

Dr. Kriti Ghatani

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Subject specialization: Food Microbiology, Functional foods

Areas of Research Interest:

- Probiotics
- Microbial diversity of ethnic fermented foods
- Health benefits of fermented foods
- Value addition of foods

No. of Ph.D. students: Ongoing 2

No. of M.Phil. students: Nil

No. of M.Sc. students: 5 (M.Sc. Dissertation)

No. of Publications: 10

Achievement & Awards:

- Qualified National Eligibility Test (NET) – I in 2014.
- Qualified National Eligibility Test (NET) – II in 2014.
- Qualified State Level Eligibility Test (SLET) – in 2013.
- Young Scientist Award -2018, in National conference on Chemistry for Human Health and Environment organized by Green Chemistry Network Centre (GCNC) and National Environmental Science Academy (NESA), Delhi.
- Young Scientist Award- 2016, in an International Conference on Nutraceuticals and Functional Foods-The Challenges and Opportunities, organized by AAU, Anand and Indian Society of Agricultural Biochemists Kanpur, 2016 at Anand Agricultural University, India.
- Best Poster Award in an International Conference on Ethnic Fermented Foods and Beverages: Microbiology and Health Benefits, 2015, Sikkim University, Gangtok, Sikkim and SASNET-Fermented Foods.
- Best Oral Presentation Award in an International Conference, AFSET, 2012, Krishi Sanskriti at Jawaharlal Nehru University, New Delhi.
- Senior Research Fellowship under Rajiv Gandhi National Fellowship Govt. of Indian July, 2012.
- Junior Research Fellowship under Rajiv Gandhi National Fellowship Govt. of Indian July, 2010.
- Awarded Gold medal and certificate of Merit in B.Sc Microbiology Honours in 2007, St. Josephs College, Darjeeling.

Professional Experiences:

- Assistant Professor in Department of Microbiology, Raiganj University, Uttar Dinajpur from March, 2017 to June 2019.
- Assistant Professor (WBCSC) in Department of Microbiology, Raniganj Girls' College, Searsole, Rajbari, Dist. Burdwan from October 2016 to March 2017.
- Government approved part-time lecturer in the Department of Microbiology, Darjeeling Govt. College December 2009 to February 2011.

Administrative Experiences:

- Head, Department of Food Technology, University of North Bengal.
- Superintendent, Nivedita Girls Hostel.
- Head of the Department, Dept. of Microbiology, Girls' College, Searsole, Rajbari, Dist. Burdwan, October 2016 to March 2017.
- Treasurer, Sports Board of Raiganj University.

Research Projects:

<i>Title of the Project</i>	<i>Funding Agency</i>	<i>Grant Received (Rs.)</i>	<i>Date of implementation</i>	<i>Remarks</i>
Evaluation of efficacy and safety of indigenous probiotic strains having hypocholesterolaemic property	UGC University Research Grant	1.5 Lakh	09.09.2019	Completed
Production of functional pickle by probiotic strain isolated from plant based fermented foods	DST-SERB Govt. of India	45.99144 Lakh	29.01.2020	Ongoing
Selection of Bacterial enzyme for industrial application from <i>Doi</i> , an ethnic Fermented Milk product of North Bengal.	UGC University Research Grant	1.5 Lakh	13.11.2020	Ongoing

Selective List of Publications:

Research papers

1. Ghatani K and Tamang B. (2017). Assessment of probiotic characteristics of lactic acid bacteria isolated from fermented yak milk products of Sikkim, India: Chhurpi, Shyow, and Khachu in *Food Biotechnology*, Vol.31(3)210–232
2. Ghatani K and Tamang B. (2017). Screening of indigenous lactic acid bacteria for cholesterol lowering and additional probiotic attributes. Published in *Indian Journal of Agricultural Biochemistry*. Print ISSN: 0970-6399, Online ISSN: 0974-4479, Vol 30, No.1, 85-91.
3. Ghatani K and Tamang B. (2016). Indigenous rearing practices of Yak and its multipurpose uses in the Sikkim Himalayas. *IOSR Journal of Agriculture and Veterinary Science (IOSR-JAVS)* e-ISSN: 2319-2380, p-ISSN: 2319-2372. 9(3)1:1-8.
4. Ghatani K, Sha S P and Yadav K K. (2013). A Comparative Study of extraction procedures for Isolation and Characterization of Extracellular Polymeric Substances of *Proteus mirabilis*. *International Journal of Environmental Research and Development*. Volume 3, Number 8:39-43, ISSN No: 2249-3131.

5. Ghatani K and Sha S P (2013). *Tari*, a naturally fermented alcoholic beverage of West Bengal. *International Journal of Biotechnology and Bioengineering Research*, Volume 4, Number 3: 415-420, ISSN No: 2231-1238.
6. Sha S P and Ghatani K (2013). *Khajur Tari*, a naturally fermented alcoholic beverage of West Bengal and Bihar. *International Journal of Biotechnology and Bioengineering Research*, Volume 4, Number 3:401-408, ISSN No: 2231-1238.
7. Ghatani K, Sha S P and Tamang J P.(2013). Dalbari, a Traditional Pulses based fermented food of West Bengal. *International Journal of Environmental Research and Development*. Volume 3, Number 8:34-38, ISSN No: 2249-3131.
8. Ghatani K, Thakur N and Tamang B.(2012) "Isolation and characterization of cholesterol utilizing potential Lactic acid bacteria" in an *International Journal of Agriculture and Food science and Technology*, Volume 3, Number 2:117-112, ISSN 2249-3050.

Book Chapters

1. Ghatani K. (2020). Application of Bile salt hydrolase enzyme in cholesterol lowering. In *Microbial Fermentation and Enzyme Technology*. Editors, Thatoi H, Pradeep K. Das Mohapatra P. K. D, Mohapatra S, Mondal K.C published by CRC Press, Taylor and Francis. International Standard Book Number-13: 978-0-3671-8384-4.
2. Sha S.P and Ghatani K. (2020). Traditional Indian Fermented Foods and Their Health Promoting Effects. In *Microbes, Environment and Human Welfare*. Editor Sha. T and Tiwari. B, ISBN: 978-1-53617-945-3.
3. Ghatani K, Alam R and Sha S.P. (2020). Documentation of food culture of ethnic community of Uttar Dinajpur District of West Bengal. In *Contemporary Research on Folk Studies*. Editors, Pal. T, Bhuimali A and Mishra M. ISBN 978-622- 6206-800.
4. Ghatani K. (2018). Bioinformatics: a key tool for analysis of biological molecules". A handbook of bioinformatics. In *Information Technology, Biological sciences and Society: A handbook* edited by P.KPaul and B.K Santra. ISBN 978-93-86453-40-2 pp: 113-118.
5. Ghatani K and Sha S P. (2018). Role of Lactic acid bacteria in food fermentation, In Cambridge Press.
6. Ghatani K and Sha S P. (2018). Applications of Culture-Independent technique (PCR-DGGE), for microbial diversity analysis in Food and Food products. In Cambridge Press.
7. Ghatani K. (2017). Traditional food culture of the ethnic community in Sikkim Himalayas- A potential to economic development. In *National Integrity and its Crisis: The responsibilities of NSS*. ISBN 978-81-928721-3-1 pp 348-355.

Book Published

1. *Fundamentals of Food Microbiology*, ISBN: 978-93-86138-79-8. Research India Publications, New Delhi.2017.
2. *Multiple choice Questions in Microbiology*, Volume 1, ISBN: 978-93-86138-96-5, Research India Publications, New Delhi.2017.

Popular Articles

1. An article published in News paper Sikkim Now "Is fluoride in your water really good"? Sha S P and Ghatani K. October 6, 2012.
2. An Article on "Large Cardamom : The Queen of Spices" was published in Agrobios Newsletter, a monthly magazine of Agricultural and Biological sciences, Vol 10, Issue No. 5, October 2011.

Sequences submitted to genebank (NCBI)

1. Ghatani, K and Tamang, B. (2016) *Lactobacillus* sp. YD8S 16s rRNA gene, partial sequence of 1,452 bp, Acc. No. KU601439.1, <http://www.ncbi.nlm.nih.gov>.
2. Ghatani, K and Tamang, B. (2016) *Lactobacillus plantarum* strain YD5S 16s rRNA gene, partial sequence of 1,480 bp, Acc. No. KU601440.1, <http://www.ncbi.nlm.nih.gov>.
3. Ghatani, K and Tamang, B. (2016) *Lactobacillus* sp. YD11S 16s rRNA gene, partial sequence of 1,472 bp, Acc.No. KU601441.1, <http://www.ncbi.nlm.nih.gov>.
4. Ghatani, K and Tamang, B. (2016) *Lactobacillus* sp. YD9S strain 16s rRNA gene, partial sequence of 1,012 bp, Acc. No. KU601442.1, <http://www.ncbi.nlm.nih.gov>.
5. Ghatani, K and Tamang, B. (2016) *Enterococcus* sp. YY1 strain 16s rRNA gene, partial sequence of 769 bp, Acc. No. KU601443.1, <http://www.ncbi.nlm.nih.gov>.
6. Ghatani, K and Tamang, B. (2016) *Enterococcus* sp. YHC20 strain 16s rRNA gene, partial sequence of 1,474 bp, Acc. No. KU601444.1, <http://www.ncbi.nlm.nih.gov>.
7. Ghatani, K and Tamang, B. (2016) *Enterococcus* sp. strain B/HS03 16s rRNA gene, partial sequence of 881 bp, Acc. No. KX274030.1, <http://www.ncbi.nlm.nih.gov>.
8. Ghatani, K and Tamang, B. (2016) *Enterococcus* sp. strain G/HS10 16s rRNA gene, partial sequence of 922 bp, Acc. No. KX274031.1, <http://www.ncbi.nlm.nih.gov>.
9. Ghatani, K and Tamang, B. (2016) *Enterococcus* sp. strain F/HS18 16s rRNA gene, partial sequence of 1,407 bp, Acc. No. KX274032.1, <http://www.ncbi.nlm.nih.gov>.
10. Ghatani, K and Tamang, B. (2016) *Enterococcus* sp. strain J/HS23 16s rRNA gene, partial sequence of 941 bp, Acc. No. KX274033.1, <http://www.ncbi.nlm.nih.gov>.
11. Ghatani, K and Tamang, B. (2016) *Enterococcus* sp. strain H/HS31 16s rRNA gene, partial sequence of 930 bp, Acc. No. KX274034.1, <http://www.ncbi.nlm.nih.gov>.
12. Ghatani, K and Tamang, B. (2016) *Enterococcus* sp. strain I/HS04 16s rRNA gene, partial sequence of 943 bp, Acc. No. KX274035.1, <http://www.ncbi.nlm.nih.gov>.
13. Ghatani, K and Tamang, B. (2016) *Enterococcus faecium* strain K/HS44 16s rRNA gene, partial sequence of 485 bp, Acc. No. KX354351.1, <http://www.ncbi.nlm.nih.gov>.
14. Ghatani, K and Tamang, B. (2016) *Enterococcus faecium* strain D/YHC12 16s rRNA gene, partial sequence of 738 bp, Acc. No. KX387371.1, <http://www.ncbi.nlm.nih.gov>.

Invited lecture

1. Delivered lecture on Livelihood management and sustainable development of ethnic communities of Sikkim Himalayas with reference to traditional foods in International conference on Environment and Society ICES 2020 on 26th, 27th and 28th December, 2020 jointly organized by ABRF and GESA.
2. Delivered lecture on Technological properties of probiotic bacteria from *Misti doi*, a fermented milk product in National Seminar on Recent Advances in Translational Research organized by Department of Biotechnology, University of North Bengal, 29th February, 2020.
3. Delivered lecture on Role of Microbiology in Quality assurance of Foods and Beverages in Food Tech Conclave on 14th February, 2020 at Courtyard Marriot Hotel, Siliguri organised by the Indian Chamber of Commerce, Ministry of Food Processing Industries, Government of India.

Paper presentations

1. Oral presentation in “Agriculture, Food Sciences and Environmental Technology for Sustainable Global Development” (AFSET) on 28-29th Oct 2012, organized by Krishi Sanskriti at JNU, New Delhi.
2. Oral presentation in International 7th Asian Conference on Lactic Acid Bacteria” (ACLAB) on 6th to 8th September 2013 at New Delhi.
3. Poster presentation in National Seminar on Applied Microbiology: Microbial World 2014 by organized by Dept. of Microbiology, University of North Bengal on March 14th, 2014.
4. Oral presentation in UGC sponsored National Seminar on Global climate change and its impact on Floral, Faunal and Microbial biodiversity, organized by Dept. of Botany, St. Joseph’s College Darjeeling in collaboration with Teesta Torsa Agro Care Welfare Society, Kalimpong held in June 26th to 28th, 2015.
5. Oral presentation in 1st Regional Science and Technology Congress, Bardhaman Division, jointly organized by Department of Science and Technology, Govt. of West Bengal and Bankura Christian College, Bankura on 7th – 8th November, 2016 at Bankura Christian College.
6. Participated and orally presented paper in University of Delhi in 2 days (15th and 16th December 2018) National conference on Chemistry for Human Health and Environment organized by Green Chemistry Network Centre (GCNC) and National Environmental Science Academy (NESA), Delhi.
7. Participated and delivered Oral presentation in an International conference on Local Issues Global resolutions: Ecology, Environment, Climate and Economy organized by, Raiganj University, 10th-11th January, 2018.
8. Oral presentation in an International Conference on Nutraceuticals and Functional Foods- The Challenges and Opportunities, organized by Anand Agricultural University, Anand and Indian Society of Agricultural Biochemists Kanpur on 6th – 8th December, 2016 at Anand Agricultural University.
9. Poster presentation in International Conference on “Ethnic Fermented Foods and Beverages: Microbiology and Health Benefits” on 20th -21st November, 2015 Organised by Department of Microbiology, Sikkim University, Gangtok, Sikkim, India In Association with SASNET-Fermented Foods.

Participation seminars/conferences/workshop

Seminar

1. Participated in the Third Science Conclave: National Seminar, A Congregation of Nobel Laureates at Indian Institute of Information Technology, Allahabad, and 8th – 14th Dec 2010.
2. Participation in National Seminar on Micro and Macro resources in Biomolecular Technology organized by Dept. of Biotechnology and Microbiology, University of North Bengal on Feb 25th -26th, 2013.

Conferences

1. Participation in National Conference on Tea Culture and Science- jointly organized by Department of Plantation Management and studies, Sikkim University and Tea Board on April 9th, 2013.
2. Participation in Frontier Lectures in Biology under “ INSA 100 Lectures” organized by Dept. of Botany, Sikkim University on 15th November, 2013.

Workshops

1. One Day Workshop on “Career Business prospects in Food Processing” organized by National Institute of Food technology Entrepreneurship and Management, New Delhi and Indian Institute of Crop processing Technology, Tamil Nadu held on 29th Sept 2010 at Gangtok.
2. Participated in a workshop on Capacity Building in Effective Management of Intellectual Property Rights (IPR) in Biotechnology by Universities and Research Institutes in Sikkim, organized by DBT, Govt. Of India, Delhi on November 04-05, 2014.
3. Participated in one day workshop on “Biosafety and Bioethics” held on 22nd May 2015 at Conference Hall, Vigyan Bhawan, Deorali, Gangtok, organized by Sikkim Biotech Hub, State Council of Science and Technology with the support from Department of Biotechnology, Govt. of India, Delhi.