

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 2302409. Fax: +91
821 2517233; (M) 9448082409

Google Scholar : <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



Major Awards/ Fellowship

- * Fellows of IAAM, AMSc, NABS, RSB, BRIS, AFSTi,
- * Raman Research Fellow, USA &
- * DAAD Fellow, Germany

2. 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
10	Short Term International Fellowship (DHR-ICMR fellowship)	Virginia Commonwealth University, USA	Jun – July 2025

3. Research Experience/Employment:

SN	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

4. Area of specialization:

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

5. Honours/Awards received:

- 1) Recipient of Junior Research Fellowship of IARI, New Delhi, Aug. 1991 to Aug. 1993
- 2) Recipient of Senior Research Fellowship of IARI, New Delhi, Sept. 1993 to Jan. 1994
- 3) Qualified Joint CSIR-UGC Junior research fellowship and National Eligibility Test exam in Life Sciences, held in June. 1993.
- 4) Recipient of fellowship of Japan International cooperation agency (JICA) for training in Biotechnology at Kobe University, Japan. March-July 1998
- 5) Awarded fellowship of German Academic Exchange Services (DAAD-2000/2001) for the partial fulfillment of Ph.D. research at Frankfurt/M University, Germany
- 6) Recipient of Indo-Italian POC fellowship of DST, Govt. of India 2005/7
- 7) Recognized as a guide for PhD in Biotechnology & Microbiology of the University of Mysore, Mysore as well as University of Mangalore, Mangalore, Karnataka
- 8) Awarded FAST-TRACK young Scientist project of DST, New Delhi. Nov. 2006
- 9) Recipient of DAAD re-invitation fellowship to visit Germany July-Aug. 2007.
- 10) Invited speaker at 5th Asia federation conference on lactic acid bacteria, National University of Singapore July 3-5, 2009.
- 11) Visiting researcher at the Karlsruhe Institute of Technology, Germany under CSIR-DAAD Scientific exchange programme 2009.
- 12) Invited speaker for plenary lecture at International symposium of lactic acid bacteria. Universiti Putra Malaysia. July 25-27, 2010.
- 13) Visited Japan (Hokkaido University, Hakodate) under DST-JSPS project (GAP-0366) Nov-Dec. 2010
- 14) Deputation to Germany under INSA-DFG Scientific exchange programme July-2012
- 15) Recipient of Raman Research Fellowship-2012/13 to undertake research at University of Minnesota, USA.
- 16) Deputation to Mauritius to deliver invited talk at BTBT2013 (travel grant from ICMR New Delhi), Nov. 2013.
- 17) Recipient of CSIR-CFTRI foundation day award-2013 for individual contribution in R & D among Group IV Scientists.
- 18) Awarded Laljee Godhoo Smarak Nidhi award of AFSTi-2013 for R & D contribution
- 19) Recipient of DAAD fellowship-2015 to visit Germany under bilateral programme.
- 20) Fellow, Indian Association of Applied Microbiologists (FIAAM-2016)
- 21) Fellow, Indian Academy of Microbiological Sciences (FIAMSc-2016)
- 22) Fellow, National Academy of Biological Sciences (FNABS-2016)
- 23) NABS best scientist award 2018

- 24) Editor, J Food Sci Technology (Springer) (2019 till 2024)
- 25) Best Scientist award of CSIR-CFTRI on foundation day 2019
- 26) Deputation to Indonesia to participate in 10th ACLAB, Aug. 2019, travel grant from DST New Delhi.
- 27) Member, Scientific panel of FSSAI New Delhi, on Antibiotic residue 2020
- 28) Senior Scientist Award of Microbiologist Society India (MSI) (national level) 2020
- 29) Convenor cum member, technical committee of FAD 15.1 Microbiology Bureau of Indian Standards, New Delhi, 2021
- 30) Fellow, Royal Society of Biology, London; UK 2021
- 31) Fellow, Biotech Research Society, India. 2021
- 32) Fellow, National Environmental Science Academy, New Delhi. 2021
- 33) Member, University of Mysore, Advisory Committee, Institute of Excellence. 2022
- 34) Member, BOS in Life Sciences, JSS Academy of higher Education, Mysore. 2022
- 35) Board member, Department of Biotechnology, University of Mysore.
- 36) Member, Board of Studies in Food Science Technology, St Joseph University, Bangalore. 2022.
- 37) Member, Board of Studies in Microbiology, St Philomena's College, Mysore.
- 38) Member, Scientific panel of FSSAI New Delhi, on Antibiotic residue 2021 till date
- 39) Fellow, Association of Food Scientists & Technologists (India), 2021
- 40) Fellow, Microbiologist Society India, 2022
- 41) Chairperson, Bureau of Indian standards FAD29 alcoholic drinks since July 2023
- 42) Dr. G. B. Manjrekar award (Biennial), AMI, 2023
- 43) First prize (Scientific staff) in essay writing competition on "India's wealth: millet challenges and opportunities for using in nutritious diet" conducted on 21/03/2023 a part of Celebration of International year of Millets (IYoM), CSIR-CFTRI, Mysuru
- 44) 2nd prize in National Nutrition week competition the theme Health diet going affordable for all. 1-7 Sept. 2023.
- 45) Excellence in Research Award, International Conference on Innovations on biotechnology research for sustainable bioresources and bioeconomy: challenges and practices, Sanjivani Arts, Commerce, and Science College, Kopargon, 15-16 Feb 2024.
- 46) Received the Best department award for the R&D activity (Institute level).
- 47) Awarded best paper for the paper 'Geetha, V., Chathur, K. N., Halami P M., & Suresh Kumar, G. (2023). In vitro fermentation of glycosaminoglycans from mackerel fish waste and its role in modulating the antioxidant status and gut microbiota of high fat diet-fed C57BL/6 mice. Food & Function, 14(15), 7130-7145 (Institute level).
- 48) Short Term International Fellowship (DHR-ICMR fellowship) to VCU, Richmond; USA, June-July 2025

5.2 Awarded following prizes for the best papers:

1. **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.
2. **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.
3. **Second** best paper award for the abstract OP4 at 11th NABS-2019
4. **Third prize** for Abstract M38 in the 15th ICFOST 2002 and Abstract OP1 of 11th NABS-2019
5. **First prize** for Abstract FHW-066 in the 9th IFCoN 2023
6. **First prize** for Abstract FM-009 in the 9th IFCoN 2023
7. **Second prize** for the paper BBN-OP-18 in the National conference on Trends in multidisciplinary research: challenges and application, organised by M S Ramaiah college of arts, Science and Commerce- Autonomous, Bengaluru, 2024
8. **Third prize** for the abstract on "Synbiotic Fortified Barnyard Millet Based Functional Beverage" at National Conference on "Trends in Multidisciplinary Research: Challenges and Applications" organised by M S Ramaiah College of Arts, Science and Commerce- Autonomous, Bengaluru, in collaboration with Department of Biotechnology, GOI and Microbiologists Society on May 15th and 16th 2024.
9. **Third prize** for Synbiotic Fortified Barnyard Millet Based Functional Beverage, t National Conference on "Trends in Multidisciplinary Research: Challenges and Applications" organised by M S Ramaiah College of Arts, Science and Commerce- Autonomous, Bengaluru, in collaboration with Department of Biotechnology, GOI and Microbiologists Society on May 15th and 16th 2024
10. **Second Prize** for Oral presentation on Evidences that *B. subtilis* SC3.7 produces sublichenin and subtilisin type of lantibiotics at National Conference on "Trends in Multidisciplinary Research: Challenges and Applications" organised by M S Ramaiah College of Arts, Science and Commerce- Autonomous, Bengaluru, in collaboration with Department of Biotechnology, GOI and Microbiologists Society on May 15th and 16th 2024
11. **First prize** for "Microencapsulation of probiotics and dragon fruit bioactive in biopolymeric matrices under food engineering and rheology theme" at the international conference on Recent advances in food science and technology: A way forward organized by DSLD CHEFT, Devihososur-Haveri during 22-24 January 2025

6. Professional Affiliations:

6.1 Teaching:

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

6.2 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, 2024
- 10) Short term course on ‘Development of pour over millet beverage and curd through probiotic bacteria’ was conducted on Sep. 28-30th 2023 and 20-24 Nov. 2023. (No. of participants- 25 & 7, respectively)
- 11) Half day Symposium on Standardizing spirits: understanding Indian standards on alcoholic beverages, Sponsored by BIS, New Delhi. Feb. 27, 2025
- 12) Idli-Dosa batter demonstration 16-21, Jan, 2025 (No. of participants 54)

6.3 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.

7 Research and Development work:

7.1 Journal publications:

Total publications: 141 (as of 13.06.2025)

Total publications(as on 14.02.2025)	=	141
SCI foreign journals	=	107
In Non SCI foreign journals	=	15
In SCI Indian journals	=	16
In Non SCI Indian journals	=	03
Popular article	=	10

Total Google Scholar Citations	4902
h-Index	38
i-10-index	100

7.1a List of important SCI publications of last 5 years

S.N	Author (s)	Title	Name of Journals	IF	Volume	Page	Year
1	Sundararaman, A., Ray, M., Ravindra, P. V., & Halami PM* .	Role of probiotics to combat viral infections with emphasis on COVID-19	<i>Applied Microbiology and Biotechnology</i>	5	104	8089-8104.	2020
2	Mrityunjaya, M., Pavithra, V., Neelam, R., Janhavi, P., Halami PM. , & Ravindra, P. V.	Immune-boosting, antioxidant and anti-inflammatory food supplements targeting pathogenesis of COVID-19	<i>Frontiers in Immunology</i>	7.3	11	57012-2	2020
3	Goel, A. Halami PM & Tamang, J. P	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>	5.2	11	40	2020
4	Thumu SCR and Halami PM*	<i>In vivo</i> safety assessment of <i>Lactobacillus fermentum</i> strains, evaluation of their cholesterol lowering ability and intestinal microbial modulation	<i>Journal of the Science of Food and Agriculture</i>	1.4	100 (2)	705-713	2020
5	Palani Kumar, M. K., Halami PM. , & Serva Peddha, M	Effect of <i>Lactobacillus fermentum</i> MCC2760-based probiotic curd on hypercholesterolemic C57BL6 Mice.	<i>ACS omega</i>	4.1	6	7701-7710.	2021
6	Rohith, H. S., & Halami PM*	<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>	2.8	203	2989-2998	2021

7	Sundararaman, A., Bansal, K., Sidhic, J., Patil, P., & Halami, P. M.*	<i>Genome of Bifidobacterium longum NCIM 5672 provides insights into its acid-tolerance mechanism and probiotic properties</i>	<i>Archives of Microbiology</i>	2.8	203	6109-6118	2021
8	Manjunath, A., Thumu, S. C. R., Kumar, S., & Halami PM* .	Bacterial heteroresistance an evolving novel way to combat antibiotics.	<i>Biologia</i>	1.5	76(10)	3029-3041.	2021
9	Sundararaman, A., & Halami, P. M.* .	Genome editing of probiotic bacteria present status and future prospects	<i>Biologia</i>	1.5	77	1831-1841	2021
10	Sharma, B. R., Jayant, D., Rajshee, K., Singh, Y., & Halami PM*	Distribution and diversity of nisin producing LAB in fermented food	<i>Current Microbiology</i>	2.6	78,	3430-3438	2021
11	Naushin S, Sardana V, Ujjainiya R, Bhatheja N, -----	Insights from a Pan India Sero-Epidemiological survey (Phenome-India Cohort) for SARS-CoV2	<i>Elife</i>	7.7	10	e66537	2021
12	Sharma, B. R., Halami PM. , & Tamang, J. P	Novel pathways in bacteriocin synthesis by lactic acid bacteria with special reference to ethnic fermented foods	<i>Food Science and Biotechnology</i>	2.9	31	1-16.	2021
13	Archer, A. C., Muthukumar, S. P., & Halami PM*	<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>	4.9	13	1068-1080	2021
14	Rohith, H. S., & Halami PM* .	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>	4.9	15	351–362	2021
15	Singh, P., Ujjainiya, R., Prakash, S., Naushin, S., Gupta, D & Halami,	A machine learning-based approach to determine infection status in recipients of BBV152	<i>Computers in Biology and Medicine</i>	7.7	146,	105419	2022

	PM et al.	whole virion inactivated SARS-CoV-2 vaccine for serological surveys.					
16	Dindhoria K, Kumar S, Baliyan N, Raphel, S, Halami PM* and Kumar R	<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>	3.5	840,	14674 4	2022
17	Baruah, R., Ray, M., & Halami PM* .	Preventive and therapeutic aspects of fermented foods	<i>Journal of Applied Microbiology</i>	4	132(5),	3476- 3489	2022
18	Epparti, P., Eligar, S. M., Sattur, A. P., Kumar, B. G., & Halami PM* .	Characterization of dual bacteriocins producing <i>Bacillus subtilis</i> SC3.7 isolated from fermented food	<i>LWT</i>	6	154	11285 4	2022
19	Ray, M., Manjunath, A., & Halami, PM* .	Prevalence of polymyxin resistance through the food chain, the global crisis.	<i>The Journal of Antibiotics</i>	3.3	75	185- 198	2022
20	Goel, A., & Halami, P. M.*	Structural and biosynthetic diversity of plantaricins from <i>Lactiplantibacillus</i> .	<i>Applied Microbiology and Biotechnology</i>	5	107	5635- 5649	2023
21	Ray, M., Manjunath, A., & Halami, P. M.*	Effect of probiotics as an immune modulator for the management of COVID-19	<i>Archives of Microbiology</i>	2.8	205	182	2023
22	Geetha, V., Chathur, K. N., Ramkumar, S., & Halami, P. M. and Suresh kumar	<i>In vitro</i> fermentation of glycosaminoglycans from mackerel fish waste and its role in modulating the antioxidant status and gut microbiota of high fat diet-fed C57BL/6 mice.	<i>Food & Function</i>	6.1	14 (15),	7130- 7145	2023
23	Baruah, R., Kumar, P. P., Gangani, S., Prashanth, K. H., & Halami, P. M.*	Structural characteristics and functional properties of a fucose containing prebiotic exopolysaccharide from <i>Bifidobacterium breve</i> NCIM 5671	<i>Journal of Applied Microbiology</i>	4	134 (11)	1xad26 2.	2023

24	Goel, A., Chauhan, A. S., & Halami, P. M.*	<i>LactiplantiBacillus 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>	3.4	17	6425–6439	2023
25	Nair, D., Zarei, M., Halami, P. M. , & Talahalli, R.	<i>Lactobacillus fermentum</i> MCC2760 abrogate high-fat induced perturbations in the enterohepatic circulation of bile acids in rats	<i>Life Sciences</i>	6.1	320	12156–3	2023
26	Rohith, H. S., Peddha, M. S., & Halami, P. M.*	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>	4.9	16	894–910	2023
27	Ashwini, M., Ray, M., Sumana, K., & Halami, P. M.	Prevalence of macrolide–lincosamide–streptogramin resistant lactic acid bacteria isolated from food sample	<i>Journal of Food Science and Technology</i>	3.1	60 (2)	630–642	2023
28	Raphel, S., & Halami, P. M.*	Genome mining of <i>Bacillus licheniformis</i> MCC2514 for the identification of lasso peptide biosynthetic gene cluster and its characterization	<i>Archives of Microbiology</i>	2.8	206	143	2024
29	Ishrat J. P, and Halami P. M*	Improved production of RNA inhibiting antimicrobial peptide by <i>Bacillus licheniformis</i> MCC 2514 facilitated by a genetic algorithm optimized media	<i>Bioprocess and Biosystems Engineering</i>	3.8	47	683–685	2024
30	Tamang, J. P., Kharnaia, P., & Halami, P. M.*	Lactic acid bacteria in some Indian fermented foods and their predictive functional profiles.	<i>Brazilian Journal of Microbiology</i>	2.2	55	1745–1751	2024

31	Ray, M., Ashwini, M., & Halami, P.M.*	The Occurrence of Colistin Resistance in Potential Lactic Acid Bacteria of Food-Producing Animals in India	<i>Current Microbiology</i>	2.6	81(9)	1-15	2024
32	Peerzade, I. J., Peddha, M. S., & Halami, P. M.*	The lasso peptide produced by <i>Bacillus licheniformis</i> MCC 2514 demonstrates efficacy in treating in-vivo <i>Salmonella typhimurium</i> infection.	<i>International Journal of Biological Macromolecules</i>	7.7	281	13647-0.	2024
33	Raphel, S., & Halami, P. M.*	Bioactive compounds from food-grade <i>Bacillus</i> https://doi.org/10.1002/jsfa.13935	<i>Journal of the Science of Food and Agriculture</i>	3.3	-	-	2024
34	Keremane, V. R., Yashwanthkumar, M. H., Uppin, V., Halami, P. M. , & Talahalli, R. R.	<i>Lactobacillus fermentum</i> MCC2760 attenuates heated Oil-induced Brain Oxidative Stress and Inflammation via Modulation of NRF2 and NF-kB in Rats.	<i>Molecular Nutrition & Food Research</i>	4.6	68(23)	24006-56.	2024
35	Achi, S. C., Chetana, R., Asha, M. R., Raphel, S., & Halami, P. M.*	Dark chocolate: delivery medium for probiotic <i>Bifidobacterium breve</i> NCIM 5671.	<i>Journal of Food Science and Technology</i>	3.1	61	1411-1415	2024
36	Keremane, V., Kamala, H., Halami, P.M. , & Talahalli, R.	<i>Lactobacillus fermentum</i> MCC2760 attenuates neurobehavioral alterations induced by oxidized oils in rats.	<i>Metabolic Brain Disease</i>		40(1)	1-14	2025
37	Komatwar K , Sundararaman A, Raphel S, and Halami, P.M.	Whole Genome Analysis of <i>Limosilactobacillus fermentum</i> MCC0552 for Probiotic Functionalities and Comparative Genomic Study with Reference Strains. <i>Probiotics and Antimicrobial Proteins</i>	<i>Probiotics and Antimicrobial Proteins</i>	4.9	-	-	2025
38	Rohith, H. S., Peerzade, J. I., and Halami, P. M.*	Formulation and analysis of probiotic <i>Bacillus licheniformis</i> MCC 2514 infused osmo dried carrot	<i>Journal of Food Science and Technology</i>	3.1	-	-	2025

Publication as a corresponding author*7.1b 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	4	205
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	2.5	4
3.	Sublichenin, a new subtilin-like lantibiotics of probiotic bacterium <i>Bacillus licheniformis</i> MCC 2512T with antibacterial activity. <i>Microbial Pathogenesis</i>	<i>Microbial Pathogenesis.</i> 128:139-146	3.3	36

7.2 Books edited/ Authored

- 1) **Halami, P. M., & Sundararaman, A. (Eds.). (2024).** Genome Editing in Bacteria (Part 1) Bentham Science Publishers, 200pg ISBN 9815165690, 9789815165692
- 2) **Halami, P. M., & Sundararaman, A. (Eds.). (2024).** Genome Editing in Bacteria (Part 2) Bentham Science Publishers, 329pg ISBN 9815223801, 9789815223804
- 3) D Dhansekharan and Halami PM (Eds.). Postbiotics Health and Industry Elsevier ISBN: 9780443221880. Oct. 1, 2024

7.3 Book chapter/s publications:

Total number of book chapters published: **21**

List of book chapter publications in the last 5 years:

- 1) 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.
- 2) 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.
- 3) 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.
- 4) 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.
 - 5) 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
 - 6) Aravind S., Shetty K, **Halami PM*** (2022). Role of probiotics in autism spectrum disorders. In the book, Microbiome, gut brain axis. ISBN 978-981-16-1625-9 Page. 355-366.
 - 7) 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.
 - 8) 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.
 - 9) Steji R and **Halami PM***. Genome editing in *Bacillus licheniformis*: Current Approaches and Applications, a book chapter in Genome Editing in Bacteria (Part 1), 2024, Bentham Science Publisher, ISBN: 978-981-5165-68-5 pp 156-180
 - 10) Aravind S and **Halami PM***. Metabolic engineering of *Bifidobacterium* sp. Using genome editing techniques, a book chapter Genome Editing in Bacteria (Part 1), 2024, Bentham Science Publisher, ISBN: 978-981-5165-68-5 pg88-105
 - 11) Bathula S and **Halami PM***. Genome editing in Cyanobacteria, a book chapter Genome Editing in Bacteria (Part 2), 2024, Bentham Science Publisher, pp 142-157
 - 12) Peerzade, I. J., Kudre, T., & Halami, P. M. Poultry and Meat Processing. In *Frontiers in Food Biotechnology* (pp. 427-444). 2024, Singapore: Springer Nature Singapore.

7.4 Patents obtained:

SI. 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	India	Patent No. 512/DEL/2004	Shamala, TR, Anil-kumar, PK, Kshama lakshman, Halami PM , Joshi GJ,

	co-polymer			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

7.5 Papers presented in symposium/conference:

- I. National:**
Total number of papers presented: 99
- II. International:**
Total number of papers presented: 97

7.5a List of papers presented in international conferences in the last 5 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) 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
- 12) 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
- 13) 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
- 14) 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

- 15) Dhanasekaran D and Halami P M. Exopolysaccharides as a postbiotics: production and characterization from lactobacilli and bifidobacteria. 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
- 16) 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
- 17) 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
- 18) 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
- 19) 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
- 20) 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
- 21) 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
- 22) 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
- 23) 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
- 24) 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

- 25) 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
- 26) Epparti P, and *Halami P M** (2024) Oral presentation on genome mining of *Bacillus subtilis* SC3.7 for the identification of bacteriocins and their characterization at International Microbiology Conference Microcosm 1.0, Innovating microbial solutions towards a sustainable future, JSS Academy of Higher Education and Research, 15-16th Nov. 2024
- 27) Nikil, D, Epparti P, Shym R G and **Halami P M*** (2024) Microencapsulation of probiotics and dragon fruit bioactive in biopolymeric matrices under food engineering and rheology theme at the international conference on Recent advances in food science and technology: A way forward organized by DSLD CHEFT, Devihososur-Haveri during 22-24 January 2025 (First Prize).

7.5b Invited lecture/s, Technical seminar:

I. National

🚩 **Total number:**

81

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

- 1) 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.
- 2) 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.
- 3) 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.
- 4) 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
- 5) 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.

- 6) Delivered lecture on Rejuvenation of gut microbiota through probiotics: A CSIR-CFTRI initiatives at Pooja Bhagwat PG Centre, Mysore. 27.05.2022
- 7) Delivered a lecture on Background of FPIC dept. STC1088: Fumigation, prophylaxis and pest management techniques for stored food commodities. 10.06.2022
- 8) Delivered lecture to the participants STC1088: Microbial infestation of stored food commodities. 13.06.2022
- 9) 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
- 10) Delivered lecture in National Conference on Integrated Microbial Technology for Sustainable Future (IMTSF-2022) Alosuis College, Coorg. 7-8, July 2022,
- 11) **Halami PM** and Padmaja R.J. 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
- 12) **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
- 13) 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 prspectives for sustainable future. 15-16. 02. 2023, Warangal
- 14) **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
- 15) Microorganisms: novel source of food additives and safety concern of AMR in Food Chain Invited talk at ational Symposium On “Multi-Disciplinary Trends in Food Technology & Nutrition Safety, Department of Food Technology,, MS Ramaiah University of Applied Sciences Bengaluru, 3 Nov. 2023
- 16) Guest lecture on the topic Gut microbiota and probiotic at MMK & SDM College For Women, Mysuru, 22 May 2023

- 17) Gut microbiota and dietary fibers of millets. A invited talk at national symposium on “Revisiting millets for food and nutrition security, JSS Academy of Higher Education and Research, Mysuru 19-20th May 2023
- 18) Probiotics-Application in food and dairy products invited lecture in National workshop on Probiotics-Application in food and dairy products, Sanjivani Arts, Commerce, and Science College, Kopargon, 8th July 2023 (online)
- 19) Microbiome modulation through probiotics A CSIR CFTRI initiative. Invited talk at two Day National Seminar on The Microbiome Revolution: From Fundamental Science to Therapeutic Innovations, Bhavans Vivekananda College of Science, Humanities and Commerce, Sainikpuri, Secunderabad, 24 & 25 Jan 2024
- 20) Gut microbiota, a invited talk at Refresher course on Bioscience and Biotechnology, organized by UGC-MMTTC, JNVU, Jodhpur. 02-15 Feb 2024
- 21) GRAS microbes: Nutritional and health security of future. Invited talk at National level seminar on Trends in Multidisciplinary research: Challenges and Application, M.S.Ramaiah College of Arts, Science and Commerce (MSRCASC), Bangalore. 15 & 16th, May, 2024.
- 22) Research Initiatives on Postbiotics in India. Invited talk at First National Seminar on: Postbiotics – New Emerging Area in Functional Foods Health Benefits, Applications in Food Industry & Future Prospects
- 23) Microbiome modulation through millets – A case study. Invited talk at Two days faculty development programme on ‘Trends in modern Biotechnology and skill development’ in association with MMTTC 29th Nov. 2024, DoS in Biotechnology, Univ of Mysore
- 24) Gerobiotic potential of probiotic bacteria. Invited talk at 30th Indian Convention of Food Technologists ICFoST 2024 at D Y Patil Deemed to Be University, Center of Excellence, Nerul, Navi Mumbai on 19-21, Dec. 2024.
- 25) Probiotics : Applications in poultry Industry. Invited talk at Two days workshop on probiotics: applications in poultry industry under SSR activity sponsored by DST-SERB-CRG project; DoS in Microbiology; Univ of Mysore. 21-22, Jan. 2025
- 26) Invited talk on Carrier opportunities in Microbiology Probiotic carrot nectar- CSIR-CFTRI innovative technology for health and wellness; Yuvaraja College Mysore. 6th March 2025
- 27) Indigenous Probiotics FOR Better health. Invited talk at 47th Meet at Mysuru ; GSSS Technology Business Incubator Foundation. 8th March 2025
- 28) Lasso peptide producing probiotic *Bacillus licheniformis* for Food security & Food Safety. Department of Biotechnology, Central University of Tamil Nadu,

Thiruvavur are organizing a Seminar on Biotechnology at the Crossroads of Interdisciplinary Sciences on 17th March, 2025.

- 29) Expert Talk: Research opportunities in Germany; Study Day in Germany; Master and PhD in Focus. Vijnana Bhavan Auditorium, University of Mysore, Mysore, organized by DAAD Bangalore on 15th March 2025
- 30) lecture in 21 days online teaching cum training on 'Student Capacity Building Programme entitled "Dairy Microbiological tools and techniques" for for UG perusing B.Tech (DT) and Masters in Dairy Microbiology organized by Department of Dairy Microbiology, Sanjay Gandhi Institute of Dairy Technology (SGIDT), BASU Patna. 20-Aug-09 Sept 2024
- a) Fermented food & Health benefits, and
 - b) Fermentation Technology for Production of value aided products, during 6- 7th Sept 2024.

II. International:

 **Total number:**

20

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

- 1) **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
- 2) **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
- 3) Fermentative transformation of food industry Bioresources for better economy invited talk at International Conference on Innovations on biotechnology research for sustainable bioresources and bioeconomy: challenges and practices, Sanjivani Arts, Commerce, and Science College, Kopargon, 5-16 Feb 2024.
- 4) Wonder of kodo and barnyard millet based probiotic product. Invited talk at International conference on "Reviving ancient grains: millet on global stage, Feb 8-9 2024, Kolar
- 5) Value addition through microbial processing: newer avenues for Bio-entrepreneurship. Invited talk at Three days International level conference "Biomake in India II", Krishna Vishna Vidyapeeth, Karad, 19-21 Jan 2025

8. Research Supervised:

8.1 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/Dr. Aditi Goel
9	Studies on production, purification and properties of novel peptide antibiotics of probiotic bacteria	2025/ Ms. Ishrat Jahan Peerzade (Submitted)

b) In the field of Microbiology

SN	Thesis title	Year of award/ Name of the candidate
10	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
11	Characterization of fibrinolytic enzyme of <i>Bacillus</i> species isolated from food source	2018/ Dr. Yogesh D
12	Molecular assessment of aminoglycoside resistance in	2018/ Dr. Jaimee George

	<i>Enterococcus</i> sp.	
13	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
14	Effect of bifidobacterial probiotics on alleviation of inflammation.	2020 / Dr. Sajan C Achi
15	Evaluation of structural and functional properties of subtilin-like lantibiotics produced by <i>Bacillus</i> species	2022/Dr. Pramila Epparti&
16	Identification of the biosynthetic gene involved in the peptide antibiotic production by <i>Bacillus licheniformis</i> MCC 2514 and its mechanism of action	2025/ Dr. Steji Raphel

8.2 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 - 2022	Recombinering of bifidobacteria using CRISPR Cas9	CSIR Nehru post doc fellow

5	Dr. Rwivoo BARUA; April 2019 - 2022	Elucidation of structural and functional properties of heteropolysaccharide from probiotic <i>Bifidobacterium breve</i> NCIM 5671	CSIR-RA
6	Dr. Mousumi Ray; Sept 2019 - 2022	Elucidation of molecular mechanism of colistin resistance among food- borne pathogens and food bacteria	ICMR RA

8.3 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

8.4 Post-Graduation:

a) Total number of post-graduation dissertations supervised:	98
🚦 B.Tech:	7
🚦 M.Tech:	8
🚦 B.Sc.:	1
🚦 M.Sc.:	82

9. 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).

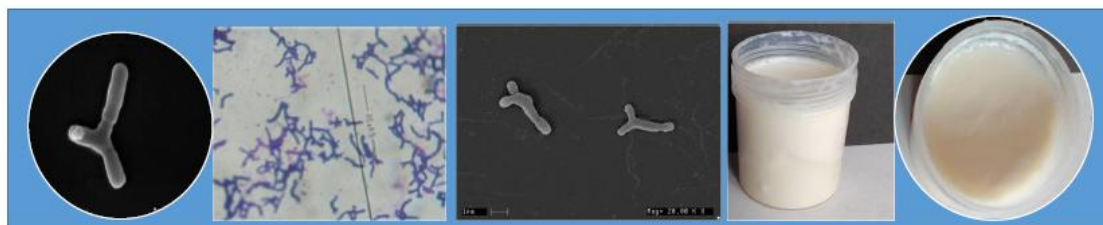
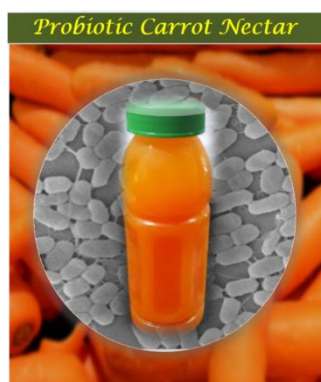


Figure: Pictorial representation of native isolate of probiotic bifidobacteria and the fermented product developed as a part of translational research.

- iii) **Probiotic carrot nector:** *Lactobacillus plantarum* MCC5231 was incorporated carrot nector exhibiting anti-obesity properties and the product having rich in vitamin A.



Probiotic carrot-based nectar is a unique product which has been developed using carotene rich carrot. The product developed was found to be excellent in all of the tested parameters. Viability studies showed a great log count after product formulation, and during storage at two different temperatures. An overall sensory score was 8.4 and its sensory quality is tremendous. The proximate studies present that components in probiotic carrot-based nectar development comes within the range of BIS specifications. A PDRU process under

considerations at institute level, 2024.

10. Research Projects completed:

SN	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	DST	7.5	Feb. 2007 to Feb.

	application in biopreservation (PI)			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	CSIR	100	Apr 2020 to March 2021

	techniques/protocols for the detection of Covid virus			
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
20	Targeting improved gut health with underutilized Indian berries/pseudo berries as source of prebiotics and nutraceuticals	DBT	-	2021-2024
21	Identification of potential locations across India for seaweed cultivation and their valorisation; CSIR New Delhi (HCP0024)	CSIR New Delhi	-	March 2021 to March 2024
22	Study of neutral spirits for alcoholic drinks for their quality and safety parameters (FAD0015 (PI)	FAD	9	June 2024-Jan. 2025

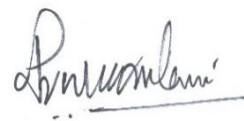
11. Ongoing Research Projects

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	Post-biotics for gut microbiome eubiosis in different terrain DRDO-DFRL Mysore.	PI	Jan 2023-Jan 2025 Postbiotic formulation for diabetes and hyperlipidemia preclinical trials Jan 2026

I hereby declare that the information furnished as above is true to the best of my knowledge and belief

Dated: 17/06/2025

CFTRI Mysore



Prakash M HALAMI