

FACULTY PROFILE

NAME: Dr Gayathri Devaraja

Designation: Professor & Former Registrar (Administration)

Department: Microbiology

Qualification :M Sc., Ph D

Areas of Specialization : Medical Microbiology and Environmental Biotechnology

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Vision

To make the department and research laboratories enriched with knowledge, as research centers with facilities reachable to societal needs.

Educational Qualifications

Sl. No.	Degree	Specialization/ Subjects	University	Year of Award/ Passing
1	PhD.,	Microbiology	Mangalore University.	2004
NET/SLET 1996				
3	PG	M Sc Microbiology	Kuvempu University	1996
4	UG	Botany Zoology Chemistry	Kuvempu University.	1993

Professional Details (Academic/Research Experience)

Sl. No.	Designation	Institution/University	UG/PG	From	To
1	Professor	Department of studies in Microbiology, Davanagere University, Shivagangothri, Tholahunase, Davanagere 577002	PG	2012	tilldate
2	Associate Professor	ProfessorDepartment of studies in Microbiology, Davanagere University, Shivagangothri, Tholahunase, Davanagere 577002	PG	2006	2012

5	Lecturer (Senior Scale)	Department of Microbiology, University College, Mangalore	UG	2003	2006
6	Lecturer	Department of Microbiology, University College, Mangalore,	UG	1996	2003

Areas of Research Interest:

1.	Bioremediation for sustainable environment
2.	Use of monoclonal antibodies for detection of animal and human pathogens
3.	Probiotics for healthcare. Conjugated/multi-targeted Vaccine development for pathogenic bacteria using hybridoma and nano technology.

Academic/Administrative responsibilities:

	<ul style="list-style-type: none"> • Registrar (Administration) Davangere University, 08th February 2021 to 6th May 2022 • State National Education policy (NEP-2020), member, syllabus framing committee, Program: Microbiology since 2021. • State Committee member for Uniform fee fixation committee for Sakala and Seva Sindhu, Govt of Karnataka since 2021. • Registrar (Evaluation) Davangere University, 15 September 2019 to 8th Nov 2019 • Syndicate member: Davangere University, 18th January 2018 to Jan 2019, Sept 2020 to May 2022 • Academic council member, 2017-2019, 2019-21, 2022 • Dean, Faculty of Science and Technology, Davangere University 1 April 2017 to 30 sept 2019. • Chairperson, Dept of Microbiology, Davangere University. 2008-2010, 2012-2018, 2018-2020 • Coordinator, Dept of Yogic science, Davangere University, 2018 to 2021 • Co-ordinator, Dept. of Biotechnology, Davangere University, July 2017- Aug 2019 • Co-ordinator, Dept. of Botany, Davangere University, 2011-2014. • Co-ordinator, Dept. of Zoology, Davangere University. 2013-15. • Chairperson, BoS, Dept of Biotechnology, Davangere University, February 2018 • Chairperson, BoS, Dept of Microbiology, Davangere University. 2014-2018 • Chairperson, BoS, Dept of Botany, Davangere University. 2014-2018 • Chairperson, BoS, General Science and management, Davangere University. 2017-2022
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	<ul style="list-style-type: none"> • Warden, Ladies Hostel, Davanagere University, Davanagere, December 2008 to 2010, 2011 to 2020. • Chairperson, P G BOE. 2008-09. 2011-12, 2015-16, 2018-19 • Chairperson, Department of studies in Microbiology, Kuvempu University, Jnana Sahyadri, Shankaraghatta 577451, September 2006 to 5 August 2008. • Member, Board of Examiners for Microbiology (PG), Kuvempu University, Jnana Sahyadri, Shankaraghatta. 2006-07, 2007-08, 2008-09 • Member, Board of Examiners for Microbiology (PG), Davangere University, Shivagangothri, Tholhunse, Davanagere. 2009- 2023 • Member, BoE for Microbiology (PG), Karnatak University 2011-12, • Member, BoE for Microbiology (PG), Bangalore University 2011-12.2016-17, 18 • Member, BoS for Microbiology (UG), Karnatak University 2013-14, • BoS member, Kuvempu University 2019-2022 • Head, Department of Microbiology, University College, Mangalore. August 1997 to 28 August 2006. • Coordinator, Microbiology Practical Examination (UG) 2003-04, Mangalore University, Mangalagangothri. • Member, Board of Examiners for Microbiology Examination (UG), Mangalore University, 1998-2006 • Chairperson, Board of Examiners for Microbiology Examination, Mangalore University, 2005-2006. • Head, Water Testing Centre, Microbiological examination of water, Department of Microbiology, University College, Mangalore. 2004-2006
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Research Projects:					
Sl. No.	Title of the Project	Funding Agency	Project Budget (in Lakhs)	Period	Status
1.	Antiproliferative activity of encapsulated Zinc oxide Nanoparticles conjugated with Bacteriocin for treating Colorectal Cancer	VGST-KSTePs, GoK	30.00	2022-24	Ongoing
2.	“Efficacy of monoclonal antibody based immunodot test for the detection of <i>A. invadans</i> of EUS of culture ponds”.	UGC. N. Delhi.	1.00	March 2005 to 2008.	Completed.

3.	Investigation on indigenous bacteria for biodegradation of polychlorinated biphenyls from industrial effluents..	UGC Major Research Project. New Delhi	9. 033	May 2009 to April 2012.	Completed.
4.	Irradiation effect on lichensymbionts for the improvement of soil fertility fromChitradurga fort area Karnataka.	DAE-BRNS	16.36025	April 2013 to June 2016.	Completed.
5.	Development of gluten free wheat foods using potential indigenous Lactobacillus spp.,.	DBT R&D Project, N Delhi	23.00	14 th November 2013 to 14 November 2016,	Completed.
6.	Evaluation of restorative effect and Tight junction barrier strengthening in Caco-2 celllines using Probiotic cells for celiac disease,	Research Fund for Talented Teachers: Vision Group Science and Technology, Govt of Karnataka	3.00	2016-17	Completed.
7.	1)Effect of Pongemia cake on beneficial soil microorganisms in Areca nut plantation. April 2013-July 2013, Karnataka State Council for Science and Technology (KSTA), Rs. 15, 000. 2)Composition of methanotrophs in paddy field and effect of pomgemia cake, a by product of biofuel production. March to May 2017, Rs. 10,000, 3)Efficacy of Pongamia oil based soap against conventional soaps with respect to antibacterial activity to encourage hygiene practice among rural folk. March to July 2018, Rs. 12,500, (41 st	Student Projects: sponsored by KSCST, Govt of Karnataka, Indian Institute of Science, Bangalore			Completed.

series				
4)Efficacy of pongamia oil and herbal based formulation soap against conventional-To encourage hygiene practice among rural folk for enteropathogens. Rs 8, 500. (42 nd series)				

Research Publications:

a) International/National Journals

- 1) Mahanthesh Vasudha, and Devaraja Gayathri (2023) Metabolism and functional heterogeneity of lactic acid bacteria isolated from fermented milk in rural India for lactose intolerance. *J. Microbiol Biotech Foo Sci. (in press)*
- 2) Vasudha, M., Prashantkumar, C.S., Bellurkar, M., Kaveeshwar, V., & Gayathri, D. (2023). Probiotic potential of β -galactosidase-producing lactic acid bacteria from fermented milk and their molecular characterization. *Biomedical Reports*, 18, 23. <https://doi.org/10.3892/br.2023.1605>
- 3) Vasudha, M., & Vasudha, M. (2023). Kinetic and modeling analyses of lactose-hydrolyzing β -galactosidase from *Lactiplantibacillus plantarum* GV54. *World Academy of Sciences Journal*, 5, 11. <https://doi.org/10.3892/wasj.2023.188>
- 4) Vasudha M, M. N. Kalasad, S. C Sharath and Devaraja Gayathri (2023) Fourier transform infrared spectroscopy analysis of Lactose hydrolysis by β -galactosidase from *Lactiplantibacillus plantarum* GV54 and *Lactiplantibacillus* sp. GV66. *Biomedicine*. 43(1). <https://doi.org/10.51248/v43i1.2577>
- 5) Sharath SC, D Gayathri, RM Santosh and MN Kalasad (2022) Growth and characterization of Ag2S Semiconductor nanoparticles. *MaterialsToday:Proceedings* <https://doi.org/10.1016/j.matpr.2022.08.159>
- 6) Vasudha, M., Gayathri, D., & Prathapkumar, C. (2021). Synthesis of BMA NPs using aloe vera gel for their electrochemical, biological and photocatalytic studies. *Journal of Photochemistry and Photobiology*, 6, 100017.
- 7) Swamy, C. T., & Gayathri, D. (2021). High throughput sequencing study of foliose lichen-associated bacterial communities from India. *Molecular Biology Reports*, 1-9. <https://doi.org/10.1007/s11033-021-06272-6>
- 8) Vasudha, M., Khan, A. A., Bhumika, K. M., Gayathri, D., ... & Surendra, B. S. (2021). Facile chemical synthesis of Ca₃MgAl₁₀O₁₇ nanomaterials for photocatalytic and non-enzymatic sensor applications. *Sensors International*, 2, 100082.
- 9) Rashmi, B. S., Gayathri, D., Vasudha, M., Prashantkumar, C. S., Swamy, C. T., Sunil, K. S., ... & Prakash, P. (2020). Gluten hydrolyzing activity of *Bacillus* spp isolated from sourdough. *Microbial cell factories*, 19(1), 1-11. <https://doi.org/10.1186/s12934-020-01388-z>
- 10) Tanvi, D. A., Pratam, K. M., Lohit, R. T., Vijayalakshmi, B. K., Devaraja, T. N., Vasudha, M., ... & Gayathri, D. (2020). Biosorption of heavy metal arsenic from

- Industrial Sewage of Davangere District, Karnataka, India, using indigenous fungal isolates. *SN Applied Sciences*, 2(11), 1-7. <https://doi.org/10.1007/s42452-020-03622-0>
- 11) Kumara, S. S., Gayathri, D., Hariprasad, P., Venkateswaran, G., & Swamy, C. T. (2020). In vivo AFB1 detoxification by *Lactobacillus fermentum* LC5/a with chlorophyll and immunopotentiating activity in albino mice. *Toxicon*, 187, 214-222. <https://doi.org/10.1016/j.toxicon.2020.09.004>
 - 12) Priyanka, V., Ramesha, A., Gayathri, D., & Vasudha, M. (2020). Molecular characterization of non-biogenic amines producing *Lactobacillus plantarum* GP11 isolated from traditional pickles using HRESI-MS analysis. *Journal of Food Science and Technology*, 1-11. <https://doi.org/10.1007/s13197-020-04732-8>
 - 13) Gayathri, D., & Ramesha, A. (2020). Gluten-hydrolyzing probiotics: An emerging therapy for patients with celiac disease. *World Academy of Sciences Journal*, 2(5), 2, 14 <https://doi.org/10.3892/wasj.2020.55>
 - 14) Jolad Shivali, U., Devaraja, T. N., Swamy, C. T., & Gayathri, D (2020) Effect of Pongamia cake on beneficial soil microorganisms in Areca nut plantation, Intl J Agricul Sci Vet Med. 8(2):11-19
 - 15) Sunil Kumar S AmbikaBashisht, G. Venkateswaran, P. Hariprasad and **Devaraja Gayathri (2018)** Characterization of novel *Lactobacillus fermentum* from curd samples of indigenous cows from Malnad region, Karnataka, for their Aflatoxin B1 binding and probiotic properties. *Probiotics and Antimicrobial Proteins J, Springer Nature*. doi.org/10.1007/s12602-018-9479-7
 - 16) C T Swamy, **D Gayathri**, TN Devaraja and G Sanjeev (2019) Low dose e-beam irradiation Consequence on Plant Growth Promoting Properties of Lichenized Bacteria, *Enterobacter cloacae* and *Providencia rettgeri*. *Ind J Exp Biol*. 57(5), 353-361. <http://nopr.niscpr.res.in/handle/123456789/47165>
 - 17) Sunil K S and **D Gayathri** (2018) Screening of Probiotic Potential of *Lactobacillus* Strains Isolated using Homemade Curd from Mysore District, Karnataka. *EC Microbiology*. 14(7):361-383.
 - 18) Devaraja Gayathri and Vasudha M (2018) Lactose Intolerance with Special Emphasis on Probiotics for Management. *EC Nutrition*: 13(5):325-332.
 - 19) Rashmi BS and **Gayathri D** (2017) Draft genome sequence of gluten ydrolysing bacterium *Bacillus subtilis* GS 188. *GenomeA, (American society of Microbiology)* DOI:10.1128/genomeA.00952-17
 - 20) Rashmi BS and **Gayathri D** (2017) Molecular characterization of gluten hydrolyzing *Bacillus* sp. And their efficacy and biotherapeutic potential as probiotics using Caco-2 cell line. *J Appl Microbiol (Wiley online)*, 123(3) DOI: 10.1111/jam.13517.
 - 21) Rashmi BS and **Gayathri D** (2017) Evaluation and Optimization of Extracellular Digestive Enzymes from *Bacillus* spp. Isolated from Curds. *Matern Pediatr Nutr*, 3:1 DOI: 10.4172/2472-1182.1000118
 - 22) Somaraja PK and **Gayathri D** (2016) Biodegradation study of a novel Biphenyl degrading bacterial isolate GS-008. *Ind J Sci Tech*. 9(S1), DOI: [10.17485/ijst/2016/v9iS1/109813](https://doi.org/10.17485/ijst/2016/v9iS1/109813),

- 23) **Gayathri D** and Rashmi BS (2017) Mechanism of Development of Depression and Probiotics as Adjuvant Therapy for its Prevention and Management. *J Mental Health Prev*(Elsevier) [10.1016/j.mhp.2017.01.003](https://doi.org/10.1016/j.mhp.2017.01.003) (Elsevier)
- 24) **Devaraja Gayathri** and Jayanna K Shobha (2016) Bioremediation of 2,4dichlorobiphenyl (Ortho chlorinated) by the consortium of *Pseudomonas* isolates GSa and GSb - A lab scale study. *Int J AdvLifSci*9(4):438-444. ISSN 2277-758X
- 25) Swamy CT, **Devaraja Gayathri**,Devaraja TN (2016) Antibacterial activity of lichens *Parmotrema tinctorum* and *Pyxinesorediata* and their secondary metabolites. *Int J AdvLif Sci*. 9(3):373-380. Online ISSN:2277-758X. Print ISSN:2320-1827.
- 26) **Devaraja Gayathri** and Rashmi BS (2016) Anti-Cancer Properties of Probiotics; A Natural Strategy for Cancer Prevention and Management. *EC Nutrition*5(4): 1191-1202.
- 27) Shobha K Jayanna,**Devaraja Gayathri**, SomarajaPalegarKrishnappa (2016)Diversity of 2, 4 Dichlorobiphenyl degrading consortium of *Pseudomonas* isolates GSa and GSb for degradation of Poly Chlorinated Biphenyl congeners. *IndJ Biotech Bioinform* 4(3) ISSN (online): 4(3), 1-5. ISSN (Online) 2319-6599 ISSN (Print): 2319-6580
- 28) **Gayathri Devaraja**, Bhavyashree G and Rashmi BS (2016) Food Allergy: Immunological Mechanisms and Prevention Strategies. *EC Nutrition*. 5(1): 1058-66
- 29) Gayathri D and Rashmi BS (2016) Critical analysis of wheat as food. *J MaternPediatrNutr*. 2:3. DOI:[10.4172/2472-1182.1000115](https://doi.org/10.4172/2472-1182.1000115)
- 30) Gayathri D and Rashmi BS (2016) Microbial Diversity in Different Organs of Human System. *J Food Microbiol*. 1(1). DOI: <http://dx.doi.org/10.20936/JFM/160101>
- 31) **Gayathri D** (2016).Short note on Probiotics for Mental health and Anxiety. *J MaternPediatrNutr*2: 114. doi:[10.4172/mpn.1000114](https://doi.org/10.4172/mpn.1000114)
- 32) ChidanandamurthyThippeswamySwamy, **Devaraja Gayathri**, ThimmalapuraNeelakantaiahDevaraja, MandarBandekar, Stecy Elvira D'souza, Ram MurtiMeenaandNagappaRamaiah(2016) Plant growth promoting potential and phylogenetic characteristics of a lichenized nitrogen fixing bacterium, *Enterobacter cloacae*. *J Basic Microbiol*:DOI [10.1002/jobm.201600197](https://doi.org/10.1002/jobm.201600197)IF:1.585 (Wiley online)
- 33) **Gayathri D** (2016) Probiotics for total health: Better today and tomorrow. *J MaternPediatrNutr*2(1) <http://dx.doi.org/10.4172/mpn.1000107>
- 34) Shobha K Jayanna and **Devaraja Gayathri** (2015) Degradation of 2,4dichlorobiphenyl via metacleaveage pathway by *Pseudomonas* spp. Consortium. *CurrMicrobiol* 70(6):871-876. DOI:[10.1007/s00284-015-0800-3](https://doi.org/10.1007/s00284-015-0800-3) (Springer)
- 35) **Devaraja Gayathri** and Rashmi BS (2014) Development of Celiac Disease; pathogenesis and Strategies to Control; A Molecular Approach. *J Nutr Food Sci*4: 310doi: [10.4172/2155-9600.1000310](https://doi.org/10.4172/2155-9600.1000310)
- 36) **Devaraja Gayathri** and KJ Shobha(2015) 2,4 Dichlorobiphenyl, a congener of polychlorinated biphenyl degradation by *Pseudomonas* sp GSa and GSb. *Ind J Exp Biol*

- 53(8) 536-542
- 37) Shobha K Jayanna and **Devaraja Gayathri** (2014) Optimization of 2,4dichlorobiphenyl (PCB Congener) degradation by *Pseudomonas spp.* *Bulletin of Environ and Scientific Res.*3(2-3) 1-7.
 - 38) **Devaraja Gayathri**, Swamy CT, Devaraja TN (2014) Role of Cyanolichens in biological Nitrogen fixation, *AngewandtenBiologieForschung*, 2(1): 17-23.
 - 39) Rashmi BS and **Devaraja Gayathri** (2014) Partial Purification, Characterization of *Lactobacillus* sp G5 Lipase and their Probiotic Potential. *Int Food Res J.* 21(5) 1737-1743.
 - 40) **Gayathri Devaraja** and S Sunil Kumar (2014) Anti-adhesion therapy: a potential alternate approach to overcome drug resistance among infectious microorganisms. *World J Pharm Res.* 3(3):3890-3903.
 - 41) Shobha K Jayanna and **Devaraja Gayathri** (2013) Biodegradation of Methoxychlor derivative, 2, 2 dichloro 4 methoxyphenyl by *Bacillus* sp. *Global J Appl Environ Sci.* 3(2): 101-110, ISSN 2248-9932
 - 42) P. K. Somaraja, D. Gayathri, N. Ramaiah (2013) Molecular Characterization of 2-Chlorobiphenyl Degrading *Stenotrophomonas maltophilia* GS-103. [*Bulletin Environ Conta Toxicol.* 91\(2\):148-153\(DOI\) 10.1007/s00128-013-1044-1.](#) (Springer) Impact factor; 1.255
 - 43) Eramma N and **Devaraja Gayathri** (2013) Antibacterial potential and phytochemical analysis of *Flacourtia indica* (Burm.f.) Merr. root extract against human pathogens. *Indo-Amer J Pharmaceu Res.* 3(5). 3832-3846 ISSN NO: 2231-6876.
 - 44) **Gayathri D**, P.K.Somaraja, K.J.Shobha (2013) Biological effects of Polychlorinated biphenyls and its bioremediation. *Env Sci J*, 8(1):14-21. ISSN 0974 – 7451 IF:0.56
 - 45) Nagaraj K, Suvarna VC and **Gayathri D** (2012) *In-vitro* Antibacterial Activity of Honey on Health Hazardous Microorganisms. *Res J Pharmaceutical, Biol and Chem Sci* 3(2):382-387. ISSN:0975-8585
 - 46) Asha and **Gayathri D** (2012) Synergistic impact of *Lactobacillus fermentum* and *L. plantarum* in 1, 2- dimethylhydrazine induced colorectal cancer in mice. *Experimental and therapeutics in Medicine*. DOI: [10.3892/etm.2012.536](#) Print ISSN: 1792-0981, Online ISSN: 1792-1015
 - 47) Asha and **Gayathri D** (2012) Antagonistic properties of *Lactobacillus fermentum* and *L. plantarum* with potential intestinal pathogens; Purification and characterization of bacteriocin isolated from curd and fecal samples. *Adv J Food Sci Tech*, 4(5): 265-269. ISSN (Online): 2042-4876, ISSN (Print): 2042-4868
 - 48) **Gayathri D** and Swamy CT (2012) Lichens: A novel and potential source of

antimicrobials for human use. *J of Phytology*, 4(1): 38-43. ISSN: 2075-6240

- 49) **Gayathri Devaraja**, Eramma NK, TN Devaraja (2012) New Delhi metallo beta-Lactamase-1; Incidence and threats. *Int J of Biological and Medical research* 3(2): 1870-1874. ISSN/EISSN: 0976-6685
- 50) Asha, **Gayathri DandBatish V** (2012) Molecular characterization and variation of *Lactobacillus* sp. of remote malnad regions of Karnataka, India. *Adv in Env. Biol.* 6(1): 481-486. ISSN 1995-0756, EISSN 1998-1066
- 51) **Gayathri D**, Asha and T. N. Devaraja (2011) *Lactobacillus* sp. as probiotics for human health with special emphasis on colorectal cancer. *I. J of Sci and Tech.* 4 (8) 1008-1014. ISSN: 0974-6846 EISSN: 0974-5645 DOI: [10.17485/ijst/2011/v4i8/30912](https://doi.org/10.17485/ijst/2011/v4i8/30912)
- 52) **Gayathri Devaraja**, KM. Shankar, CV Mohan, TNDevaraja, TM Anil, P Keshavanath (2008) Antigen characterization and epitope analysis of *Aphanomyces invadans* of epizootic ulcerative syndrome pathogen by monoclonal antibodies. *J.Asian fisheries sci*21(2) 215-227. ISSN : 0116-6514
- 53) **Gayathri D**, Shankar K M, Mohan C V (2008) Determination of specific sampling site on EUS affected fish for diagnosis of *Aphanomyces invadans* by immunodot using monoclonal antibodies. *Research J of Agri and BiologSci*, 4(6). 757-760. ISSN 1816-1561.
- 54) PK. Pradhan, CV Mohan, KM. Shankar, B. Mohana Kumar and **Gayathri Devaraja** (2007) Yearlingsof Indian major carps resist infection against the epizootic ulcerative syndrome pathogen, *Aphanomyces invadans*. *Current Science* 92 (10) 1430-1434. ISSN No:0011-3891, Impact Factor:0.935.
- 55) **Gayathri Devaraja**, Shankar KM and Mohan CV (2004) Monoclonal antibody- based immunodot test for epizootic ulcerative syndrome pathogen, *Aphanomyces invadans*. *Current Science* 87 (3) 289-291. ISSN No:0011-3891, Impact Factor:0.935
- 56) Devaraja TN and **Gayathri D** (2004). Organic wastes and bioremediation in relation to water quality management in aquaculture. *Fishing Chimes*24(4) 27-30. ISSN, 0971-4529.

c) International/National Conference

1. Prashantkumar S Chakra and Gayathri Devaraja (2021) Biosynthesis of Zinc oxide nanoparticles from lactic acid bacteria from milk sample. Electrochemical Science and Technology NSEST-2020 held on 21 and 22 January 2021 IISC Bengaluru.
2. Shilpa Hosmani and Gayathri Devaraja (2020) Biosorption of Heavy metals by indigenous bacteria. World environmental day Celebration 2020. National Online conference. Environmental and Social Developmental organization New Delhi. 5-6 June 2020
3. Vasudha M and Gayathri Devaraja, (2019) Probiotic Bacteria and Lactose Intolerance. 15th Kannada VijnanaSammelanaheld on 15-09-2019 to 16-09-2019 at Davangere University Davangere.
4. Prashantkumar S Chakra and Gayathri Devaraja, (2019) Emerging role of Lactic Acid Bacteria in Prevention of Colorectal Cancer. 15th Kannada VijnanaSammelanaheld on 15-09-2019 to 16-09-2019 at Davangere University Davangere.
5. Swamy CT and Gayathri Devaraja, (2019) Lichenised bacteria: Nextgeneration sequence analysis for unexplored bacterial diversity of lichens. UGC Sponsored two day national seminar on “Sustainable Environment through Biological Sciences and. Technology” held on 07-02-2019 to 08-02-2019 at Davangere University Davangere.
6. Vasudha M and Gayathri Devaraja, (2019) Production of β -galactosidase by indigenous Lactic acid bacteria. UGC Sponsored two day national seminar on “Sustainable Environment through Biological Sciences and. Technology” held on 07-02-2019 to 08-02-2019 at Davangere University Davangere.
7. Prashantkumar S Chakra and Gayathri Devaraja, (2019) Bio-degradation of reactive red 120 azo dye by beneficial bacterial isolated from industrial effluents. UGC Sponsored two day national seminar on “Sustainable Environment through Biological Sciences and. Technology” held on 07-02-2019 to 08-02-2019 at Davangere University Davangere.
8. Swamy CT and Devaraja Gayathri, (2018), Next generation sequence analysis for unexplored bacterial diversity of lichenized bacteria isolated from foliose lichens with plant growth-promoting properties. 59th Annual Conference of Association of Microbiologists of India and International Symposium on Host Pathogen Interactions December 09-12, 2018.
9. Vasudha M and Devaraja Gayathri, (2018), Potentiality of probiotic indigenous Lactic acid bacteria for gluten and lactose intolerance. 59th Annual Conference of Association of Microbiologists of India and International Symposium on Host Pathogen Interactions December 09-12, 2018.
10. Sunil Kumara S, D Gayathri, P Hariprasad and G. Venkateswaran (2018) Evaluation of probiotic *Lactobacillus fermentum*, for *in vivo* Aflatoxin B1 binding and elimination using Swiss Albino mice. In: International J of Biotechnology and Biomedical Sciences Jan-June- 2018. P. 19. KrishiSanskriti publications.
11. Sunil Kumara S, D Gayathri, G. Venkateswaran, P Hariprasad, ArtiTewari, andSujeet Kumar Singh (2018) Oral administration of *Lactobacillus fermentum*modulates

- cytokine production in AflatoxinB₁ induced mice. 16th National Conference of IAAM, JSS Academy of Higher Education & Research, Mysuru. 27-28 September. 2018. p 53
12. Sunil Kumara S, D Gayathri, P Hariprasad and G. Venkateswaran (2018) Screening of *Lactobacillus fermentum* for AflatoxinB₁: binding trait: isolated using homemade curd from Chickmagalur District, Karnataka. International Conference on Agriculture, allied and applied sciences (ICAAAS-2018), Biologix Research and Innovation Centre Pvtlts, India, JNU, N Delhi, April 28-29, 2018. p 308
 13. Vasudha M and Devaraja Gayathri (2018) Indigenous lactic acid bacteria to overcome lactose intolerance: A preliminary study. In: National conference on: Science & Technology for inclusive development, organized by KSTA and Gulbarga University, India, on 6-7 March 2018. p 19-20.
 14. Vasudha M and Devaraja Gayathri (2018) Antibacterial effect of indigenous lactic acid bacteria for lactose intolerance isolated from curd samples. In: National conference on :Current microbial challenges in the environment, organized by the DEPT OF Microbiology, Kuvempu University, India, on 9-10 March 2018. p 50-51.
 15. Swamy CT and D Gayathri (2016) Molecular characterization and plant growth potential of Lichenized bacteria from crustose lichens from Chitradurga fort. In: International symposium on "Understanding the molecules of life in the era of New Biology, organised by the Depts of Life sciences. Davangere University. India, on 20-22 October 2016. p99-100.
 16. Rashmi BS and D Gayathri (2016) Molecular characterization of gluten hydrolyzing *Bacillus* spp and evaluation of probiotic potential in Caco-2 celllines. In: International conference on Science and technology: Future challenges and solutions, Organised by JSPS and University of Mysore. August 8-9, 2016. Held at University of Mysore. P.135.
 17. Swamy CT and D Gayathri (2016) Molecular characterization and plant growth potential of Lichenized bacteria from crustose lichens of stone fort Chitradurga, Karnataka, India. In: International conference on Science and technology: Future challenges and solutions, Organised by JSPS and University of Mysore. August 8-9, 2016. Held at University of Mysore. p.164.
 18. Sunil Kumara S, D Gayathri, G. Venkateswaran, P Hariprasad and Ambika Vasist (2016) Evaluation of *Lactobacillus* spp isolated from curd for aflatoxin B₁ binding properties. In: International conference on Science and technology: Future challenges and solutions, Organised by JSPS and University of Mysore. August 8-9, 2016. Held at University of Mysore. P. 148.
 19. Swamy CT and D Gayathri (2015) Antibacterial activity of different solvent extracts of Lichen, *Parmotrema tinctorum* and *Pyxinesorediata*. In: 11th Karnataka Science Congress, Organised by Swadeshi vijnana and olana-Karnataka. September 13-15, 2015. Held at Laxmi Venkatesh Desai College, Raichur. p. 154
 20. Rashmi BS and D Gayathri (2015) Screening and characterisation of probiotic indigenous gluten degrading bacteria- An attempt for preliminary development of gluten reduced food for celiac disease patients. In: NABS National Seminar on 'Biological products for crop, animal and human health-problems and prospects'. Organised by the Dept of Biotechnology, University of Mysore and National Academy of Biological Sciences, Chennai, August 21-22, 2015. p 71.
 21. Somaraja PK and Gayathri D (2015) A novel

- Stenotrophomonas maltophilia* degrading 2-chlorobiphenyl. *In*: International conference on 'Bioactive chemicals for reproduction and human health' organised by the Depts of Life sciences. Davangere University. India, on 26-28 Feb 2015. p 79.
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 23. National Seminar: Gayathri D and Shobha KJ (2013) Biodegradation of Methoxychlor derivative, 2,2-dichloro 4-methoxyphenyl by *Bacillus* sp. *In*: National seminar on 'Trends in environmental Biotechnology and its applications', organized by Dept of Biotechnology and Botany. St Aloysius College, Mangalore, India, on 10-11 Dec 2013. p 52.
 24. National Seminar: Rashmi BS and Gayathri D (2013) Optimisation and probiotic potential of Lipase producing *Lactobacillus* sp G5, isolated from goat curd of migrant Shepherd population of North Karnataka region, India. *In*: National seminar on 'Trends in environmental Biotechnology and its applications', organized by Dept of Biotechnology and Botany. St Aloysius College, Mangalore, India, on 10-11 Dec 2013. p 49.
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 26. Seminar and Exhibition: Gayathri D and Shivali JD (2013) Effect of Pongamia cake on beneficial soil microorganisms in areca plantation. *In*: 36th series, 2012-13 Biofuel Projects selected for seminar and exhibition held at Angadi Institute of Technology and Management, Belgaum, on 30-31 August 2013, In Biofuel Technical Record: 2012-13, p 65-66.
 27. National conference: Somaraja PK and Gayathri D (2012) PCB degrading potential of aerobic bacteria from oil contaminated soil. *In*: National conference on environmental sciences and health hazards & XIV annual meeting of society for science and environment, Dept of Biotechnology and Microbiology, Karnatak University, Dharwad, India, 19-21 Nov 2012, p 7
 28. National conference: Somaraja PK, Gayathri D, Eramma N (2012) Evaluation of potential of *Fluorocortia indica* against some human pathogenic bacteria. *In*: UGC sponsored national conference on "Biotechnological prospecting in herbal antiviral and anticancerous drug development", Sri Dharmastala Manjunatheswara College (Autonomous), Ujire. Feb 17-18, 2012, p 52-53.
 29. National symposium: Chaired session: Renewable energy and sustainable development (UGC innovative program), Dept of Social Work, Davangere University, 19-20 March 2012.
 30. Special Lecture: Gayathri D (2011) Role of environmental Biotechnology in sustainable development. Two days national symposium on 'Governance, social

- justice and sustainable development', 30-31 March 2011. Dept. Of Social Work. Davanagere University. Davanagere, India.
31. Indo-US work shop: On Global intracellular pathogens. Jawaharlal Nehru University, New Delhi. 30 Jan-5 Feb 2011.
 32. Conference: Gayathri D, Somaraja PK, and Shobha K J (2010) Indigenous bacteria for bioremediation of Polychlorinated biphenyls from industrial effluents. 16th National conference and symposium on 'Applications of Biotechnology in environment management and medicine, 19-21 Nov. 2010. Bapuji institute of Engineering and technology, Davanagere, India.
 33. Conference: Gayathri D, Somaraja PK, and Shobha KJ (2010) Microbiological degradation of Polychlorinated biphenyls. 8-10 Nov. Women's Science Congress, Davanagere University, Davanagere.
 34. Conference: Gayathri Devaraja and Asha (2010) Synergistic effect of *Lactobacillus* sp and *Catheranthusroseus* for potential intestinal pathogens. 8-10 Nov. Women's Science Congress, Davanagere University, Davanagere.
 35. International Symposium – Asha and Gayathri Devaraja (2010) Microbial interationstudy of *Lactobacillus* sp, against infectious intestinal pathogens. 11th Sir Dorabji Tata Symposium on 'Diagnostics in infections', Indian Institute of Science, Bangalore. 10-11 March 2010 p. 48
 36. National conference – Shivakumar PS and Gayathri Devaraja (2008) Isolation and evaluation of Nitrogen waste degrading bacteria from domestic sewage. 24th National conference of ISCAP on 'Biotechnological strategies for biodiversity conservation, 13-15 March 2008 p. 13.
 37. National conference- BhargaviPrabhuswamy, Gayathri Devaraja and Sanjay KN (2008) A study on distribution of human blood group antigen in and around Shivamogga dist. 24th National conference of ISCAP on ' Biotechnological strategies for biodiversity conservation', 13-15 March 2008 p. 124-125.
 38. International Conference Paper: Shankar KM, Mohan CV and Gayathri S (2002) Monoclonal antibodies for antigen characterization and detection of *Aphanomyces invadans* – causative agent of EUS. The sixth Indian Fisheries forum, Asian fisheries society, Indian branch, Mumbai. 17-20 December, 2002. P. 146.
 39. International conference (Poster): Gayathri Devaraja and Shankar KM (2005) A novel method of detection of fungal pathogen *Aphanomyces invadans* having zoonotic potential by IgG1 monoclonal antibody. Indo-Australian conference on "Biotechnology of Infectious Diseases", Kasturba Medical College, Manipal. 1-3 March, 2005 p.99.
 40. National conference (Poster): Gayathri Devaraja and Shankar KM (2003) Field application of monoclonal antibodies for the detection of *Aphanomyces invadans*, the causative agent of EUS in fish.. 44th All India Microbiologists Conference, UAS, Dharwad. 12-14 November 2003 p 95-96.
 41. Conference paper: Gayathri Devaraja, Shankar KM and Devaraja TN (2007) A molecular tool for the detection of *Aphanomyces invadans* in culture Ponds. 3rd

	<p>Kannada Science conference, SVAK, Kuvempu University 15-17 sept 2007. p 73-74.</p> <p>42. Conference paper: Devaraja TN and Gayathri Devaraja(2007) Scientific integrated fish farming- a boon to small farmers. 3rd Kannada Science conference, SVAK, Kuvempu University 15-17 sept. 2007.p 72-73.</p> <p>43. Special Lecture: Ozone depletion: Health effects. 15 September 2008. Economics Forum, Dept. of Economics, P G Centre,</p>
Book Published / Book Chapters Published:	
	<ol style="list-style-type: none"> 1. Gayathri Devaraja*, Prashantkumar S Chakra and M Vasudha (2021). Current Insights on the Modulation of Gut Microbiome and Its Effect on Human Health. In: Springer Nature, Editor: R. Z. Sayyed, M. Khan (eds.), Microbiome-Gut-Brain Axis. http:// DOI: 10.1007/978-981-16-1626-6_2 2. Gayathri Devaraja*, M Vasudha, and Prashantkumar S Chakra. (2021). Gut-brain axis: Probiotic interactions and Implications for Human Mental health. In: Springer Nature, Editor: R. Z. Sayyed, M. Khan (eds.), Microbiome-Gut-Brain Axis, https://doi.org/10.1007/978-981-16-1626-6_11. 3. Gayathri Devaraja et al., (2022) Biomolecule based Nanomaterials, <i>In: Biobased Products: Sustainable Applications.</i> Ed: Keshamma & Sharangouda Patil. Today & Tomorrow's printer and publishers. New Delhi 4. Yadav HA, Manjunatha DH, Gayathri D, Patil VS, Kalasad MN. Intense Classification of Nanomanufacturing. In <i>Nanomanufacturing and Nanomaterials Design</i> (pp. 31-43) (2022). CRC Press. doi.org/10.1201/9781003220602-3 5. Chakra S Prashantkumar1 and Devaraja Gayathri (2021) Biogenic Synthesis of Nanoparticles by Microorganisms and their Products with Special Emphasis on Lactic Acid Bacteria. In: CURRENT TRENDS IN MATERIALS CHEMISTRY, 48 ISBN: 978-93-85682-66-7. 48-63 6. Gayathri D. and Devaraja TN. (2003) Hybridoma technology in aquaculture health management with an emphasis on <i>Aphanomyces invadans</i> of epizootic ulcerative syndrome in fish. In: Biotechnology in Environmental Management, ed. T Chakrabarti, T K Ghosh, G.Tripathi. APH Publishers, New Delhi, p. 361-373. 7. Devaraja TN and Gayathri D. (2003). A review on microbial products for disease management and improved production in aquaculture. In: Biotechnology in environmental management, ed T Chakrabarti, T K Ghosh, G Tripathi. APH Publishers, New Delhi, p. 325-337. 8. Gayathri Devaraja and Devaraja TN (2012). Antigen: specificities and types. In: <i>Cellular and Biochemical Science</i>, Ed. G Tripathi. I K International Publishers, New Delhi.p.537-548. 9. Gayathri Devaraja and Devaraja TN (2012). Hybridoma Technology: Applications of monoclonal antibody. In: <i>Cellular and Biochemical Science</i>, Ed. G Tripathi, I K International Publishers, New Delhi.p.580-587. 10. Gayathri D & BS Rashmi (2018) Diversity of Microorganisms in Human System. In: Biodiversity conservation (Applications and implications, Ed. BB Hosetti&Bharathi, Write and Print publications, New Delhi. p 33-41

11. E Chapter: Rashmi BS and Gayathri D (2017) Celiac Disease - A Chronic Enteropathy, Its Management with an Emphasis on Probiotics. <http://openaccessebooks.com/probiotics-chronic-diseases-prevention.html>

12. Paper Published at Technical record: Gayathri Devaraja (2013) Effect of pomgamia cake on

beneficial soil microorganisms in areca plantation. KSCST:SPP: Biofuel projects compendium, 2012-13 page no.65-66

Popular articles,

13. Swamy CT and Gayathri Devaraja (2020) Kalluhoovugalallina Bacteria gala adhyayanadallimundinathalemarinaanavayikaadhyayanagalathanthrajanadapathra. *VijnanaLoka*. KASTA, Govt of Karnataka, 13(6):16-18

14. Devaraja TN and Gayathri Devaraja (2020) Jalashakthi, jaladashakthi, jalaveshakthi, *VijnanaLoka*. KASTA, Govt of Karnataka, 13(5):3-5

15. Gayathri Devaraja (2018) Probiotics yembamayasoosookshmanujeevikarulina cancer thadegattuvallinapatra. *VijnanaLoka*, KASTA, Govt of Karnataka, 12(3):14-15

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17. Gayathri Devaraja (2017) VijnanikasamshodhanematthuSamshodhaka. *VijnanaLoka*, KASTA, Govt of Karnataka, 10(6) 20-21.

18. Gayathri D, Swamy CT, Devaraja TN and SanjeevaNayaka (2016) Kalluhoovugalasamshodhanalokadallionduinuku nota. *VijnanaLoka*, KASTA, Govt of Karnataka, 10(1), Decennial Edition, 33-36

19. Gayathri Devaraja (2016) AhaaramathuuArogyavardhane: JapaneyaraArogyadaguttu, *Janatavani Daily*, 25th March, 2016, 42(312):3

20. Gayathri Devaraja (2015) Janmajanmadaanubandhaesookshmanujeevigalasambhanda, *Janatavani Daily*, 18th Nov 2015.184(184):3

21. Gayathri Devaraja and Swamy CT (2015) Refrigerator, ahaarasurakshathematthunammanambike, *Janatavani Daily*, 5th August 7, 2015, 42(83):4.

22. Gayathri Devaraja (2014) SookshmanujeevigalumatthuNavu, *Janatavani daily*, 11th June 2014, 41(28); 4.

23. Gayathri D, Swamy CT, Devaraja TN and SanjeevaNayaka (2014) Kalluhoovu:Dehaandu, Jeevayeradu.Feb 2014, *Hosatu*, (monthly magazine) Navakarnataka Publications. Bangalore, Karnataka. 15(7):43-46.

24. Gayathri Deavaraja (2012). Hesarallenide, iruvudellamosalinalli-Badukinamosaru. *Janatavani daily*, 28 Nov, 39(195):5.

25. Gayathri Devaraja (2012) Lasikegalaprapanchadalliondugiraki. *Janatavani daily*, 13th July 2012, 39(60):6.

26. Devaraja TN, Gayathri Devaraja and Pradeep HM (2011) Dharehatthiuridode. Sahaja Saguvai, 9(6) 17-19.

27. Devaraja TN and Gayathri Devaraja (2006). Krishipooraka – Kolagalallimeenukrishi. *Sujatha Sanchike*, October '06, 12-14.

28. Devaraja TN, Gayathri Devaraja and Mamatha HR (2006) Krishibadukinallisusthiraththeyembaneralubelakinahoydata. *Janatha Vani (daily)* Saphthahikasanchaya, 8 October '06, 3-4.
29. Gayathri S (2001) AIDS, Arivumattu Hone, *Savitha Vani* (Kannada monthly magazine), South Canara, March 2001, 7(5): 7-10.

Radio Talks:

30. Yuvavani, "Importance of probiotics" AIR, Chitradurga. Broadcasted on 28/7/2017
31. Interview in KrishRanga on 'Importance of microorganisms in agriculture', AIR, Chitradurga. Broadcasted on 16/9/2014
32. Interview in Yuvataranga on Educational & Employment opportunities for Microbiology Graduates. AIR, Chitradurga. Broadcasted on 4/7/2012.
33. Farmer's friendly and Rapid detection test for EUS. KrishiRanga, AIR, Bhadravathi, broadcasted on 10/1/2011.
34. Job opportunities and Scope of Microbiology in Research for youth. YuvaVani, AIR, Bhadravathi, broadcasted on 17/7/2008.

Research Guidance Details (MPhil/PhD):

Sl.No	Name of the Scholar	University	Registration month & Year	Research Area
1.	Asha "Evaluation of Lactobacillus sp with vincristine for colorectal cancer in mice system"	Kuvempu University,	Awarded Ph D on 20 th February 2012.	Probiotics
2.	Shobha K Jayanna "Polychlorinated Biphenyl Degradation using indigenous bacteria from industrial effluents",	Kuvempu University	Awarded Ph D on 3 rd Nov 2014	Environmental Biotechnology
3.	Somaraja P K, "Bioremediation of polychlorinated biphenyls; A nano biotechnological approach"	Davangere University,	awarded on 18 th December 2017	Environmental Biotechnology
4.	Rashmi B S,	Davangere University	awarded on 27 th January 2018	Probiotics

	“Development of Gluten Reduced Wheat Product Using Indigenous Lactic Acid Bacteria for Celiac Disease”			
5.	Swamy C T, “Lichen associated bacteria and their role in plant growth promoting properties”	Davangere University	awarded on 3rd February 2018	Lichen Biology
6.	Sunil Kumara S, Evaluation of probiotic Lactobacillus spp for control of aflatoxin B₁ mediated carcinogenesis	Davangere University	Awarded on 16/3/2019	Probiotics
7.	Eramma N	Davangere University	Awarded 2022	Phytochemistry
8.	Vasudha M	Davangere University	On going	Probiotics
9.	Prashanth Chakra	Davangere University	On going	Probiotics
10.	Shilpa Hosamani	Davangere University	On going	Environmental Biotechnology
11.	Soundarya R	Davangere University	On going	Probiotics

Conference/ Workshops/Trainings attended/organized:

Attended: 20

Organised: National Seminars (4), National Science day (7), International women’s day (5)

Achievements/Awards / Abroad visit / Professional Membership

1.	Three stars Merit certificate: By Ministry of Education and Culture, Govt of India. (1987)
2.	Best AMI research paper award- 2003 for “Field application of monoclonal antibodies for the detection of <i>Aphanomyces invadans</i> , the causative agent of EUS in fish”. Best AMI (poster) paper award- 2003
3.	State award: State Sadbhavana Award (Best researcher) by Human rights commission (Bangalore, India)- 2011

4. **Overseas fellowship:** International training course on vaccinology, International Vaccine Institute, Seoul, S. Korea. 14-19 May 2012.
5. **Project of the year:** Karnataka State Council for Science and Technology, IISc, Bangalore, SPP 36th series awarded **Outstanding Project** during Seminar and Exhibition held at Angadi Institute of Technology and Management, Belgaum on 30-31 August 2013. And also awarded the cash prize.
6. **Project Monitoring Committee Member:** Ministry of Environmental, Forestry and climate change, Govt. of India. New Delhi.
7. **Best project of the year 2018:** Efficacy of Pongamia oil based soap against conventional soaps with respect to antibacterial activity to encourage hygiene practice among rural folk.
KSCST, SPP Biofuel projects, IISc, Bangalore, SPP 41st series awarded during Seminar and Exhibition held at BIET, College, Davangere on 10-11 August 2018. And also awarded the cash prize.
8. **Best project of the year 2019:** Efficacy of Pongamia oil based soap against conventional soaps with respect to antibacterial activity to encourage hygiene practice among rural folk.
KSCST, SPP Biofuel projects, IISc, Bangalore, SPP 41st series awarded during Seminar and Exhibition held at BIET, College, Davangere on 10-11 August 2018. And also awarded the cash prize.
9. **Dr Kalpana Chawla young woman Scientist Award (2018) by Govt of Karnataka, for For excellent Research and academic contribution, outstanding achievement in the development of Science and technology.**
10. **Best International participant award:** International training course on vaccinology, International Vaccine Institute, Seoul, S. Korea. 14-19 May 2012.
11. **Best Research publication award (2021). Vision Group Science and Technology (VGST), Govt of Karnataka**
 - **Memberships In Professional Organisations:**
 - a. International Member, *American Society of Microbiology*
 - b. International Member, *Korean Society of Microbiology and Biotechnology*
 - c. Member, *Indian Science Congress* (2016 onwards)
 - d. Executive Member, *Association of Microbiologists of India (AMI)*
 - e. Member, *Mycological Society of India (MSI)*
 - f. Executive Member, *Microbiology Teachers Association*, Mangalore
 - g. Life Member, *Swadeshi VignanaAndolana-Karnataka* (SVAK-046 8/LM-DVG)