

Bio-data

1. Personal Details:

Name : Dr. Prakash M. HALAMI
Date of Birth : 1st January, 1968
Designation : Chief Scientist & Professor-AcSIR
 Head of the Department
Address : Department of Microbiology & Fermentation
 Technology; CSIR- Central Food Technological
 Research Institute, Mysore- 570 020; India
Email ID : prakashalami@cftri.res.in //
kash13@yahoo.com
Phone No. : 0821-2517539 @ 0821 2957491. Fax: +91 821
 2517233; (M) 9448082409
Google Scholar : [https://scholar.google.co.in/citations?u
 ser=
 eaVJjH8AAAAJ&hl=en](https://scholar.google.co.in/citations?user=eaVJjH8AAAAJ&hl=en)
ORCID : <https://orcid.org/0000-0002-0293-1891>
Research Gate : [https://www.researchgate.net/profile/Pm
 Halami](https://www.researchgate.net/profile/PmHalami)



Major Awards/ Fellowship

- * Fellow of IAAM, AMSc, NABS, RSB, BRS I, AFST I, NESA & MBSI
- * Raman Research Fellow, USA &
- * DAAD Fellow, Germany

2. Educational Qualifications:

Sl. No.	Degree/Certificate	Year of passing	University/Institute*	Subjects
1.	B. Sc. Agriculture	1991	Punjabrao Krishi Vidyapeeth, AKOLA, Maharashtra State	Agricul. Sciences; Plant Breeding and Genetics
2.	M. Sc. Molecular Biology & Biotechnology	1993	Indian Agricultural Research Institute (IARI), PUSA, NEW DELHI	Microbial Genetics, Genetic Engineering, Fermentation Techn, rDNA Technology
3.	Ph.D.	2005	Mysore University, MYSORE	Biotechnology

*Part of PhD research at the University of Frankfurt am Main; Germany

3. Overseas training received:

S N	Overseas programme	University/Institute	Duration
1.	Group training course in Biotechnology	Japan International Cooperation Agency and Kobe University, JAPAN	March-July, 1998
2.	German Academic Exchange Services (DAAD) Sandwich program PhD studies	University of Frankfurt/M GERMANY	June 2000-March 2002
3.	Indo-Italian POC fellowship programme of DST & MAE	University of Milano, Milan; ITALY	March-May 2006
4.	DAAD re-invitation programme	University of Frankfurt/M GERMANY	July-Aug. 2007
5.	CSIR-DAAD exchange of Academic programme	Karlsruhe Institute of Technology, Karlsruhe GERMANY	Oct-Dec. 2009
6.	DST-JSPS exchange programme	University of Hokkaido, Hakodate, JAPAN	Nov-Dec. 2010
7.	INSA New Delhi and German Research Foundation (DFG)	University of Frankfurt/M GERMANY	July. 2012
8.	Raman Research Fellow	University of Minnesota, St Paul; USA	Nov. 2012-Feb. 2013
9.	CSIR-DAAD exchange of Academics	University of Frankfurt/M GERMANY	Sept. Oct. 2015

4. Research Experience/Employment:

SI. No.	Duration	Position held	Summary of the work
1.	Jan. 1993 to Jan. 1994	Position held Junior & Senior Research Fellow	Molecular Characterization of somatic hybrids of <i>Brassica</i> by using 5S-18S rRNA, <i>cox I</i> & <i>rbc L</i> gene probe
2.	Feb. 1994 to Feb. 1999	Scientist-B	Molecular cloning and characterization of antifungal proteins from sorghum a) Biotechnological approaches for the production of bacteriocin as a bio-preservatives b) Production and utilization of microbial catalase c) Rapid detection of Food-borne pathogens
3.	Feb. 1999 to Feb. 2003	Scientist -C	Microbial production of PHA, screening and characterization of PHA producing bacteria by Molecular Biology techniques
4.	Feb. 2003 to Feb. 2007	Scientist –E1	Probiotics from fermented food sources, Microbial enzymes, lipase and food borne pathogen detection using nano technology.
5.	Feb. 2007 to Feb 2012	Principal Scientist	Microbial enzymes such as fibrinolytic enzymes, functional food. Lactic fermentation of fish and leather waste. Antibiotic resistance in lactic acid bacteria, their transferability, genomics of lactobacilli and bifidobacteria,

6.	Feb. 2012-to-feb 2017	Senior Principal Scientist	Aminoglycoside and vancomycin resistance in lactic acid bacteria, Evaluation of mode of action of antibiotics of bacilli; Bifidobacteria encapsulation, <i>Lactobacillus fermentum</i> , <i>Lb plantarum</i> and <i>Bacillus licheniformis</i> for probiotic functionalities.
7.	Feb. 2017 till date	Chief Scientist	Genome editing in probiotic bacteria, mechanism of colistin resistance, Molecular studies on RNA inhibiting peptide antibiotics etc.

5. Area of specialization:

- ✓ Molecular Biology & Omics Sciences
- ✓ Biotechnology & Bioinformatics
- ✓ Microbial metabolite & Nutraceutical

6. Honours/Awards received:

SN	Year	Awarding organization	Name of the award/honour
1.	Aug. 1991 to Aug. 1993	IARI, New Delhi	Junior Research Fellowship
2.	Sept. 1993 to Jan. 1994	IARI, New Delhi	Senior Research Fellowship
3.	June. 1993	CSIR, New Delhi	CSIR/UGC Junior research fellowship and National Eligibility Test exam in Life Sciences
4.	1998	Japan International Cooperation Agency	JICA fellowship for training in Biotechnology at Kobe University, Japan.
5.	2000/2001/2007/2009/2015	DAAD, Germany	DAAD fellowship for the partial fulfilment of Ph.D. research at Frankfurt/M University, Germany
6.	2005/7	DST, Govt. of India	Indo-Italian POC fellowship
7.	2006 / 2016	University of Mysore, Mysore as well as University of Mangalore, Mangalore, Karnataka	Recognized as a guide for PhD in Biotechnology & Microbiology
8.	Nov. 2006	DST, New Delhi	Awarded FAST-TRACK young Scientist project
9.	July 3-5, 2009	National University of Singapore (Travel grant from CSIR New Delhi)	Invited speaker at 5 th Asia federation conference on lactic acid bacteria
10.	July 25-27, 2010	University Putra Malaysia (Travel grant from CSIR New Delhi)	Invited speaker for plenary lecture at International symposium of lactic acid bacteria
11.	2012	Indian National Science Academy	Deputation to Germany under INSA-DFG Scientific exchange programme
12.	2012/13	CSIR, New Delhi	Raman Research Fellowship to Undertake research at University of Minnesota, USA.
13.	Nov. 2013	Travel grant from ICMR New Delhi	Deputation to Mauritius to deliver invited talk at BTBT2013

14.	2013	CSIR-CFTRI Mysore	Foundation day award-2013 for individual contribution in R & D among Group IV Scientists
15.	2013	AFST-I Mysore	Awarded Laljee Godhoo Smarak Nidhi award of AFSTi-2013 for R & D contribution
16.	2016	Indian Association of Applied Microbiologists	Fellow, Indian Association of Applied Microbiologists.
17.	2017	CSIR-CFTRI Mysore	Alternate member, technical committee of FAD 15.1 Microbiology subcommittee of the BIS
18.	2019	AFST I	Editor, Journal of Food Science & Technology- India
19.	2019	DST- New Delhi	International travel grants of SERB-DST New Delhi to visit Indonesia for invited talk in 10 th ACLAB Conference
20.	2019	NABS, Chennai	Dr GS Venkataraman Memorial National Academy of Biological Sciences-Best Scientist Award
21.	2019	CSIR-CFTRI Mysore	CSIR-CFTRI Foundation day award (Best Scientist award)
22.	2020, 2022	FSSAI New Delhi	Member, Scientific panel on Antibiotic residue
23.	2020	of Microbiologist Society India (MSI) (national level)	Senior Scientist Award
24.	2021	Royal Society of Biology, UK	Fellow award
25.	2021	Biotech Research Society of India	Fellow award
26.	2021	National Environmental Science Academy	Fellow award
27.	2021	AFST I Mysore	Fellow award
28.	2021	Drinking water and carbonated beverages subcommittee of Bureau of Indian Standards	Member & Convenor
29.	2022	University of Mysore	Member, Advisory Committee, Institute of Excellence
30.	2022	JSS Academy of higher Education, Mysore	Member, BOS in Life Sciences
31.	2022	Department of Biotechnology, University of Mysore	Board member
32.	2022	Board of Studies in Food Science Technology, St Joseph University, Bangalore	Member
33.	2022	Board of Studies in Microbiology, St Philomena's College, Mysore.	Member
34.	2022	Microbiologist Society India	First Fellow award of society
35.	2023	Bureau of Indian standards FAD29 alcoholic drink	Chairperson
36.	2023	Association of Microbiologists of India	Dr. G. B. Manjrekar award- 2023

7. Awarded following prizes for the best papers:

- A) Five first prizes for abstract F11 in the 4th IFCON-1998, FM 45 in the 5th IFCON 2003, FB11 in the 16th ICFOST 2004, FB-11 in the 6th IFCON 2008 and abstract FM-29 in the 6th IFCON 2008.
- B) Four best paper awards for the Abstract No D-0404 in the 7th IFCON 2013, APPN AFB02 in BTBT2013, FB15 in ICFOST2014 and Foodomics'2016.
- C) Second best paper award for the abstract OP4 at 11th NABS-2019
- D) One third prize for Abstract M38 in the 15th ICFOST 2002 and Abstract OP1 of 11th NABS-2019
- E) Two first prizes for Abstract FHW-066 & Abstract FM-009 in the 9th IFCON 2023

8. Professional Affiliations:

8.1 Teaching:

- 🌐 Faculty member for the training programme since 1996 till date
- 🌐 Faculty member for MSc Food Technology since 2002 till date

8.2 Course coordinator for the following institute sponsored courses -

- 1) Course coordinator and faculty of the short-term course on “Molecular techniques in Microbiology” Sept. 2006 and June 2007.
- 2) Molecular Biology approaches for Microbiological Studies and Application, Institute's short-term training course, Sept 22-26, 2009.
- 3) Molecular Biology techniques in Microbiology, STC, CFTRI; Aug. 2010.
- 4) Molecular biology techniques in Microbiology during Oct 04-18, 2012.
- 5) 2013 Institute's training programme on 'Advance techniques in Molecular Biology'. Oct 08-19, 2013.
- 6) Advanced techniques in Mol. Biology 2014.
- 7) Advance Molecular Biology Techniques. Aug. 24-28, 2015.
- 8) Analytical methods in Microbiology. Aug. 2018 & Oct 2019.
- 9) Strategies for probiotic product development Jan. 2020. & 2022
- 10) Short term course on 'Development of pour over millet beverage and curd through probiotic bacteria' was conducted on Sep. 28-30th 2023 and Nov. 20-24th 2023

8.3 Course Director for the DBT Govt. of India; New Delhi sponsored courses -

- 1) Molecular biology techniques in Microbiology, March 4-19, 2010.
- 2) Molecular biology techniques in Microbiology. Nov 16 -Dec. 02; 2011, &
- 3) Molecular biology techniques in Microbiology for lecturers Sept 2-19, 2014.

8.4 Organized/participated as faculty for the sponsored courses

- 1. Wine fermentation, 08.10.2018 to 12.12.10.2018 (total No of participants 09).
- 2. Farmer's centric training programme on 'Processing of rice, fish and fruits and vegetables for value addition 31.10.2018 to 02.11.2018. A lecture on 'Entrepreneurship development through microbial processes in food technology (followed by field visit), a lecture by Dr Prakash M HALAMI, TTBD Dept. CSIR-CFTRI Mysore.
- 3. Organizing Secretary, International conference on Recent Trends and on Food Protectants and infestation control. Feb. 2021
- 4. Organising Secretary, National Workshop on Next generation probiotics March 01, 2019.
- 5. Organizing Secretary, International Conference on gut brain health, Oct. 2021

6. Organizing Secretary, National workshop of Antimicrobial Resistance in Food Chain. Nov. 2021
7. Organized two webinar on the occasion of Aadi ka Amrit Mahotsav on
 - Innovations and advancement in Food Protectants and Grain Storage, Jan. 05, 2022
 - Balanced Nutrition through Microbial food additives, Jan. 10, 2022
8. Organizing Secretary, National workshop on Bifidobacterial probiotics: Supplementation through fermented foods. Mar. 2022
9. Organized the event for two days Stakeholders workshop on Grain storage and pest management sponsored by UPL Mumbai. Aug. 17-18, 2022
10. Organized booster dose vaccination camp at CSIR-CFTRI, Mysuru. Aug. 8, 2022
11. Organized the event Pre-conference workshop of 62nd AMI at MFT Dept CSIR-CFTRI on 'Fermentation Technology-upstream and downstream processing (No of participants 68) Sep. 20, 2022
12. Organizing Secretary, 62nd Annual Conference of AMI Sep. 2022
13. Organizing Secretary, National Workshop on gerobiotic supplementation through fermented millet curd and beverage. Apr. 12-13, 2023.

9. Research and Development work:

9.1 Journal publications: (

<https://scholar.google.co.in/citations?user=eaVJjH8AAAAJ&hl=en>)

Total publications:

130 (as of 22.12.2023)

- ✓ No of publications in SCI foreign journals = **97**
- ✓ In Non-SCI foreign journals = **18**
- ✓ In SCI Indian journals = **14**
- ✓ In Non-SCI Indian journals = **01**
- ✓ Popular articles = **07**

Total Google Scholar Citations	3915
h-Index	34
i-10-index	92

9.2 List of important SCI publications of last 5 years

S N	Title of the paper	Journal name/volume/page nos.	Year & Name of the authors	Impact Factor	Citation
1	Structural characteristics and functional properties of a fucose containing prebiotic exopolysaccharide from <i>Bifidobacterium breve</i> NCIM 5671.	<i>Journal of Applied Microbiology</i> , 134(11), 1xad262.	2023; Baruah, R., Kumar, P. P., Gangani, S., Prashanth, K. H., & Halami, P. M.*	4	
2	<i>Lactiplanti</i> <i>Bacillus plantarum</i> MCC5231 enriched carrot (<i>Daucus carota</i>) nectar: a value-added beverage with enhanced vitamin A.	<i>Journal of Food Measurement and Characterization</i> , 1-15.	2023; Goel, A., Chauhan, A. S., & Halami, P. M.*	3.4	
3	<i>In vitro</i> fermentation of glycosaminoglycans from mackerel	<i>Food & Function</i> 14	2023; Geetha, V., Chathur, K.	6.1	1

	fish waste and its role in modulating the antioxidant status and gut microbiota of high fat diet-fed C57BL/6 mice.	(15), 7130-7145	N., Ramkumar, S., & Halami, P. M.*		
4	Structural and biosynthetic diversity of plantaricins from <i>Lactiplantibacillus</i> .	<i>Applied Microbiology and Biotechnology</i> , 1-15	2023; Goel, A., & Halami, P. M.*	5	
5	Probiotic <i>Bacillus licheniformis</i> MCC2514 and <i>Bifidobacterium breve</i> NCIM 5671 Regulates GATA3 and Foxp3 Expression in the Elevated Disease Condition	<i>Probiotics and Antimicrobial Proteins</i> , 1-17	2023; Rohith, H. S., Peddha, M. S., & Halami, P. M.*	4.9	
6	Effect of probiotics as an immune modulator for the management of COVID-19	<i>Archives of Microbiology</i> , 205(5), 182	2023; Ray, M., Manjunath, A., & Halami, P. M.*	2.8	1
7	Prevalence of macrolide–lincosamide–streptogramin resistant lactic acid bacteria isolated from food sample	<i>Journal of Food Science and Technology</i> 60(2), 630-642	2023; Ashwini, M., Ray, M., Sumana, K., & Halami, P. M.	3.1	1
8	Probiotic Chewing Gums for Adjuvant Treatment of Periodontitis in Diabetics	<i>Cumhuriyet Dental Journal</i> 26(3), 220-226.	2023; Durga, K. R., Ravindra, S., & Halami, P. M		
9	<i>Lactobacillus fermentum</i> MCC2760 abrogate high-fat induced perturbations in the enterohepatic circulation of bile acids in rats	<i>Life Sciences</i> , 320, 121563.	2023; Nair, D., Zarei, M., Halami, P. M. , & Talahalli, R.	6.1	
10	Conjugal transfer of macrolide-lincosamide-streptogramin resistance from lactic acid bacteria isolated from food materials	<i>Materials Today: Proceedings</i> , 51, 707-714	2022; Ashwini, M., Ray, M., Halami PM. , & Sumana, K.		2
11	Prevalence of polymyxin resistance through the food chain, the global crisis.	<i>The Journal of Antibiotics</i> , 75(4), 185-198	2022; Ray, M., Manjunath, A., & Halami, PM*.	2.8	3
12	<i>Lactobacillus plantarum</i> MCC2034, a novel isolate from traditional Indian lactic fermented preparation: molecular identification and evaluation of its <i>in vitro</i> probiotic potential	<i>Journal of Microbiology, Biotechnology and Food Sciences</i> , 4(4), 328-331	2021; Henry, D. E., Halami PM* & Prapulla, S. G.		7 7
13	The antimicrobial efficacy of a novel nisin variant lantibiotic against periodontal pathogens- An <i>in vivo</i> pilot study	Bulletin Monumental - ISSN / e-ISSN 0007-473X. 22: 210-217	2021; Nair MB, Halami PM , Ravindra S, and Suman B		
14	<i>Bacillus licheniformis</i> MCC 2514 genome sequencing and functional annotation for providing genetic evidence for probiotic gut adhesion properties and its applicability as a biopreservative agent.	<i>Gene</i> , 840, 146744.	2022; Dindhoria K, Kumar S, Baliyan N, Raphel, S, Halami PM* and Kumar R	3.5	5

15	A machine learning-based approach to determine infection status in recipients of BBV152 whole virion inactivated SARS-CoV-2 vaccine for serological surveys.	<i>Computers in Biology and Medicine</i> , 146, 105419	2022; Singh, P., Ujjainiya, R., Prakash, S., Naushin, S., Gupta, D & Halami, PM et al.	7.7	10
16	Genome editing of probiotic bacteria: present status and future prospects	<i>Biologia</i> , 77(7), 1831-1841	2021; Sundararaman, A., & Halami, P. M* .	1.5	4
17	Characterization of dual bacteriocins producing <i>Bacillus subtilis</i> SC3.7 isolated from fermented food	LWT, 154, 112854.	2022; Epparti, P., Eligar, S. M., Sattur, A. P., Kumar, B. G., & Halami PM* .	6	8
18	Preventive and therapeutic aspects of fermented foods	<i>Journal of Applied Microbiology</i> , 132(5), 3476-3489	2022; Baruah, R., Ray, M., & Halami PM* .	4	32
19	Novel pathways in bacteriocin synthesis by lactic acid bacteria with special reference to ethnic fermented foods	<i>Food Science and Biotechnology</i> , 1-16.	2021; Sharma, B. R., Halami PM. , & Tamang, J. P	2.9	18
20	Bacterial heteroresistance: an evolving novel way to combat antibiotics.	<i>Biologia</i> , 76(10), 3029-3041.	2021; Manjunath, A., Thumu, S. C. R., Kumar, S., & Halami PM* .	1.5	4
21	The combined effect of potential probiotic <i>Bacillus licheniformis</i> MCC 2514 and <i>Bifidobacterium breve</i> NCIM 5671 towards anti-inflammatory activity on HT-29 cell lines.	<i>Probiotics and Antimicrobial Proteins</i> , 1-12	2021; Rohith, H. S., & Halami PM* .	4.9	12
22	Insights from a Pan India Sero-Epidemiological survey (Phenome-India Cohort) for SARS-CoV2	<i>Elife</i> , 10, e66537	2021; Naushin S, Sardana V, Ujjainiya R, Bhatheja N,and Halami PM et al.	7.7	26
23	Distribution and diversity of nisin producing LAB in fermented food	<i>Current Microbiology</i> , 78, 3430-3438	2021; Sharma, B. R., Jayant, D., Rajshee, K., Singh, Y., & Halami PM*	2.6	6
24	<i>In vitro</i> validation studies for adhesion factor and adhesion efficiency of probiotic <i>Bacillus licheniformis</i> MCC 2514 and <i>Bifidobacterium breve</i> NCIM 5671 on HT-29 cell lines	<i>Archives of Microbiology</i> , 203, 2989-2998	2021; Rohith, H. S., & Halami PM	2.8	13
25	Effect of <i>Lactobacillus fermentum</i> MCC2760-based probiotic curd on hypercholesterolemic C57BL6 Mice.	<i>ACS omega</i> , 6(11), 7701-7710.	2021; Palani Kumar, M. K., Halami PM. , & Serva Peddha, M	4.1	11

26	<i>Lactobacillus fermentum</i> MCC2759 and MCC2760 alleviate inflammation and intestinal function in high-fat diet-fed and streptozotocin-induced diabetic rats	<i>Probiotics and Antimicrobial Proteins</i> , 13(4), 1068-1080.	2021; Archer, A. C., Muthukumar, S. P., & Halami PM.	4.9	30
27	Genome of <i>Bifidobacterium longum</i> NCIM 5672 provides insights into its acid-tolerance mechanism and probiotic properties	<i>Archives of Microbiology</i> 203, 6109-6118	2021; Sundararaman, A., Bansal, K., Sidhic, J., Patil, P., & Halami, P. M.*		8
28	Immune-boosting, antioxidant and anti-inflammatory food supplements targeting pathogenesis of COVID-19	<i>Frontiers in Immunology</i> , 11, 2337.	2020; Mrityunjaya, M., Pavithra, V., Neelam, R., Janhavi, P., Halami PM. , & Ravindra, P. V.	7.3	323
29	Role of probiotics to combat viral infections with emphasis on COVID-19.	<i>Applied Microbiology and Biotechnology</i> , 104, 8089-8104.	2020; Sundararaman, A., Ray, M., Ravindra, P. V., & Halami PM*.	5	178
30	Genome Analysis of <i>Lactobacillus plantarum</i> isolated from Some Indian Fermented Foods for Bacteriocin Production and Probiotic Marker Genes	<i>Frontiers in Microbiology</i> , 11, 40	2020; Goel, A. Halami PM & Tamang, J. P	5.2	69
31	Evaluation of growth and cereulide production by <i>Bacillus cereus</i> isolated from cooked rice	<i>International Journal of Food Studies</i> , 9(1).	2020; Seyi-Amole, DO, Onilude, AA, Rani, SD and Halami, P. M.*		3
32	<i>In vivo</i> safety assessment of <i>Lactobacillus fermentum</i> strains, evaluation of their cholesterol lowering ability and intestinal microbial modulation	<i>J Sci Food Agril.</i> 100 (2):705-713	2020; Thumu SCR and Halami PM*	4.1	20
33	Conjugal transfer of <i>erm</i> (B) and multiple <i>tet</i> genes from <i>Lactobacillus</i> spp. to bacterial pathogens in animal gut, <i>in vitro</i> and during food fermentation	<i>Food Res Int.</i> 116: 1066–1075	2019; Thumu SCR and Halami PM*	8.1	39
34	<i>In vitro</i> comparative analysis of probiotic and functional attributes of indigenous isolates of <i>Bifidobacteria</i>	<i>Current Microbiol</i> 6(3):304-311	2019; Achi SA and Halami PM*	2.6	18
35	Characterization and mode of action of a potent bio-preservative from food-grade <i>Bacillus licheniformis</i> MCC 2016	<i>Preparative Biochem and Biotechnol.</i> 49, (4): 334–343	2019; Nithya V and Halami PM*	2.9	12
36	Prophylactic effects of probiotic <i>Bifidobacterium</i> spp in the resolution of inflammation in arthritic rats	<i>Appl Microbiol Biotechnol.</i> 103 : 6287-6296	2019; Achi SA, Ramaprasad TR and Halami PM*	5	22
37	Heterogeneity of macrolide-	<i>Ind J Med</i>	2019; Thumu	1.7	4

	lincosamide-streptogramin phenotype and conjugal transfer of <i>erm(B)</i> in <i>Pediococcus pentosaceus</i>	<i>Res</i> 149(2):270-275	SCR and Halami PM*		
38	Presence of extracellular DNA and protein in biofilm formation by gentamicin resistant <i>Lactobacillus plantarum</i>	<i>Ind J Med Res.</i> 149: 257-262	2019; Jaimee G and Halami PM*	1.7	10
39	Genetic variation of plantaricin bacteriocin among probiotic <i>Lactobacillus plantarum</i> group strains with anti-oxidant and cholesterol lowering ability.	<i>Probio and Antimicrobial Prot.</i> 11(1):11-22	2019; Devi SM and Halami PM*	4.9	20

***Publication as a corresponding author**

9.3 List of publications as a single author

SN	Title of the paper	Journal name year/vol/page	Impact Factor	Citation
1.	Production of poly-hydroxyalkanoate from starch by the native isolate <i>Bacillus cereus</i> CFR06	<i>World J. Microbiol. Biotechnol.</i> 24: 805-812	1.2	131
2.	Isolation and characterization of a nitrosoguanidine- induced <i>Enterococcus faecium</i> MTCC 5153 mutant defective in enterocin biosynthesis	<i>Res Microbiol.</i> 161: 590-594	2.154	3
3.	Sublichenin, a new subtilin-like lantibiotics of probiotic bacterium <i>Bacillus licheniformis</i> MCC 2512T with antibacterial activity. Microbial Pathogenesis	<i>Microbial Pathogenesis.</i> 128:139-146	2.58	5

9.4 Book chapter/s publications:

I. Total number of book chapters published: 20

II. List of book chapter publications in the last 5 years:

- 1)** Vrinda Ramchandran, Bhaskar N and **Halami PM*** (2019) Lipase of Lactic Acid Bacteria: diversity and application. A book chapter in *Microbes for sustainable development and Bioremediation*. CRC press. ISBN. 9780367226008: page. 313-324.
- 2)** Jayant Dharana and **Halami PM*** (2020) Industrial perspective of food preservatives from microbial origin. A book chapter in *Current Developments in Biotechnology and Bioengineering: Sustainable Bioresources for Emerging Bioeconomy*. Elsevier publisher. ISBN: 9780444643094 page. 243-261.

- 3) Devaraj Yogesh and **Halami PM*** (2020) Fibrinolytic enzymes in fermented food products. Bioactive compounds in Fermented Foods: Health aspect. CRC press ISBN 9780367136000. Page. 120-140.
- 4) Baruah Rwivoo, Appaiah KA Anu and **Halami PM*** (2020) Ethnic Fermented Foods and Beverages of Karnataka. A book chapter in History, Culture and Science of Ethnic Fermented Food and Alcoholic Beverages of India. Elsevier publisher Springer publisher ISBN 978-981-15-1485-2 page 209-230.
- 5) Baruah R, Rajshree K. and **Halami PM*** (2021) Exopolysaccharides producing microorganism for functional food industry. In book: Bioprocess technologies for production of nutraceuticals and functional food products. . Elsevier. ISBN: 978-0-12-823506-5. Page. 337-354.
- 6) Baruah R and **Halami PM*** (2021) Microbial gums: Current trends and application. In book: Bioprospecting of microorganism based industrial molecules. Wiley. ISBN: 1119717249 page. 31-46. 2021
- 7) Aravind S., Shetty K, **Halami PM*** (2022). Role of probiotics in autoism spectrum disorders. In the book, Microbiome, gut brain axis. ISBN 978-981-16-1625-9 Page. 355-366.
- 8) Ray, M., Manjunath, A., Baruah, R., & **Halami, PM*** (2023). Enzymes from Lactic Acid Bacteria for Nutraceuticals Production. In *Microbial Enzymes in Production of Functional Foods and Nutraceuticals* (pp. 25-44). CRC Press.
- 9) Warghane, Ashish, Rashmi Saini, Neena K. Dhiman, Khushdil Khan, Meena Koche, Aditya Sharma, R. M. Gade, **Halami PM**, and Anunava Das. "Value-addition in citrus processing industry waste through enzyme technology." In *Value-Addition in Agri-food Industry Waste Through Enzyme Technology*, pp. 177-190. Academic Press, 2023.
- 10) Steji R and **Halami PM***. Genome editing in *Bacillus licheniformis*: Current Approaches and Applications, a book chapter in *Genome Editing in Bacteria*, 2023, 1-00 (in press)
- 11) Bathula S and **Halami PM***. Genome editing in Cyanobacteria, a book chapter *Genome Editing in Bacteria*, 2023, 1-00 (in press)
- 12) Aravind S and **Halami PM***. Metabolic engineering of *Bifidobacterium* sp. Using genome editing techniques, a book chapter *Genome Editing in Bacteria*, 2023, 1-00 (in press)

9.5 Patents obtained:

Sl. No.	Title	Country	Granted on (Patent No. & Year)	Name of the other Inventors
1.	An improved process for catalase production	India	Patent No. 1264, 1997	Basappa, S. C., Venkateshwaran, G., Halami, PM. , Renu Agrawal and Somshekar, D
2.	A process for preparation of polyhydroxyalkanoate co-polymer	India	Patent No. 512/DEL/2004	Shamala, TR, Anil-kumar, PK, Kshama lakshman, Halami PM , Joshi GJ, Chandrashekar A
3.	A process for the production of anti-listerial bacteriocin	India	Patent No.1237/DEL/2008 A	Halami PM and Chandrashekar A
4.	A process for the preparation of a novel bio-curd	India	Patent No 745/DEL/2005 (publication date 12/11/2010)	Renu Agrawal and Halami PM

9.6 Papers presented in symposium/conference:

I.	National:	
	Total number of papers presented:	89
II.	International:	
	Total number of papers presented:	96

List of papers presented in international conferences in the last 4 years:

- 1) Baruah R, Harish Prashant KV and **Halami PM***. Structural elucidation of capsular heteropolysaccharide from probiotic *Bifidobacterium breve* NCIM 5671 30.01 to 1.02.2020 27th ICFIST Tezpur University, Assam OP
- 2) Rohith H.S., and **Halami PM**. Immunomodulatory effect of *Bacillus licheniformis* MCC 2514 and *Bifidobacterium breve* NCIM 5671 on HT-29 cell line. 5th Biennial Conference of Probiotics Association of India & International Symposium on Probiotics & Immunity: Way forward to Microbial Therapy. November 19-20, 2020.
- 3) Sundararaman A, Sajan Achi, **Halami PM**. Genomic analysis and *In vivo* effect of probiotic *Bifidobacterium longum* NCIM 5672 for its immunomodulatory properties in arthritis induced wistar rats. 5th Biennial conference of Probiotics Association of India & Intl Symposium on Probiotics & Immunity: Way forward to Microbial Therapy. November 19-20, 2020
- 4) Aditi Goyel and **Halami PM**. Characterization of *Lactobacillus plantarum* DHCU70as a potential immunomodulatory. 5th Biennial conference of Probiotics Association of India & Intl Symposium on Probiotics & Immunity: Way forward to Microbial Therapy. November 19-20, 2020
- 5) Ashwini M, **Halami PM** and Sumana K. Prevalence of macrolide-streptogramin-lincosamide resistance among food producing animals. 1st International E-Conference on Microbiology: COVID-19 & Current Issues held at Department of Microbiology, Primeasia University, Bangladesh. 31st January, 2021.

- 6) Ashwini M, **Halami PM** and Sumana K (2021). Molecular characterization and conjugal transfer of macrolide -lincosamide-streptogramin resistance in lactic acid bacteria isolated from food samples. One-Day International E-Conference on "Recent Research and Innovations in Life Sciences 2021" held at Department of Microbiology, MMK & SDM Mahila maha Vidyalaya Mysore. February 19, 2021
- 7) Ishrat Jahan, Rohith H. S., C. S. Vivek Babu and **Halami PM**. Molecular interaction of cry protein toxic to stored grain pest" in International Virtual Conference on Emerging Trends in Food Protectants and Infestation Control [ET- FPIC 2021] by Pesticide Science Study Group (PSSG) & Food Protectants and Infestation Control Department, CSIR-Central Food Technological Research Institute, Mysuru. February 24-25, 2021.
- 8) Jameema Sidhic, C. S. Vivek Babu and **Halami PM**. ITS marker based genomic mining of *Aspergillus* spp. in perspective of stored grain management International Virtual Conference on Emerging Trends in Food Protectants and Infestation Control [ET- FPIC 2021] by Pesticide Science Study Group (PSSG) & Food Protectants and Infestation Control Department, CSIR-Central Food Technological Research Institute, Mysuru on 24-25 February, 2021.
- 9) Ashwini M, Mousumi Ray, Sumana K and **Halami PM**. Gene expression of Lactic Acid Bacteria isolated from food samples against macrolide -Lincosamide-Streptogramin antibiotics. Two days International Conference on "Gut Brain Health Connections", CSIR - CFTRI, Mysuru. 28 -29 Oct. 2021 (Third prize)
- 10) Kusuma NP, Rwivoo Baruah, and **Halami PM**. Characterization of EPS gene cluster from *Bifidobacterium breve* NCIM 5671. Two days International conference on "Gut-brain health connection" CSIR-CFTRI, Mysuru, Karnataka, India, 28 – 29 Oct. 2021 (Consolation prize)
- 11) Kusuma NP, Rwivoo Baruah, and **Halami PM**. *In Silico* comparative analysis of *Bifidobacterium breve* NCIM 5671 for its probiotic marker genes. IcFOST, Aurangabad, Maharastra, India. 22 Jan. 2022
- 12) Aditi Goel, Muthukumar S P and **Halami PM**. Anti-obesity effect of probiotic *Lantiplantibacillus plantarum* DHCU70 in high fat diet fed C57BLP mice. Abstract no. PPI-036. 62nd annual international conference of AMI, University of Mysore, Mysuru. 21-23 Sep. 2022
- 13) Peerzade I J and **Halami PM**. Purification, characterization, and antimicrobial spectra of the antimicrobial peptide produced by *Bacillus licheniformis* MCC2514. Abstract no. 317-PXX-78. 62nd annual international conference of AMI, University of Mysore, Mysuru. 21-23 Sep. 2022
- 14) Kusuma NP and **Halami PM**. Genomic characterization of *Bifidobacterium breve* NCIM 5671 for probiotic functionalities. Abstract no. PPI-039. 62nd annual international conference of AMI, University of Mysore, Mysuru. 21-23 Sep. 2022
- 15) Raphel S and **Halami PM**. Genome mining and comparative analysis of *Bacillus licheniformis* MCC 2514 for the characterization of antibiotic biosynthetic gene cluster. Abstract no. PPI-041. 62nd annual international conference of AMI, University of Mysore, Mysuru. 21-23 Sep. 2022
- 16) Dhanasekaran D and Halami P M. Exopolysaccharides as a postbiotics: production and characterizarion from lactobacilli and biffidobacteria. 6th Biennial Conference of PAi & International Symposium on Psychobiotics and Gut: Potential in Neurological Disorders. ICAR-National Dairy Research Institute, Karnal & DUVASU, Mathura. December 5-6, 2022

- 17) Aditi Goel, Atter Singh Chauhan, and **Halami PM**. *Lactiplantibacillus* DHCU70 enriched carrot nectar: A boon to healthy life. IcFOST, Aurangabad, Maharashtra, India. 22 Jan. 2022
- 18) Vyshali Ramesh K, Anjali PM, **Halami PM**, Ramaprasad TR. *Lactobacillus fermentum* MCC2760 beneficially modulate oxidized oil induced perturbations in brain oxidative stress and inflammation in rats. Abstract No. FHW-070. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 19) Varsha H S, Sridevi Annapurna Singh, Ramaprasad T R, Madan Kumar Perumal, **Halami PM***. *In-vitro* alpha-amylase inhibition activity by postbiotic extracts obtained from probiotic bacteria. Abstract No. FHW-066. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 20) Ishrat Jahan Peerzade, Muthukumar Serva Peddha , **Halami PM***. Efficacy of Antimicrobial peptide from probiotic *Bacillus licheniformis* MCC 2514 in *Salmonella typhimurium* challenged mice. Abstract No. FM-009. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 21) Krishna Komatwar Aravind Sundararaman, **Halami PM***. Analysis of the whole genome of *Limosilactobacillus fermentum* MCC0552 for probiotic functionalities and comparative genomic study with reference strains. Abstract No. FM-002. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 22) Steji Rapheland **Halami PM***. RNA biosynthesis inhibiting novel lasso peptide-like antibiotic of probiotic *Bacillus licheniformis* MCC 2514. Abstract No. FM-017. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 23) Kusuma N P and **Halami PM***. Probiotic *Bifidobacterium breve* NCIM 5671 produces RNA biosynthesis inhibiting antimicrobial peptide. Abstract No. FM-018. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 24) Maithili Banginwar, Aditi Goel, **Halami PM***. Optimization of parameters for the formulation of starter cultures required for probiotic dairy product preparation. Abstract No. DAF-011. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 25) Pramila Epparti and **Halami PM***. Studies on prebiotic activity of barnyard millet fraction by using probiotic *Lactobacillus* and *Bacillus* spp. Abstract No. MNC-014. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 26) Annapoorna B, Kusuma N P and **Halami PM***. *In-vitro* prebiotic activity of Barnyard millet by probiotic bifidobacteria and lactic acid bacteria and its functional study. Abstract No. MNC-030. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023
- 27) Ms. Mounika Reddy Munagala, Akhilasri P, Saravanan M, Ashwath kumar, Roopavathi C, **Halami PM**, Prabhashankar, Vikas Singh Chauhana. Impact of the Incorporation of red seaweed biomass on the dough rheology, and physico-chemical, and bioactive profile of the buns prepared thereof. Abstract No. FF-023. 9th IFCoN, CSIR-CFTRI, Mysuru. Dec. 07-10. 2023

9.7 Invited lecture/s, Technical seminar:

I. National

✚ Total number:

71

✚ List of invited lecture/s, technical seminar in the last 5 years:

- 1) Probiotic *Lactobacillus fermentum*: a functional-food approach for inflammatory related diseases. Abstract page 48-49 of invited talk by **Halami PM** during 106th Indian Science Congress Jan. 3-7; 2019.
- 2) Phylogeny of probiotic bacteria, abstract page No. 36-38 of invited talk by **Halami PM** during Workshop on 'Probiotics – Ambassadors of Human health, sponsored by Probiotics Association of India, Dairy Sci College, Bengaluru. Feb. 14-15, 2019
- 3) Exploring fermented food as a source of new probiotics: Molecular characterization and delivery' invited talk by **Halami PM** organized by AMI Allahabad chapter and Society of Microbiology – SHUATS at Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad (UP) March 08, 2019.
- 4) Translational Research in Microbiology: a case study, abstract pg. 22 of invited talk by Halami PM during UGC sponsored National conference On Current Status and Future Prospects in Life Science Research (CSFPLR-2019), Dravidian University, Kuppam (AP), March 28-29, 2019.
- 5) Gut microbiota and human health: Current status and future perspective, a Special lecture at the Dept of BTBM and IQAC at SBRR Mahajan First Grade College Mysore 13.07.2019. The uses of bacteriocins for human welfare an invited talk at National Conference on Phytochemicals and Microbial bioactive compounds – role in agriculture and human welfare; Bangalore University Dept Microbiol & Biotechnol. Oct. 04, 2019 Bangalore.
- 6) Supplementation of probiotic through fermented dairy products. Invited lecture in the seminar at Dept Dairy Technology; SG Inst of Dairy Technol. Bihar Animal Sciences University, Patna; Bihar 30.01.2019
- 7) Diversity, distribution and functionalities of lactic microflora obtained from fermented food of North East India. An invited talk at 27th Indian Convention of Food scientists and Technologist 'RAINBOW Tezpur University Assam 30.01 to 01.02.2020.
- 8) Modulation of gut microbiota by probiotics and bacteriocin, an invited lecture at UGC sponsored programme for enrichment of teachers under CPE scheme; JSS College of Arts, Comm & Sci. 26.02.2020.
- 9) Participated and delivered a lecture as Resource person National seminar on 'foods for gut immunity' St Alosius College Mangalore in collaboration with Karnataka Science and Technology Academy, 22.04.2022.
- 10) Delivered invited lecture on Efficiency of probiotic bacteria on Th1 and Th2 induced immune response at National conference on Advances in Microbial Biotechnology: Current trends and future prospects (AMBT22) at Bangalore University on 29.04.2022
- 11) Invited talk (online) on the topic 'Value addition in agricultural commodity through food processing' at Institute of Directors, Bengaluru, in association with MSME; Development Institute, Government of India, Bengaluru. 13.05.2022.

- 12) Delivered lecture on Rejuvenation of gut microbiota through probiotics: A CSIR-CFTRI initiatives at Pooja Bhagwat PG Centre, Mysore. 27.05.2022
- 13) Delivered a lecture on Background of FPIC dept. STC1088: Fumigation, prophylaxis and pest management techniques for stored food commodities. 10.06.2022
- 14) Delivered lecture to the participants STC1088: Microbial infestation of stored food commodities. 13.06.2022
- 15) Delivered a lecture on Health benefits of probiotics : preclinical studies at National conference on Integrated Microbial technology for sustainable future (IMTSF-2022) Jnana Kaveri campus, Coorg; Mangalore University 7-8.07.2022
- 16) Delivered lecture in National Conference on Integrated Microbial Technology for Sustainable Future (IMTSF-2022) Alosuis College, Coorg. 7-8, July 2022,
- 17) **Halami PM** and Padmaja RJ. Nano-immunosensor for the detection of subclinical mastitis in bovine population. National Invited talk at Conference on Innovations in Biomaterials and Bionanotechnology: Applications in Agriculture, Biology and Health Care. MGR College, Honsur, Tamilnadu. 10-11. 11. 2022
- 18) **Halami PM** and Kusuma NP. Healthy living through tribal foods: Indian gut microbiota studies. Invited talk at 108th Indian Science Congress - Science and Technology for sustainable. Rashtrasant Tukadoji Maharaj University, Nagpur, Maharashtra. 3-7. 01. 2023
- 19) Rohith H S and **Halami PM**. Probiotic spore forming *Bacillus licheniformis* MCC 2514 elevate Foxp3 and modulate NFkB in rat model invited talk in National seminar on Advance microbiological prspctives for sustainable future. 15-16. 02. 2023, Warangal
- 20) **Halami PM**. Health benefits of probiotics: preclinical trails-A CSIR-CFTRI initiatives. Invited talk at National Conference on Recent Trends in Biotechnology, Mohanlal Sukhadia University, Udaipur, Rajasthan, India. 3-4 March 2023

9.8 Webinar delivered during last two year

- 1) UGC-HRDC, BU-R.C in Synthetic Biology. Two weeks webinar on “Synthetic biology approaches for the development of innovative food preservatives’ organized by UGC-HRDC, HRDC-Bharathiar Univeristy, Coimbatore, 2 - 15 February 2021
- 2) Bioprospecting and genome editing in microorganisms for drug development. TAL Academy Sponsored Faculty development programme on Drug Engineering through Bioprospecting Organized by Department of Biotechnology, Dr NGP Arts and Sci College, Coimbatore, TN, 12 July 2021
- 3) Food-grade microorganisms. Microbiologists Society, India, Jharkhand Unit international Microorganisms Day: Ranchi, 17th September 2021.
- 4) Biotech Foods-Panacea to Cure Lifestyle Diseases. Department of Biotechnology; Govt of India sponsored popular lecture series on ‘Biotech Foods- Panacea to Cure Human Diseases’ Organized by Department of Home Science, V.V.Vanniaperumal College for Women (Madurai Kamaraj University); Virudhunagar, Tamil Nadu, 06 October 2021.
- 5) Probiotics through fermented foods: a CSIR-CFTRI approach. International Conference on Advances in Food Sci & Technology (AFSTECh-202) a part of

CONIAOS-XXVII Organized by SASNET-FF and North East Hill University Tura Campus Meghalaya India; Anand, Gujarat & NE Hill University; Tura campus, Meghalaya, 26-28 October 2021.

- 6) How antibiotic usage in food and feed threaten our food chain? Two days national workshop on antimicrobial resistance organized by Department of Microbiology and Fermentation Technology, CSIR-CFTRI, Mysuru, 25-26th November 2021.
- 7) Fighting malnutrition through bio-fortification. Centre for Society & Policy and Digital health project. Centre for Society & Policy & digital health project, IISc Bangalore, 10 December 2021.
- 8) Natural microbial metabolites as novel drugs AICTE-ISTE Sponsored One Week Online Induction / Refresher Program organized by SWVSM's Tatyasaheb Kore College of Pharmacy, Warananagar, 13 - 18 December 2021.
- 9) Novel foods: feeding billions. Traditional foods vs processed foods (modern foods) organised by Department of biotechnology, Dayananda sagar College of engineering, Bengaluru, 22 December 2021.
- 10) Recent advances in microbiology. In the conference, Recent advances in Microbiology organised by Department of microbiology, Telangana social welfare residential Degree College, Mehabubnagar, 27 December 2021.
- 11) Bacteriocins as an emerging and Adoptable Biopreservation Technologies for Sustainable Agro-Food products during Covid-19 health emergencies. 8th ICFoST (emerging and adoptable technologies for sustainable Agro-food) Industries & Economy at Aurangabad/Mumbai/Mysore (virtual mode); AFST (I), 20-22 January 2022.
- 12) Role of probiotics on gut and brain health. Recent Advances and Current Trends in Biological Sciences, organised by Department of Studies in Botany, Davanagere University, Davanagere, 14 - 19 February 2022.
- 13) Bifidobacterial probiotics: supplementation through fermented foods: a bird eye view. At National workshop on Bifidobacterial probiotics sponsored by PAi at CSIR-CFTRI Mysore March 24-25, 2022.
- 14) Halami PM and Dhanasekaran D Probiotics and postbiotics: recent advances & future challenges. 2 -Day Webinar on Fermentation: Interplay of Microbes, Immunity & Nutrition, North-Eastern Hill University, Tura, Meghalaya. 03-04 Feb. 2023
- 15) Halami PM Probiotics and postbiotics: recent advances & future challenges. Invited talk at -Day Webinar on Fermentation: Interplay of Microbes, Immunity & Nutrition, North-Eastern Hill University, Tura, Meghalaya, 3-04 Feb. 2023

II. International:

 Total number:

17

List of invited lecture/s, technical seminar in the last 5 years:

- 1) Potentiality of *Lactobacillus plantarum* group for probiotic functionality. An invited talk at 10th Asian Conference on lactic acid bacteria Yoghykarta Aug. 29-31. 2019.
- 2) **Halami PM** and Ray M. Antibiotic resistance in food chain: an unnoticed global threat invited talk at 29th ICFoST, he Al Saj Convention Centre, Kazhakootam, Thiruvananthapuram, Kerala. 5 - 7 Jan 2023
- 3) **Halami PM**. Antimicrobial resistance in food chain: an emerging pandemic. Invited talk at 52nd International annual conference of Indian Pharmacological Society, JSS College of Pharmacy, Mysuru 22-25th Feb 2023

10. Research Supervised:

I. PhD:

a) In the field of Biotechnology

SN	Thesis title	Year of award/ Name of the candidate
1.	Molecular Characterization of <i>Enterococcus faecium</i> MTCC 5153 for probiotic properties.	2012/ Dr V Badarinath
2.	Biotechnological studies on phytate degrading lactic acid bacteria: screening, isolation, characterization and application	2012/ Dr. P Raghavendra
3.	Antibacterial peptides of <i>Bacillus</i> species active against food borne pathogens	2013/ Dr. Nithya Vadakedath
4.	Molecular genetic studies of pediocin like bacteriocin in <i>Pediococcus</i> , <i>Lactobacillus</i> and <i>Enterococcus</i>	2013/ Dr. Sundru Manjulata Devi
5.	Characterization of lipase from lactic acid bacteria isolated from fish processing waste	2015/ Dr. Vrinda Ramakrishnan
6.	Studies on erythromycin resistance in lactic acid bacteria in fermented foods	2015/ Dr. Surya Chandra Rao Thumu
7.	Efficacy of probiotic bacteria in alleviating T helper cell associated immune response	2022 / Dr. Rohith HS
8.	Genetic and molecular evidence of plantaricin produced by <i>Lactobacillus plantarum</i> isolated from fermented milk & their probiotic properties	2023/Ms. Aditi Goel (sumbmitted)

b) In the field of Microbiology

SN	Thesis title	Year of award/ Name of the candidate
9	Characterization of leukotoxin producing <i>Staphylococcus aureus</i> and development of antibody-based method for leukotoxin detection in bovine milk samples	2015/ Dr. Padmaja RJ
10	Characterization of fibrinolytic enzyme of <i>Bacillus</i> species isolated from food source	2018/ Dr. Yogesh D
11	Molecular assessment of aminoglycoside resistance in <i>Enterococcus</i> sp.	2018/ Dr. Jaimee George
12	Immunomodulatory effects of <i>Lactobacillus</i> spp. from dairy and human origin	2018 / Dr. Ann Archer Catherine

c) In the field of Biological Sciences

SN	Thesis title	Year of award/ Name of the candidate
13	Effect of bifidobacterial probiotics on alleviation of inflammation.	2020 / Dr. Sajjan C Achi
14	Evaluation of structural and functional properties of subtilin-like lantibiotics produced by <i>Bacillus</i> species	2022 / Dr. Pramila Epparti&

II. PDF:

SN	Name of the candidate & duration	Title of the work	Name of the program
1	Dr Shobha Rani P, 2011	Molecular characterization of bioactive compounds obtained from lactic acid bacterial fermented sea weed	CSIR-RA
2	Dr Shobha Rani P, 2012-2015	Development and application of <i>Bacillus</i> sp as a probiotics	SERB-DST FAST track project
3	Dr Manjulata Devi S, 2014-2017	Detection and expression of immune-modulatory and probiotic genetic loci among <i>Lactobacillus</i> sp.	SERB-DST Young Scientist project
4	Dr. Aravind Sundararaman; Sept 2018 til date	Recombinering of bifidobacteria using CRISPR Cas9	CSIR Nehru post doc fellow

5.	Dr. Rwivoo BARUA; April 2019 till date	Elucidation of structural and functional properties of heteropolysaccharide from probiotic <i>Bifidobacterium breve</i> NCIM 5671	CSIR-RA
6.	Ms. Mousumi Ray; Sept 2019 till date	Elucidation of molecular mechanism of colistin resistance among food-borne pathogens and food bacteria	ICMR RA

III. Overseas researchers trained

SN	Name of the candidate & duration	Title of the work	Name of the program
1	Ms Seyi Amole Damilola Omobowale (Nigeria); Nov. 2014-Jan. 2015	Studies on production and characterization of emetic toxin by <i>Bacillus cereus</i> in cooked rice.	INSA-JRD TATA Fellow
2	Dr. Obakpororo Ejoro Agbagwa (Nigeria); Jan 2015 – April 2015	Detection and identification of antibiotic residue and <i>Bacillus</i> sp in honey	JNCSR fellowship

Post-Graduation:

a) Total number of post-graduation dissertations supervised:	103
🚩 B.Tech:	7
🚩 M.Tech:	9
🚩 B.Sc.:	1
🚩 M.Sc.:	86

11. Technology Developed & ready for commercialization

- I. **Bifidocurd:** Bifidocurd is a probiotic curd prepared by fermenting market milk exclusively using bifidobacteria as a starter culture. This health promoting bacteria can replenish bifidobacterial count in colon and provide microbial homeostasis. High viability is ensured satisfying the Minimum Biological Value (MBV) for probiotic product (289th PDRU meeting 18/01/2018; CFTRI Ref No. TTBD/PDRU/CFL-34/SVR/ 2018; dated 28/03/2018).
- II. **Bifidobacteria enriched soya curd:** Soya curd is a unique product prepared using single bifidobacterial culture for fermenting soya milk. It is a food supplement containing viable count of >10⁷ CFU/gm of a saccharolytic bifidobacterial pure culture exhibiting several health benefits. It replenishes the bifidobacterial count in the colon along-with nutritional benefits of soyabean ((289th PDRU meeting 18/01/2018; CFTRI Ref No. TTBD/PDRU/CFL-34/SVR/ 2018 dated 28/03/2018).

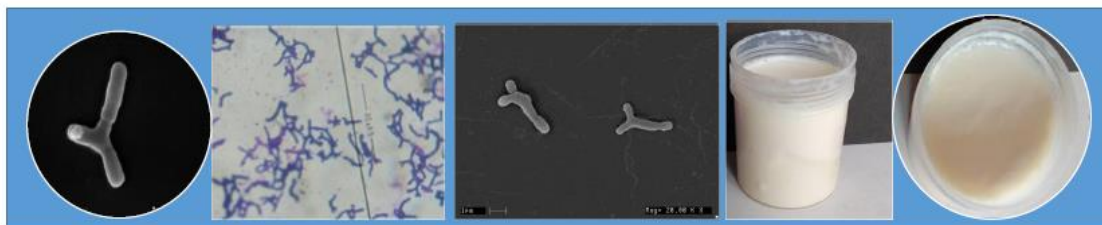


Figure: Pictorial representation of native isolate of probiotic bifidobacteria and the fermented product developed as a part of translational research.

12. Research Projects completed:

S. N.	Title of the project and role	Funding agency	Amount (Rs in lakhs)	Date of completion
1.	Microbial synthesis of polyhydroxyalkanoate copolymer (member)	DBT	24	March 2006
2.	Molecular characterization of novel bacteriocin producing bacterial strains and development of applications for food-bio preservation process (PI)	DST	3.5	April 2006 to April 2009
3.	Molecular characterization of Pediocin PA-1 producing lactic acid bacteria and their application in biopreservation (PI)	DST	7.5	Feb. 2007 to Feb. 2010
4.	Screening & evaluation of different lactic acid bacterial cultures for their proteolytic and fermentation ability for further application in lipid recovery	DBT	21.0	Jan. 2008 to Jan. 2011
5.	Bioactive molecules from sea weeds: antioxidative, antimicrobial, antihypertensive and anti-cancerous properties of polyphenols and polysaccharides (Co-PI)	DST-JSPS	-	July 2009 to July 2011
6.	Diversity and Genetic relatedness of lactic acid bacteria in fermented vegetables of North-East India (PI)	DBT	29.00	Sept 2011-2014
7.	Rapid detection of probiotic lactic acid bacteria and their suitability <i>in vivo</i> system (PI)	ICMR	15	May 2012-2015
8.	Characterization and transferability of Antibiotic resistance genes in Lactic Acid Bacteria from poultry and meat products (PI)	ICMR	27	May 2012-2015
9.	Health promoting Exopolysaccharide producing Lactic acid bacteria from indigenous fermented foods: Application in the management of gastrointestinal health (Co-PI)	DBT	47	Dec 2012-June 2016
10.	Novel pathway specific reporter assays for the characterization of anti-microbial compound produced by food-fermenting bacteria (PI of the project)	DBT New Delhi	26	Oct 2016 to Oct. 2019

11.	Gene organization, mechanism of action and food application of novel RNA biosynthesis inhibiting peptide antibiotics of probiotic bacteria (PI of the project)	DST New Delhi	34	March 2017 to March 2021
12.	Translation of pre-clinically tested probiotic formulation to human population with emphasis on immune-modulation and gut microflora (PI of the project)	CSIR- New Delhi	30	Jan 2018 till Dec. 2020
13.	Shelf life studies of aseptically packed tea extract for M/s Tata Global Beverages ltd Munnar, Kerala (team member of the project)	SSP-254	5	Sep.2018 till March 2020
14.	Establishment of a new Covid testing laboratory and development of innovative techniques/protocols for the detection of Covid virus	CSIR	100	Apr 2020 to March 2021
15.	Supporting COVID testing centre set up by CSIR-CFTRI along with Karnataka Government (Project Coordinator)	RBI Mysore	50	Oct 2020 to July 2021
16.	Scale up studies on immunity boosting shelf-stable probiotic curd enriched with bifidobacteria (PI)	Institute proect	02	July 2020 to April 2022
17.	Covid-19 sample testing project (PI)	CSIR	50	April 2021 to April 2022
18.	Development of synbiotic fruit beverage for healthy aging (member)	Institute	01	April 2021 to Mar 2022
19.	Phenome India- long term longitudinal observational cohort study of health outcome (PI)	Institute	2.5	2021-22

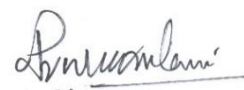
13. Ongoing Research Projects

SN	Project title & funding agency	Role (PI/member)	Duration & milestone to be achieved
1	Phenome India CSIR-health cohort knowledge base; CSIR New Delhi (HCP 0047)	PI (institute level)	Aug. 2022 to Aug. 2027; Biomarker identification on Cardio-metabolic disorders
2	Targeting improved gut health with underutilized Indian berries/psudoberries as source of prebiotics and nutraceuticals	Team member	2021-2024; phytochemicals and polyphenol identification
3	Identification of potential locations across India for seaweed cultivation and their valorisation; CSIR New Delhi (HCP0024)	Team member	March 2021 to March 2024 Nutraceuticals from sea weed
4	Post-biotics for gut microbiome eubiosis in different terrain DRDO-DFRL Mysore.	Team member	2022-2025 Postbiotic formulation for diabetes and hyperlipidemia: preclinical trials
5	Millet mission project; Development and validation of gerobiotic enriched millet beverage and curd (HCP0054)	PI	Jul-2023 to Mar. 2025 Gerobiotic enriched millet formulation for anti-aging

6.	Scale up and validation of novel synbiotic formulation for gut symbiosis and immune boosting of healthy individuals	PI	Two years
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I hereby declare that the information furnished as above is true to the best of my knowledge and belief

Dated: 25/12/2023
CFTRI Mysore



Prakash M HALAMI