopolymeric substance" at the "International Conference on Recent Trends in Biosciences" held between 7<sup>th</sup> and 9<sup>th</sup> April 2016 at Alagappa University, Karaikudi, India.
- 10. Presented a poster on "Cyclo(L-leucyl-L-prolyl) of *Bacillus amyloliquefaciens* attenuates *Staphylococcus epidermidis* (RP62a) biofilm by modifying its exopolymeric substance" at the **International conference on "New Horizons in Biotechnology"** held during November 22<sup>th</sup>-25<sup>th</sup>, 2015 at Thiruvananthapuram, India.
- 11. Presented a poster on "Bacillus amyloliquefaciens-secreted cyclic dipeptide-cyclo(L-leucyl-L-prolyl) inhibits biofilm formation of Listeria monocytogenes" at the 25<sup>th</sup> European Congress of Clinical Microbiology and Infectious Diseases (ECCMID 2015) held during April 25<sup>th</sup>-28<sup>th</sup>, 2015 at the Bella Center, Copenhagen, Denmark. (P1348).
- 12. Presented a paper on "Inhibitory efficacy of cyclic dipeptide-cyclo(L-leucyl-L-prolyl) toward biofilm and virulence production of the foodborne pathogen *Listeria monocytogenes*" at the **National Conference on "Bioactive Peptides-Application in Veterinary, Medical and Food Sciences (NBAP-TANUVAS-2014)** held during December 18<sup>th</sup>-19<sup>th</sup>, 2014 at Department of Animal Biotechnology, Madras Veterinary College, Chennai 600 007, Tamil Nadu, India.
- 13. Presented a poster on "In vitro, in vivo and genotypic methods for the evaluation of biofilm formation among methicillin-resistant Staphylococcus aureus from patients with pharyngitis infection" at the "International Conference on Emerging Trends in Biotechnology (ICETB 2014)" held during November 6<sup>th</sup>-9<sup>th</sup>, 2014 at Jawaharlal Nehru University, New Delhi.
- 14. Presented a paper on "Antimicrobial and antibiofilm efficacy of mangrove sediment bacterium- *Bacillus pumilus* against Gram-positive bacterial pathogens" at the 3<sup>rd</sup> "International Science Congress (ISC-2013)" held during December 8<sup>th</sup> & 9<sup>th</sup>, 2013 at Karunya University, Coimabatore, Tamil Nadu, India.
- 15. Presented a poster as a co-author on "Study on the antimicrobial and anti-biofilm potential of a mangrove sediment bacterium *Bacillus pumilus* against Gram-positive bacterial pathogens" at the "23rd European Congress of Clinical Microbiology and Infectious Diseases" (ECCMID 2013), April 27-30, 2013, Berlin, Germany.
- 16. Presented a poster on "Efficacy of coral associated bacteria from Gulf of Mannar against biofilms of methicillin-resistant and-susceptible *Staphylococcus aureus*" at the "National Seminar on Microbes in Health, Agriculture and Industry" held during February 27<sup>th</sup>-March 1<sup>st</sup>, 2013 at Department of Biotechnology, Alagappa University, Karaikudi 630 004, Tamil Nadu, India.
- 17. Presented a poster on "Coral associated bacteria as a promising antibiofilm agent

- against methicillin-resistant and -susceptible *Staphylococcus aureus* biofilms" at the International conference on "**Regulatory Network Architecture in Bacteria**" held on March 9<sup>th</sup>-11<sup>th</sup>, 2012 at Sastra University, Thanjavur, Tamil Nadu, India.
- 18. Presented a poster on "Molecular typing of Methicillin-Resistant *Staphylococcus aureus* from throat swabs of pharyngitis patients" at the **International Conference on** "**Microbial Biotechnology for Sustainable Development**" held on November 3<sup>rd</sup>-6<sup>th</sup>, 2011 at Panjab University, Chandigarh-160014, India.

#### PAPERS & POSTERS PRESENTED IN NATIONAL & INTERNATIONAL CONF.

Presented by my Scholars and M.Sc., Students, in which myself as Corresponding Author

- 19. Presented and won **Best Oral Presentation Award** for the paper entitled "Marine Brown Macroalgae *Padina boergesenii* and Its Bioactive Compounds Suppress Cariogenic Traits of *Streptococcus mutans*, the Primary Causative Agent of Dental Caries" at the **National Conference on "Recent Innovation in Drug from Sea & Conservation of Marine Bioresources"** organized by the Department of Zoology, V.O. Chidambaram College, Thoothukudi, Tamil Nadu 628 008 during March 27<sup>th</sup> & 28<sup>th</sup>, 2025. (By my Research Scholar, Mrs. R. Sangavi).
- 20. Presented the paper entitled "Proteomic Insights into the Anticariogenic Action of Cyclo(L-Leucyl-L-Prolyl) Against Streptococcus mutans in Dental Caries at the National Conference on "Recent Innovation in Drug from Sea & Conservation of Marine Bioresources" organized by the Department of Zoology, V.O. Chidambaram College, Thoothukudi, Tamil Nadu 628 008 during March 27th & 28th, 2025. (By my Research Scholar, Mr. N. Malligarjunan).
- 21. Presented and won **Best Oral Presentation Award** for the paper entitled "Anticariogenic potential of Cetyltrimethylammonium chloride (CTAC) and its formulated mouthwash against *Streptococcus mutans* and *Candida albicans* in mono and dual species biofilms" at the Nation Conference on "**Fungal Frontier: Fungal Farming and Healthcare (NCFFFFH 2025)**" organized by the Department of Animal Health and Management, Alagappa University, Karaikudi during March 17<sup>th</sup> & 18<sup>th</sup>, 2025. (By my Research Scholar, Mrs. R. Sangavi).
- 22. Presented and won **Best Oral Presentation Award** for the paper entitled "Lupeol Suppresses Biofilm Formation and Hyphal Morphogenesis in *Candida albicans* and Non-albicans *Candida* Species" at the Nation Conference on "**Fungal Frontier: Fungal Farming and Healthcare (NCFFFFH 2025**)" organized by the Department of Animal Health and Management, Alagappa University, Karaikudi during March 17<sup>th</sup> & 18<sup>th</sup>, 2025. (By my Research Scholar, Mr. N. Malligarjunan).
- 23. Presented the paper entitled "Chitosan-Encapsulated Bacteriophage Cocktail: A Promising Oral Delivery System for Combating *Klebsiella aerogenes* Gastrointestinal Infections" at the **2**<sup>nd</sup> **International Conference on "Emerging Concepts in Biotechnological Innovations (ICECBI-2025)"**, organized by the Faculty of Science and Humanities, Department of Biotechnology, SRM Institute of Science and Technology during February 26<sup>th</sup> to 28<sup>th</sup>, 2025. (By my Research Scholar, Mr. N. Malligarjunan).
- 24. Presented the paper entitled "Cetyltrimethylammonium Chloride (CTAC) and its formulated mouthwash as potential anticaries agents against *Streptococcus mutans* and

- Candida albicans in mono- and dual-species states" at the 2<sup>nd</sup> International Conference on "Emerging Concepts in Biotechnological Innovations (ICECBI-2025)", organized by the Faculty of Science and Humanities, Department of Biotechnology, SRM Institute of Science and Technology during February 26<sup>th</sup> to 28<sup>th</sup>, 2025. (By my Research Scholar, Ms. R. Sangavi).
- 25. Presented a poster entitled "Proteomic profiling deciphers the molecular targets in dental caries causing *Streptococcus mutans* upon treatment with anticariogenic agent" at the 5<sup>th</sup> International Conference on "**Recent Trends in Microbiology 2024**" organized by the Department of Microbiology, Alagappa University, Karaikudi between 26<sup>th</sup> & 27<sup>th</sup> February 2024. (By my Research Scholar, Ms. R. Sangavi).
- 26. Presented and won **Best Oral Presentation Award** for the paper entitled "Characterization and therapeutic evaluation of jumbo phages KSKp and KPKp against multidrug-resistant *Klebsiella pneumoniae*" at the International conference on "**Infectious Diseases and Antimicrobial Resistance (ICIDAR 2023)**" organized by the Department of Microbiology in association with Indian Association of Medical Microbiologist (IAMM) at Saveetha Dental College & Hospital, Chennai, Tamil Nadu during July 28<sup>th</sup> & 29<sup>th</sup>, 2023. (By my Research Scholar, Mr. N. Malligarjunan).
- 27. Participated and presented a posted entitled "Potential Fatty acid(s) as promising anticariogenic agent against dental caries causing Streptococcus mutans: An in silico study" at the International conference on "Infectious Diseases and Antimicrobial Resistance (ICIDAR 2023)" organized organized by the Department of Microbiology in association with Indian Association of Medical Microbiologist (IAMM) at Saveetha Dental College & Hospital, Chennai, Tamil Nadu during July 28th & 29th, 2023 (By my Research Scholar, Ms. R. Sangavi).
- 28. Presented a paper entitled "Isolation and characterization through physiological and genomic methods of novel phage PAP-1and evaluation of its therapeutic efficacy against *Pseudomonas aeruginosa*" at "Recent Trends in Microbiology (RTM-2023)" organized by the Department of Microbiology, Alagappa University, Karaikudi on 05<sup>th</sup> & 6<sup>th</sup>, January 2023 (By my Research Scholar, Ms. C. Karthika).
- 29. Presented a paper entitled "Mechanistic insights on anticandidal efficacy of 3-Bromopyruvate and its formulation as vaginal cream in effective prevention of vulvovaginal candidiasis in mice model" at "Recent Trends in Microbiology (RTM-2023)" organized by the Department of Microbiology, Alagappa University, Karaikudi on 05th & 6th, January 2023 (By my Research Scholar, Mrs. R. Jothi).
- 30. Presented a paper entitled "Anticariogenic potential of marine macroalgae *-Padina boergesenii* towards oral pathogen *-Streptococcus mutans*" at "**Recent Trends in Microbiology (RTM-2023)**" organized by the Department of Microbiology, Alagappa University, Karaikudi on 05<sup>th</sup> & 6<sup>th</sup>, January 2023 (By my Research Scholar, Ms. R. Sangavi).
- 31. Participated the presented a paper on the title "Exploration of Nature's destroyer of MDR *Pseudomonas aeruginosa* a novel bacteriophage PAP-1" at **International Conference on Infectious Diseases & Advances in Microbial Technology (MICROSUMMIT-2022)** organized by the Department of Microbiology in association with JMM- Microbiology Society, UK at Saveetha Dental College & Hospital, Chennai, Tamil Nadu during August 05th & 6th, 2022 (By my Research Scholar, Ms. C. Karthika).

- 32. Participated and own "Best Poster Presentation" Award for the paper/poster on "Phenotypic, genotypic and therapeutic characterization of novel phage PAP-1 infecting *Pseudomonas aeruginosa*" at National Level Conference on Biotechnology and OMICS Sciences-2022 (BIO-OMICS-2022) organized by the Department of Biotechnology, Alagappa University, Karaikudi during May 27 & 28, 2022 (By my Research Scholar, Mr. N. Malligarajunan).
- 33. Participated and presented a poster on "Exploring *in vitro* and *in vivo* anti-infective potential of lytic bacteriophage against planktonic and biofilm cells of *Enterobacter aerogenes*" at National Level Conference on Biotechnology and OMICS Sciences-2022 (BIO-OMICS-2022) organized by the Department of Biotechnology, Alagappa University, Karaikudi during May 27 & 28, 2022 (By my Research Scholar, Ms. C. Karthika).
- 34. Participated and presented a poster on "Cetyl trimethyl ammonium chloride (CTAC) as promising anticaries agent against dual-species biofilms of *Streptococcus mutans* and *Candida albicans*" at **National Level Conference on Biotechnology and OMICS Sciences-2022 (BIO-OMICS-2022)** organized by the Department of Biotechnology, Alagappa University, Karaikudi during May 27 & 28, 2022 (By my Research Scholar, Ms. R. Sangavi).
- 35. "Best Poster Presentation Award" for the paper/poster on "Phenotypic, genotypic and therapeutic characterization of novel phage PAP-1 infecting *Pseudomonas aeruginosa*" at National Level Conference on Biotechnology and OMICS Sciences-2022 (BIO-OMICS-2022) organized by the Department of Biotechnology, Alagappa University, Karaikudi during May 27 & 28, 2022. (By my Research Scholar, Mr. N. Malligarjunan).
- 36. Participated and own "Best Paper Award" for the paper on "Bacteriophage therapy as promising alternative to combat Enterobacter aerogenes infection: an in vitro and in vivo study" at International Conference on Infectious Diseases & Advances in Microbial Technology (MICROSUMMIT-2022) organized by the Department of Microbiology in association with JMM- Microbiology Society, UK at Saveetha Dental College & Hospital, Chennai, Tamil Nadu during August 05th & 6th, 2022. (By my Research Scholar, Ms. C. Karthika).
- 37. Participated as co-author and own "Best Poster Presentation" Award for the poster on "Cataloguing of Seaweed-epiphytic bacterial community with specific objectives of isolation, characterization and prevention of bacterial infections in the seaweeds cultivating in the Tamil Nadu coast" at **International Conference on Applied Phycology (ICAP-2022)** organized by CSIR CSMCRI, Marine Algal Research Station, Mandapam Camp, Tamil Nadu on May 30, 2022.
- 38. Participated presented a poster on "Therapeutic efficacy of bacteriophages against multidrug-resistant *Klebsiella pneumoniae*" at **International Conference on Applied Phycology (ICAP-2022) organized by CSIR CSMCRI,** Marine Algal Research Station, Mandapam Camp, Tamil Nadu on May 30, 2022 (By my Research Scholar, Mr. N. Malligarjunan).
- 39. Participated presented a poster on "Marine cyclic dipeptide- Cyclo(L-leucyl-L-prolyl) from mangrove rhizosphere bacterium- *Bacillus amyloliquefaciens* (MMS-50) hampers cariogenic properties of *Streptococcus mutans*" at **International Conference on Applied Phycology (ICAP-2022)** organized by CSIR CSMCRI, Marine Algal Research Station,

- Mandapam Camp, Tamil Nadu on May 30, 2022 (By my Research Scholar, Ms. R. Sangavi).
- 40. Participated presented a poster on "Anti-infective potential of bacteriophages EAP-1 & 2 against planktonic and biofilm cells of *Enterobacter aerogenes*" at **International Conference on Applied Phycology (ICAP-2022) organized by CSIR –** CSMCRI, Marine Algal Research Station, Mandapam Camp, Tamil Nadu on May 30, 2022 (By my Research Scholar, Ms. C. Karthika).
- 41. Participated and own "Best e-PPT Presentation Award" for the paper on "Promising antivirulence efficacy of a pentacyclic triterpenoid against *Candida albicans*" at International Virtual Conference on Emerging, Medical, Biomedical and Biological Sciences (IVCEMBBS-2020) jointly organized by SynBiogenica Labs, India, ACE International Pte Ltd., Singapore and Pegaso Canton, Italy during October 24 26, 2020 (By my Research Scholar, Ms. C. Karthika).
- 42. Participated and own "Best e-PPT Presentation" Award for the paper on "Therapeutic characterization of bacteriophage against drug-resistant clinical isolates of *Pseudomonas aeruginosa* through *in vitro* and *in vivo* study" at International Virtual Conference on Emerging, Medical, Biomedical and Biological Sciences (IVCEMBBS-2020) jointly organized by SynBiogenica Labs, India, ACE International Pvt. Ltd., Singapore and Pegaso Canton, Italy during October 24 26, 2020 (By my Research Scholar, Ms. C. Karthika).
- 43. Presented a poster entitled "Isolation of sewage bacteriophage and its in vitro and in vivo inhibitory efficacy against multidrug-resistant Pseudomonas aeruginosa" in International conference on "Bacteriophage Research and Antimicrobial Resistance" organized by Vellore Institute of Technology, Vellore, India on 12 to 13 December, 2019 (By my Research Scholar, Ms. C. Karthika).
- 44. Participated and presented a poster entitled "In vitro and in vivo efficacy evaluation of bacteriophage against multidrug-resistant *Pseudomonas aeruginosa*" in International conference on "New Horizons in Biotechnology-2019" organized by Biotech Research Society, India, CSIR- NIIST, Trivandrum, India on 20<sup>th</sup> to 24<sup>th</sup>, November 2019 (By my Research Scholar, Ms. C. Karthika).
- 45. Presented a poster entitled "Global Protein Profiling of Listeria monocytogenes upon treatment with marine cyclic dipeptide-cyclo(L-leucyl-L-prolyl)" in Third International conference on "Recent Trends in Microbiology (RTM-2019)" organized by Department of Microbiology, Alagappa University, Karaikudi on 24th to 25th, January 2019 (By my Research Scholar, Ms. C. Karthika).
- 46. Presented a poster on "A cyclic dipeptide of marine origin thwarts biofilm assemblage and virulence secretion in the food borne pathogen- *Listeria monocytogenes*" at the **National conference on "Biotechnological Innovations for Socio-Economic Developments"** organized by PG & Research Department of Biotechnology, J.J. College of Arts and Science, Pudukkottai on 1st & 2nd, March 2018 (By my M.Sc., Student Ms C Karthika).
- 47. Presented a poster on "A pentacylic triterpenoid from *Wedelia calendulacea* (L.) inhibit *Candida* species biofilms and virulence dimorphism" at the **National conference on** "Biotechnological Innovations for Socio-Economic Developments organized by PG &

- Research Department of Biotechnology, J.J. College of Arts and Science, Pudukkottai on 1<sup>st</sup> & 2<sup>nd</sup>, March 2018 (By my M.Sc., Student Ms. Vidhya).
- 48. Presented a poster entitled "Inhibition of Biofilm formation and Virulence in *Listeria monocytogenes* by a Cyclic Dipeptide-Cyclo(L-leucyl-L-prolyl) from marine *Bacillus amyloliquefaciens*" in the "National Conference on Enhancing Entrepreneurship and Innovation in Biotechnology for Sustainable Development" organized by TNSRO, Pudukkottai held during 28<sup>th</sup> to 29<sup>th</sup>, July 2017 (By my M.Sc., Student Ms C Karthika).
- 49. Presented a poster as a co-author on "Green Synthesis of Silver Nanoparticles from Marine Seaweed and Antivirulence Activity against Vibrios" at the **National conference on "Innovations in Modern Biology & 48th AQUA-TERR Annual Conference"** organized by School of Biological Sciences, Madurai Kamaraj University, Madurai on 27 & 28, February 2017.
- 50. Presented a poster as a co-author on "Improvement of simple protocol for lipid extraction from marine macroalgae for increased biofuel productivity" at the **International conference on "Recent Trends in Microbiology (RTM-2016)**" organized by Department of Microbiology, Alagappa University, Karaikudi on 20-21<sup>st</sup>, December 2016.
- 51. Presented a poster as a co-author on "Green synthesis of AgNPs from marine macroalgae and its application against Vibriosis in *Artemia franciscana*" at the 'International conference on "Recent Trends in Microbiology (RTM-2016)' organized by Department of Microbiology, Alagappa University, Karaikudi on 20-21<sup>st</sup>, December 2016.
- 52. Presented a poster as a co-author on "*In vitro* efficacy of α-mangostin in killing and eradication *Staphylococcus epidermidis* RP62A biofilms" at the "**International Conference on Current Trends in Biotechnology (ICCB-2016)**" held between 8<sup>th</sup> and 10<sup>th</sup> December 2016 at Vellore Institute of Technology (VIT), Vellore, India.
- 53. Presented a poster as a co-author on "Development of rapid protocol for lipid extraction from seaweeds for biodiesel production and comparative assessment" at the "5th International Conference Sustainable Utilization of Tropical Plant Biomass: Bioproducts, Biocatalysts & Biorefineray (SutB4)" held between 17th and 18th November 2016 at TNAU, Coimbatore, India (sponsored by ICAR).
- 54. Presented a poster as a co-author on "Xanthone from *Garcinia mangostana* Linn eradicates mature biofilms of *Staphylococcus epidermidis*" at the "**International Conference on Recent Trends in Biosciences**" held between 7<sup>th</sup> and 9<sup>th</sup> April 2016 at Alagappa University, Karaikudi, India.
- 55. Presented a poster as a co-author on "Green based AgNPs from red seaweed and its defensive effect to control Vibriosis in Brine shrimp: An environmentally friendly approach" at the "International Conference on Frontier Areas in Chemical Technologies" held between 21 and 23 March 2016 at Alagappa University, Karaikudi, India.
- 56. Presented a poster as a co-author on "Synthesis, characterization and antibacterial activity of silver nanoparticles synthesized from *Padina boergesenii*" at the "International Conference on Frontier Areas in Chemical Technologies" held between 21 and 23 March 2016 at Alagappa University, Karaikudi, India.
- 57. Presented a poster as a co-author on "Green synthesis of silver nanoparticles from marine macro algae and its defensive effect to control Vibriosis in *Artemia Fransiscana*:

An eco-friendly approach" at the "National Conference on Emerging Trends in Plant Science" held during 10 & 11 March 2016 at Bharathidasan University, Trichy, India. (As co-author).

#### SEMINAR & WORKSHOPS ATTENDED & OTHER TRAINING PROGRAMMES

- 1. National Seminar on "Cancer Prevention and Management" organized by the Department of Biomedical Science, Alagappa University on 05<sup>th</sup> February 2024 on the occasion of WORLD CANCER DAY -2024.
- One Day International Symposium on "Advances in Laboratory Techniques for Biomedical Applications" organized by the Department of Biomedical Science, Alagappa University on 31st January 2024.
- 3. Two-day Workshop on "Single-Cell Omics" organized by the Aravind Medical Research Foundation, Dr. G. Venkataswamy Eye Research Institution, Madurai on 12<sup>th</sup> & 13<sup>th</sup>, October 2023
- 4. **"International Symposium on Bioplastics ISB-23"** organized by the Department of Microbiology, Alagappa University, Karaikudi on 12<sup>th</sup> & 13<sup>th</sup>, September 2023.
- 5. National Workshop on "Electron Tomography of Biological Specimens" organized by Electron Microscopy Facility, SAIF, Department of Anatomy, AIIMS, New Delhi from May 09th -13th, 2022.
- 6. "Laboratory Animal Webinar Series (LAWS-2021)" organized by Sathyabama Institute of Science and Technology during 22<sup>nd</sup> to 27<sup>th</sup> of November 2021 (between 4:30 PM & 6:00 PM) through Online mode (Meeting ID: vex-dopt-gmf).
- 7. Training programme on "Empowering the Changemakers in Biopharma Sector" organized by KIIT- Technology Business Incubator and BCIL for *National Biopharma Mission*, Department of Biotechnology, *Government of India* at Bhubaneswar during March 3-5, 2020.
- 8. "ZEISS Microscopy Course" held between 21st and 23rd May, 2015 organized by Carl Zeiss India (Bangalore) Pvt. Ltd. at IIT Madras.

9.

#### **GENBANK & MLST SUBMISSIONS**

S. No	Culture and Sequence details	Accession No.
1.	16S rRNA gene sequence of Acinetobacter baumannii isolated from cli	nical settings
1.	Acinetobacter baumannii AB-01 16S rRNA gene, partial sequence	MF443127
2.	Acinetobacter baumannii AB-02 16S rRNA gene, partial sequence	MF443128
3.	Acinetobacter baumannii AB-03 16S rRNA gene, partial sequence	MF443129
4.	Acinetobacter baumannii AB-04 16S rRNA gene, partial sequence	MF443130
E	16S rRNA sequence of Lactic Acid Bacteria (LAB) isolated from ferm	nented curd
5.	Enterococcus faecium LAB-01 16S rRNA gene, partial sequence	MF443131
6.	Enterococcus faecium LAB-02 16S rRNA gene, partial sequence	MF443132

7.	Bacillus tequilensis PN-01 16S rRNA gene, partial sequence	PV915462
7.	Fructobacillus fructosus PN-21 16S rRNA gene, partial sequence	PV915463
8.	Fructobacillus parabroussonetiae PN-31 16S rRNA gene, partial sequence	PV915464
9.	Fructobacillus parabroussonetiae PN-35 16S rRNA gene, partial sequence	PV915465
10.	Fructobacillus fructosus PN-63 16S rRNA gene, partial sequence  PV91546	
11.	Fructobacillus durionis PN-67 16S rRNA gene, partial sequence	PV915467
12.	Staphylococcus hominis PN-7216S rRNA gene, partial sequence	PV915468
12.	Internal transcribed spacer region (ITS) sequence of <i>Candida</i> species in	
13.	clinical settings	isolatea from
14.	Candida tropicalis GCT-01 ITS region, partial sequence	MF445103
15.	Candida tropicalis GCT-02 ITS region, partial sequence	MF445104
16.	Candida tropicalis GCT-03 ITS region, partial sequence	MF445105
17.	Candida tropicalis GCT-04 ITS region, partial sequence	MF445106
18.	Candida tropicalis GCT-05 ITS region, partial sequence	MF445107
19.	Kluyveromyces marxianus GKM-01 ITS region, partial sequence	MF445108
20.	Kluyveromyces marxianus GKM-02 ITS region, partial sequence	MF445109
21.	Candida glabrata GCG-02 ITS region, partial sequence	MF445110
22.	Candida glabrata GCG-03 ITS region, partial sequence	MF445111
23.	Candida glabrata GCG-04 ITS region, partial sequence	MF445112
24.	Candida albicans GCA-01 ITS region, partial sequence	MF445113
	Candida albicans GCA-02 ITS region, partial sequence	MF445114
25.	Candida albicans GCA-03 ITS region, partial sequence	MF445115
26.	Candida albicans GCA-04 ITS region, partial sequence	MF445116
27.	Candida albicans GCA-05 ITS region, partial sequence	MF445117
28.	Candida albicans GCA-06 ITS region, partial sequence	MF445118
29.	Candida albicans GCA-07 ITS region, partial sequence	MF445119
30.	16S rRNA sequence of bacteria associated with marine rhizosphere se	diment from
31.	·	VC1222FF
22		
32.	, ,	
22		
	7 0	
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37.		
38.		SWabs of
39.		JN390831.1
40.		JN390832.1
41.		JN315147.1
42.	Staphylococcus aureus GSA-44 16S rRNA gene, partial sequence	JN315148.1
43.	Staphylococcus aureus GSA-45 16S rRNA gene, partial sequence	JN315149.1
44.	Staphylococcus aureus GSA-410 16S rRNA gene, partial sequence	JN315150.1
23. 24.  25. 26. 27. 28. 29. 30. 31. 32.  33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43.	Candida glabrata GCG-04 ITS region, partial sequence Candida albicans GCA-01 ITS region, partial sequence Candida albicans GCA-02 ITS region, partial sequence Candida albicans GCA-03 ITS region, partial sequence Candida albicans GCA-04 ITS region, partial sequence Candida albicans GCA-05 ITS region, partial sequence Candida albicans GCA-05 ITS region, partial sequence Candida albicans GCA-06 ITS region, partial sequence Candida albicans GCA-07 ITS region, partial sequence  16S rRNA sequence of bacteria associated with marine rhizosphere se Palk Bay  Bacillus amyloliquefaciens MMS-50 16S rRNA gene, partial sequence Vibrio proteolyticus MMS-05 16S rRNA gene, partial sequence Vibrio proteolyticus MMS-10 16S rRNA gene, partial sequence Vibrio natriegens MMS-11 16S rRNA gene, partial sequence Vibrio proteolyticus MMS-20 16S rRNA gene, partial sequence Bacillus pumilus MMS-4016S rRNA gene, partial sequence Vibrio harveyi MMS-06 16S rRNA gene, partial sequence Vibrio proteolyticus MMS-48 16S rRNA gene, partial sequence Vibrio proteolyticus MMS-48 16S rRNA gene, partial sequence Staphylococcus aureus GSA-84 16S rRNA gene, partial sequence Staphylococcus aureus GSA-395 16S rRNA gene, partial sequence Staphylococcus aureus GSA-44 16S rRNA gene, partial sequence Staphylococcus aureus GSA-45 16S rRNA gene, partial sequence	MF44511 MF44511 MF44511 MF44511 MF44511 MF44511 MF44511 MF44511 MF44511  MF42511 MF44511 MF445

45.	Staphylococcus aureus GSA-79 16S rRNA gene, partial sequence	JN315151.1
46.	Staphylococcus aureus GSA-A8 16S rRNA gene, partial sequence	JN315152.1
47.	Staphylococcus aureus GSA-46 16S rRNA gene, partial sequence	JN315153.1
48.	Staphylococcus aureus GSA-51 16S rRNA gene, partial sequence	JN315154.1
49.	Staphylococcus aureus GSA-A16 16S rRNA gene, partial sequence	JN315155.1

Multilocus sequence types (ST) and clonal complexs (CC) derived from sequencing of 7 housekeeping genes (arcC, aroE, glpF, gmk, pta, tpi and yqiL) for MRSA strains recovered from pharyngitis patients from southern India

S. No.	MLST ID	Strain Identity	MLST (CC-ST)
1	4149	GSA-410	CC15- ST772
2	4150	GSA-86	CC15- ST772
3	4151	GSA-45	CC5- ST368
4	4152	GSA-88	CC15- ST772
5	4153	GSA-32	CC5- ST1801
6	4154	GSA-20	CC15- ST772
7	4155	GSA-A4	CC15- ST772
8	4156	GSA-A8	CC5- ST240
9	4157	GSA-83	CC15- ST772
10	4158	GSA-A6	CC15- ST772
11	4159	GSA-16	CC672- ST672
12	4160	GSA-22	CC15- ST772
13	4161	GSA-297	CC15-ST1713
14	4164	GSA-58	CC5- ST368
15	4165	GSA-44	CC22-ST217
16	4174	GSA- 46	SINGLETON-ST571
17	4175	GSA- 63	CC22-ST1137
18	4176	GSA-414	CC15-ST2129
19	4181	GSA-395	CC15-ST772
20	4182	GSA-70	CC15-ST772
21	4183	GSA-54	CC5-ST368
22	4184	GSA-81	CC15-ST474
23	4185	GSA-51	CC5-ST585
24	4186	GSA-79	CC22-ST1137
25	4187	GSA-291	CC15-ST1713
26	4188	GSA-47	CC22-ST217
27	5449	GSA-140	ST-772
28	5450	GSA-310	ST-30

Multilocus sequence types (ST) and clonal complexs (CC) derived from sequencing of 7 housekeeping genes (arcC, aroE, glpF, gmk, pta, tpi and yqiL) for MSSA strains recovered from pharyngitis patients from southern India

S. No.	MLST ID	Strain Identity	MLST (CC-ST)
29	4189	GSA-415	CC15-ST15
30	4177	GSA-48	CC15-ST1713
31	4178	GSA-300	CC30-ST433
32	4179	GSA-100	CC5-ST1294
33	4180	GSA-394	CC15-ST15