

CURRICULUM VITAE

SANTOSH KUMAR TIWARI

Associate Professor

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Education

- Ph.D. (Genetics) 2008. Production, Purification and Characterization of plantaricin LR14: A Novel Two-Peptide Bacteriocin from *Lactobacillus plantarum* LR/14. Supervisor: Prof. Sheela Srivastava, Department of Genetics, University of Delhi South Campus, New Delhi, India
- M.Sc. (Botany) 1997. Udai Pratap College (Varanasi), Purvanchal University, U.P., India

Employments

- Assistant Professor (26th July 2008 - 2nd May 2010) Banasthali University, Rajasthan
- Assistant Professor (3rd May 2010 – 25th July 2020) Maharshi Dayanand University, Rohtak
- Associate Professor (26th July 2020 - Present) Maharshi Dayanand University, Rohtak

Awards, Memberships and Fellowships

- INSA Indo-Australia EMCR Fellowship (Monash University, Clayton, Victoria, Australia) 2017-18
- IUSSTF Indo-US Research Fellowship (Rutgers, The State University of New Jersey, USA) 2010-11
- DST Young Scientist (FAST TRACK Scheme), 2009-12
- Innovative Young Academician/Researcher Award, 2010
- Member, Society for Applied Microbiology, London, 2017
- Life Member, Indian Science Congress 2014
- Life Member, Probiotic Association of India 2015
- Life Member, Biotech Research Society of India, 2014
- Life Member, Association of Microbiologists of India, 2003
- Founder Life Member, Swedish South Asian Network on Fermented Foods, 2003
- Secretary, Association of Microbiologists of India, Rohtak Unit, 2015
- Regular Member of Human Proteome Organization USA, 2011
- ICMR Research Associate Fellowship, 2008
- ICMR Senior Research Fellowship, 2006
- CSIR/UGC National Eligibility Test (NET), December, 2001

Academic distinctions

- Associate Editor, Probiotics and Antimicrobial Proteins
- Editor, Journal of Applied Microbiology
- Editor, Letters in Applied Microbiology
- Reviewer of more than 25 journals of international repute such as Process Biochemistry, Biotechnology Process, Biocatalysis and Biotransformation, Probiotics and Antimicrobial proteins, Journal of Applied Microbiology, Letters in Applied Microbiology etc.
- Member of Committee for Research Promotion Policy (2018) Maharshi Dayanand University, Rohtak
- Member Faculty of Life Science, 2010-11, 2017-18, Maharshi Dayanand University, Rohtak
- Member of Admission Committee, Since 2010, Department of Genetics, Maharshi Dayanand University Rohtak
- Member of Post Graduate Board of Studies (PGBoS), Department of Genetics, M. D. University Rohtak
- Member of Departmental Research Committee 2011, Department of Genetics, M. D. University Rohtak
- Member of Course Curriculum Design for M.Sc. Genetics, Department of Genetics, M. D. University Rohtak
- Member of Anti-Ragging Committee, Department of Genetics, Maharshi Dayanand University Rohtak
- Coordinator Departmental IQAC, Department of Genetics, Maharshi Dayanand University Rohtak
- Member of Committee on Career Counseling and Placement Cell, Department of Genetics, M. D. U. Rohtak
- Member of several Project Purchase Committees, Department of Genetics, M. D. University Rohtak
- Member of Inspection Committee for several Colleges, M. D. University Rohtak
- Examiner to evaluate M.Phil. Thesis, Department of Genetics, Delhi University, New Delhi
- Jury Member in Inter-college competition, Department of Botany, Maharshi Dayanand University Rohtak

- Observer for several national examinations such as Joint Engineering Examination (Main), Central Teaching Eligibility Test and National Eligibility Test conducted by Central Board of Secondary Education (CBSE), New Delhi

Research interest

We have demonstrated the bacteriocin production in food and soil isolates of lactic acid bacteria. These bacteria have been characterized for probiotic properties and their bacteriocins inhibited broad host-range of pathogens. In addition, bacteriocins of food isolates have shown higher efficacy for application in food safety and therapeutics. Our findings have, first time, demonstrated the activity of probiotic bacteriocins against Gram-negative members. These are novel peptides, heat/pH stable and cause efflux of intracellular contents leading to cell death. Their activity against MDR strains has shown new way to be used as an alternative to clinical antibiotics to solve multidrug resistance problem.

Research guidance

PhD thesis:

1. Naveen Kumar (2014, completed) Designing and discovering novel antimalarial drugs.
2. Aabha Gupta (2015, completed) Purification and characterization of bacteriocins of lactic acid bacteria isolated from fermented foods.
3. Ramanjeet Kaur (2017, completed) A comparative study on purification and characterization of peptide antibiotics from environmental isolates of lactic acid bacteria and haloarchaea.
4. Vijay Kumar (2017, Completed) Purification and characterization of antimicrobial peptides from haloarchaea isolated from Pachpadra Salt Lake, Rajasthan.
5. Poonam (2019, completed) Mode of action of enterocin LD3 and plantaricin LD4 against target bacteria to evaluate their application in food safety.
6. Manoj Yadav (2019, registered) Method optimization for high-throughput screening of bacteriocin-producing lactic acid bacteria.
7. Indu Kumari (2019, registered) Genetic characterization of *Lactobacillus plantarum* LD1 and *Enterococcus hirae* LD3 for production of bacteriocins.

MSc dissertation:

1. Pavitra (2020) Mode of action of bacteriocins against target bacteria: A Review
2. Aashima (2020) Mutagenic strategies used to optimize bacteriocin production and its applications: a review
3. Piyush (2020) Statistical optimization of bacteriocin production : A review
4. Sakshi (2020) Bacteriocins of probiotic lactic acid bacteria as natural food preservative
5. Dipika (2019) Genetic characterization of bacteriocin production by a *Lactobacillus plantarum* sp
6. Anshul (2019) Food safety applications of plantaricin LD1 in indigenous Indian foods
7. Priyanka (2019) Bacteriocin from *Lactobacillus plantarum* LD1 against clinical isolate of *Enterococcus faecalis* for oral health
8. Rubal (2019) Probiotic efficacy of a food isolate *Lactobacillus plantarum* sp
9. Deepak (2018) Tangential flow filtration and antimicrobial property of bacteriocin isolated from *Lactobacillus plantarum* LD1
10. Monika (2018) Comparison of antimicrobial activity of bacteriocin S6 and LD1 on cell viability and morphology of target bacteria.
11. Parneeta (2018) Genetic characterization of bacteriocin produced by *Lactobacillus plantarum* LD1.
12. Tarun (2018) Effect of prebiotics on the growth and bacteriocin production of *Lactobacillus plantarum* LD1.
13. Pradeep (2017) Inhibition of food-borne pathogens by bacteriocin of *Lactobacillus plantarum* LD4.
14. Neetu (2017) Isolation and characterization of probiotics from human saliva.
15. Sonia (2017) Comparison of purification methods of two bacteriocins from *Lactobacillus plantarum* LD1 and *Enterococcus hirae* LD3.
16. Khushboo (2017) UV and chemical mutagenesis of bacteriocin-producing *Lactobacillus plantarum* LD4.
17. Dhruv (2017) Transformation of *Escherichia coli* with pLD1 and pLM85 containing antibiotics genes from *Lactobacillus plantarum* LD1 and *Wissella confusa* LM85.
18. Ritu (2016) Effect of UV mutagenesis on antimicrobial activity of *Lactobacillus plantarum* LD4.

19. Bhawna (2016) Plasmid profiling of different strains of haloarchaea isolated from salt lake.
20. Sonia (2016) Purification of bacteriocin from cell-free supernatant of *Lactobacillus plantarum* LD1.
21. Pooja (2016) Plasmid profiling and antimicrobial activity of lactic acid bacteria isolated from soil samples.
22. Monica (2015) Optimization of culture medium for growth and production of halocin from *Haloferax larsenii*.
23. Nandita (2015) Purification of bacteriocin from *Lactobacillus plantarum* and evaluation of its antimicrobial activity.
24. Jyoti (2015) Optimization of culture medium for growth and bacteriocin production from *Lactobacillus plantarum*.
25. Karishma (2014) Plantaricin LD4: A new bacteriocin with broad host range against Gram-positive and Gram-negative bacteria.
26. Nidhi (2014) Characterization of bacteriocin from *E. faecium* strain LD/3 isolated from batter of Dosa.
27. Parul (2013) Survival of lactic acid bacterium strain LD4 in simulated Gastric conditions.
28. Geeta (2013) Identification and characterization of lactic acid bacteria strain LD4 for antimicrobial property.
29. Gitika (2013) Probiotic potential of lactic acid bacterium strain LD4.
30. Annu (2013) Biochemical characterization and host range of lactic acid bacterium strain LD4.
31. Aabha (2009) Isolation and characterization of lactic acid bacteria from fermented foods.
32. Madhu (2009) Isolation and characterization of lactic acid bacteria from soil samples.

Extramural Research Grants

S. No.	Title of the projects	Funding Agencies	Amount (Rs. lacs)	Duration	Status
1	Bioprospecting Natural Products for Human Health and Socio economic Development in Haryana <i>Deputy Coordinator</i>	University grant Commission, New Delhi	80.00	3 years Jan, 2020 -	Ongoing
2	Characterization of bacteriocins to establish mechanism of action against target microorganisms <i>Principal Investigator</i>	Indian Council of Medical Research, New Delhi	18.16	3 Years Jan, 2017 – 31 st Dec 2019	Completed
3	Purification and X-ray Crystallography of bacteriocins produced by <i>Lactobacillus plantarum</i> LD1 and <i>Enterococcus hirae</i> LD3 <i>Indo-Australia Research Fellow</i>	Indian National Science Academy, New Delhi	14.69	6 months April - September 2017	Completed
4	Purification and molecular characterization of halocin produced by <i>Haloferax larsenii</i> strains HA/3 <i>Principal Investigator</i>	Department of Biotechnology, New Delhi	46.63	3 Years Aug, 2014 – July 2017	Completed
5	Development and Validation of High Throughput Methods for Screening of Antimicrobial Peptides from Lactic Acid Bacteria <i>Principal Investigator</i>	Department of Biotechnology, New Delhi	44.60	3 years Nov, 2013 – Oct, 2016	Completed
6	Bacteriocin Production by Lactic Acid Bacteria - Purification and Characterization <i>Principal Investigator</i>	Department of Science and Technology, New Delhi	18.66	3 years Sept, 2011 - Aug, 2014	Completed

7	Characterization of halocins produced by haloarchaea isolated from Pachpadra Salt Lake in Rajasthan <i>Principal Investigator</i>	Council of Scientific and Industrial Research, New Delhi	16.96	3 Years Jan, 2010- July, 2013	Completed
8	Characterization of bacteriocins of lactic acid bacteria isolated from fermented foods-Search for an effective food biopreservative <i>Principal Investigator</i>	University Grant Commission, New Delhi	10.32	3 Years May, 2009 - April, 2012	Completed
9	Design of Antimicrobial Peptides for Therapeutic Application: Structure-Function Analysis <i>Indo-US Research Fellow</i>	Indo-US Science and Technology Forum, New Delhi	10.18	6 months Dec, 2010 - June, 2011	Completed

Research publications:

1. Kumar G., Tewari S., Tagg J., Chikindas M.L., Popov I.V., **Tiwari S.K.** (2021) Can probiotics emerge as effective therapeutic agents in apical periodontitis? A Review. *Probiotics and Antimicrobial Proteins* 13: 299-314 (DOI: 10.1007/s12602-021-09750-2) IF 3.533. ISSN: 1867-1306
2. Sheoran P., **Tiwari S.K.** (2020) Synergistically-acting enterocin LD3 and plantaricin LD4 against Gram-positive and Gram-negative pathogenic bacteria. *Probiotics and Antimicrobial Proteins* 13: 542-554. DOI: 10.1007/s12602-020-09708-w. IF 3.533. ISSN: 1867-1306
3. Dahiya S., Bajaj B., Kumar A., **Tiwari S.K.** Singh B. (2020) A review on biotechnological potential of multifarious enzymes in bread making. *Process Biochemistry* 99: 290-306. IF 2.952. ISSN: 1359-5113
4. Kaur R., **Tiwari S.K.** (2020) Identification and characterization of a halocin-producing haloarchaeon isolated from Pachpadra salt lake. *Letters in Applied Microbiology* 71(6): 620-626. doi: 0.1111/LAM.13377. Impact Factor 2.173. ISSN: 1472-765X.
5. **Tiwari S. K.**, Dicks L.M.T., Popov I.V., Karaseva A., Ermakov A.M., Suvorov A., Tagg J.R., Weeks R., Chikindas M.L. (2020) Probiotics at war against viruses: What is missing from the picture? *Frontiers in Microbiology* 11: 1877. doi: 10.3389/fmicb.2020.01877. Impact Factor 4.235, ISSN: 1664-302X.
6. Sheoran P., **Tiwari S.K.** (2019) Enterocin LD3 from *Enterococcus hirae* LD3 causing efflux of intracellular ions and UV absorbing materials in Gram-negative bacteria. *Journal of Applied Microbiology* 126:1059-1069 (DOI: 10.1111/jam.14203). Impact Factor 2.16. ISSN 1365-2672.
7. Sheoran P., **Tiwari S.K.** (2019) Anti-staphylococcal activity of bacteriocins of food isolates *Enterococcus hirae* LD3 and *Lactobacillus plantarum* LD4 in pasteurized milk. *3Biotech* 9(1):1-7 (DOI: 10.1007/s13205-018-1546-y). Impact Factor 1.497. ISSN 2190-5738.
8. Yadav M.K., Singh B., **Tiwari S.K.** (2019) Comparative analysis of inhibition-based and indicator-independent colorimetric assay for screening of bacteriocin-producing lactic acid bacteria. *Probiotics and Antimicrobial Proteins* 11(2): 687-695. Impact Factor 3.533. ISSN: 1867-1306
9. Kaur R., **Tiwari S.K.** (2018) Membrane-acting bacteriocin purified from a soil isolate *Pediococcus pentosaceus* LB44 shows broad host-range. *Biochemical and Biophysical Research Communication* 498(4):810-816. doi.org/10.1016/j.bbrc.2018.03.062. IF 2.466, ISSN: 0006-291X.
10. Kaur R., **Tiwari S.K.** (2017) Optimization of culture conditions for bacteriocin production by soil isolates *Pediococcus pentosaceus* LB44 and *Weissella confusa* LM85. *International Journal of Infection* 4(3): e15842. ISSN:2383-1413.
11. Kumar V., **Tiwari S.K.** (2017) Halocin HA1: An archaeocin produced by the haloarcheon *Haloferax larsenii* HA1. *Process Biochemistry* 61, 202-208. IF 2.497. ISSN: 1359-5113
12. Kumar V., **Tiwari S.K.** (2017) Activity-guided separation and characterization of new halocin HA3 from fermented broth of *Haloferax larsenii* HA3. *Extremophiles* 21(3): 609-621. IF 2.346. ISSN: 1431-0651

13. Yadav M.K., Kumar V., Singh B., **Tiwari S.K.** (2017) Phospholipid/polydiacetylene vesicle-based colorimetric assay for high throughput screening of bacteriocins and halocins. *Applied Biochemistry and Biotechnology* 182: 142-154. Impact Factor 1.606. ISSN: 0273-2289
14. Kumar V., Sheoran P., Gupta A., Yadav J.P., **Tiwari S.K.** (2016) Antibacterial property of bacteriocin produced by *Lactobacillus plantarum* LD4 isolated from fermented food. *Annals of Microbiology* 66: 1431-1440. Impact Factor 1.407. ISSN: 1590-4261
15. Gupta A., **Tiwari S.K.**, Chikindas M.L. (2016) Biochemical properties and mechanism of action of enterocin LD3 purified from *Enterococcus hirae* LD3. *Probiotics and Antimicrobial Proteins* 8 (3): 161-169. Impact Factor 2.345. ISSN: 1867-1306
16. Kaur R., **Tiwari S.K.** (2016) Isolation, identification and characterization of *Pediococcus pentosaceus* LB44 and *Weissella confusa* LM85 for the presence of bacteriocin-like inhibitory substances (BLIS). *Microbiology* 85 (5): 540-547. IF 0.855, ISSN: 0026-2617
17. Kumar V., Saxena J., **Tiwari S.K.** (2016) Description of a new halocin-producing *Haloferax larsenii* HA/1 and antimicrobial activity present in culture supernatant. *Archives of Microbiology* 198: 181-192. Impact factor 1.667 ISSN: 0302-8933
18. **Tiwari S.K.**, Noll K.S., Cavera V.L., Chikindas M.L. (2015) Improved antimicrobial activity of synthetic-hybrid bacteriocins designed from enterocin E50-52 and pediocin PA-1. *Applied and Environmental Microbiology* 81: 1661-1667. Impact Factor 3.952. ISSN: 0099-2240
19. **Tiwari S. K.**, Srivastava S. (2015) Broad-antimicrobial-spectrum of plantaricin LR14 against Gram-positive and Gram-negative bacteria. *Austin Journal of Analytical and Pharmaceutical Chemistry* 1036: 1-4. ISSN: 2381-8913
20. Gupta A., **Tiwari S.K.** (2015) Probiotic potential of bacteriocin-producing *Enterococcus hirae* strain LD3 isolated from batter of Dosa. *Annals of Microbiology* 65: 2333-2342. Impact factor 1.232. ISSN:1590-5261
21. Singh, N., Kaushik N.K., Mohankrishnan D., **Tiwari S.K.**, Sahal D. (2015) Antiplasmodial Activity of Medicinal Plants from Chhotanagpur Plateau, Jharkhand, India. *Journal of Ethnopharmacology* 165: 152-162. Impact factor 2.939. ISSN: 0378-8741
22. Kaushik N.K., Bagavan A., Abdul R.A., Zahir A.A., Kamaraj C., Elango G., Jayaseelan C., Kirthi A.V., Kumar T.S., Marimuthu S., Rajakumar G., **Tiwari S.K.**, Sahal D. (2015) Evaluation of antiplasmodial activity of medicinal plants from North Indian Buchpora and South Indian Eastern Ghat. *Malaria Journal* 14:65. Impact factor 3.49. ISSN: 1475-2875
23. Gupta A and **Tiwari S.K.** (2014a) Probiotic potential of *Lactobacillus plantarum* LD1 isolated from batter of Dosa, a South Indian fermented food. *Probiotics and Antimicrobial Proteins* 6:73-81. Impact factor 2.345. ISSN: 1867-1306
24. Gupta A. and **Tiwari S.K.** (2014b) Plantaricin LD1: A bacteriocin produced by food isolate of *Lactobacillus plantarum* LD1. *Applied Biochemistry and Biotechnology* 172: 3354-3362. Impact Factor 1.687. ISSN: 0273-2289
25. Gitika and **Tiwari S.K.** (2013) Probiotic potential of lactic acid bacteria strain LD/4. *International journal of Pharmacy and Life Sciences* 49: 3000-3006. IF 4.256 ISSN: 0796-7126
26. Kumar M., **Tiwari SK** and Srivastava S. (2010) Purification and characterization of enterocin LR/6, a new bacteriocin from *Enterococcus faecium* LR/6. *Applied Biochemistry and Biotechnology* 160: 40-49. Impact Factor 1.687. ISSN: 0273-2289
27. Ghosh N., Kumar M., **Tiwari S.K.** and Srivastava S. (2008) Probiotic potential of two Environmental isolates of Lactic acid bacteria, *Lactobacillus plantarum* LR/14 and *Enterococcus faecium* LR/6. *International Journal of Probiotics and Prebiotics* 3: 199-206. ISSN: 1555-1431
28. **Tiwari S.K.** and Srivastava S. (2008) Purification and Characterization of a novel bacteriocin from natural isolate of *Lactobacillus plantarum* LR/14. *Applied Microbiology and Biotechnology* 79: 759-767. Impact Factor 3.811. ISSN: 0175-7598
29. **Tiwari S.K.** and Srivastava S. (2008a) Characterization of a bacteriocin from *Lactobacillus plantarum* strain LR/14. *Food Biotechnology* 22: 241-267. Impact Factor 0.636. ISSN: 0890-5436
30. **Tiwari S.K.** and Srivastava S. (2008b) Statistical optimization of culture components for enhanced bacteriocin production by *Lactobacillus plantarum* LR/14. *Food Biotechnology* 22: 64 -77. Impact Factor 0.636. ISSN: 0890-5436

Book edited:

1. Current Trends in Biotechnology 2012 (eds S. K. Tiwari and Bijender Singh) ISBN: 978-3-659-15773-8, LAMBERT Academic Publishing GmbH & Co., Saarbrachen, Germany.

Chapters in books:

1. Sharma, P. and **Tiwari S. K.** (2020) Bacteriocins of probiotics as potent anticancer agents. In An Update on Probiotic Research in Therapeutics (ed. I. P. Kaur and P. Deol) Springer Nature (vol 1: 231-250) ISBN: 978-981-15-8214-1
2. Kumar, V. and **Tiwari, S.K.** (2019). Halocin diversity among halophilic archaea and their applications. In Microbial Diversity in Ecosystem Sustainability and Biotechnological Applications (ed. T. Satyanarayana), SPI Global USA (vol 1: pp 497-532) ISBN: 978-981-13-8314-4
3. Kumar, V. and **Tiwari, S.K.** (2014). Peptide Antibiotics of haloarchaea: An Alternative to clinical antibiotics. In Biotechnology Vol. 3: Microbial Biotechnology (ed. J.N. Govil), Studium Press LCC, USA. pp 203-223. ISBN: 1-62699-015-8
4. Gupta A. and **Tiwari S. K.** (2012) Applications of Lactic Acid Bacteria and their Bacteriocins. In Current Trends in Biotechnology (eds S.K. Tiwari and Bijender Singh) LAMBERT Academic Publishing GmbH & Co., Saarbrachen, Germany, pp 249-274. ISBN: 97-3-659-15773-8
5. **Tiwari S. K.** (2012) Recent advances in peptide antibiotics of lactic acid bacteria. In Current Trends in Biotechnology (eds S.K. Tiwari and Bijender Singh) LAMBERT Academic Publishing GmbH & Co., Saarbrachen, Germany, pp 74-99. ISBN: 97-3-659-15773-8
6. Singh B. and **Tiwari S. K.** (2012) Metagenomics: A gateway for novel bio-molecules of biotechnological potential. In Current Trends in Biotechnology (eds S.K. Tiwari and Bijender Singh) LAMBERT Academic Publishing GmbH & Co., Saarbrachen, Germany, 335-350. ISBN: 97-3-659-15773-8
7. Gupta A. and **Tiwari S.K.** (2008) Industrial Applications of Lactic Acid Bacteria. In Molecular Biology and Biotechnology: Selected Contributions of International Conference- 2008 (eds V. Sharma and B.N. Tripathi) LAMBERT Academic Publishing GmbH & Co., Saarbrachen, Germany, 97-113. ISBN: 978-3-8433-6029-6

Paper presented in conferences:

1. **Tiwari S. K.** (2021) Health benefits of bacteriocin-producing lactic acid bacteria isolated from indigenous fermented foods. International Conference on beneficial Microbes. Organized by Don State Technical University, Rostov-on-Don, Russia held virtually on June 01-06, 2021.
2. **Tiwari S.K.** (2020) Probiotics at war against viruses: What is missing from the picture? 5th Biennial e-Conference of PAi and International e-Symposium on the "Probiotics and Immunity: way forward to microbial therapy" held on 19-20 November 2020.
3. **Tiwari S.K.** (2020) Mode of action of bacteriocin from food-isolate *Enterococcus hirae* LD3 against target bacteria. 107th Indian Science Congress organized by University of Agricultural Sciences, Bangalore on 03-07th January 2020.
4. **Tiwari S.K.** (2019) Extramural research grants from funding agencies: Opportunities and Challenges. Resource person on 5th Induction training program organized by Faculty Development Centre, Banasthali University, Rajasthan on 13th December 2019.
5. **Tiwari S.K.** (2019) Enterocin LD3 from *Enterococcus hirae* LD3 causing efflux of intracellular ions and UV absorbing materials in Gram-negative bacteria. 13th International Scientific Conference on Probiotics, Prebiotics, Gut Microbiota and Health" Organized by International Probiotic Congress at Prague Congress Centre, Prague, Czech Republic on 17-20th June 2019.
6. **Tiwari S.K.** (2019) Broad host-range of membrane-acting bacteriocin purified from a soil isolate *Pediococcus pentosaceus* LB44 (oral presentation). 106th Indian Science Congress organized by Lovely Professional University, Jalandhar on 03-07th January 2019.

7. **Tiwari S.K.** (2017) Bacteriocins: Molecule with multifarious potential from food preservative to therapeutic agent (oral presentation). National Conference on Biotechnology: Exploring through innovations. Organized by Central University of Haryana on November 13-14, 2017.
8. **Tiwari S. K.** (2017) Vesicle-based colorimetric assay for high throughput screening of antimicrobial peptides (poster presentation). International Conference on Microbes for Health and Wealth. Organized by Department of Microbiology, M. D. University Rohtak on November 14, 2017.
9. **Tiwari S.K.** (2017) Bacteriocins: Novel solution for the treatment of infectious diseases (invited lecture). 58th Annual Conference of Association of Microbiologist of India (AMI) and International Symposium on Microbes for sustainable development: Scope and applications. Organized by School of Environmental Science, Babasaheb Bhimrao Ambedkar University, Lucknow on November 16-19, 2017.
10. **Tiwari S.K.** (2016) Opportunities and challenges in getting research grants from extramural funding agencies (invited speaker). A symposium on the art and science of writing research projects for extramural funding agencies. Organized by Pt. B. D. Sharma University of Health Sciences, Rohtak on May 12, 2016.
11. **Tiwari S.K.** (2016) Probiotic potential of bacteriocin-producing *Enterococcus hirae* strain LD3 isolated from batter of Dosa (Invited Speaker) 3rd Biennial Conference of Probiotic Association of India and International Symposium on Stress, Microbiome and Probiotics. Organized by NISER Bhubaneswar on March 11-13, 2016.
12. Kumar V., **Tiwari S.K.** (2015) Activity Testing and Mode of Action of Halocin HA1 from *Haloferax larsenii* HA1 (poster presentation). 56th Annual Conference of Association of Microbiologist of India and International Symposium on Emerging Discoveries in Microbiology. Organized by School of Life Science, JNU, New Delhi on December 07-10, 2015.
13. Sheoran P., Kumar V., **Tiwari S.K.** (2015) Purification of Bacteriocin Produced by *Lactobacillus Plantarum* LD4 Isolated from Batter of Dosa (poster presentation). 56th Annual Conference of Association of Microbiologist of India and International Symposium on Emerging Discoveries in Microbiology. Organized by School of Life Science, JNU, New Delhi on December 07-10, 2015.
14. Yadav M. K., **Tiwari S.K.** (2015) Optimization of Methods for High Throughput Screening of Bacteriocin Producing Strains of Lactic Acid Bacteria. LD3 (poster presentation). 56th Annual Conference of Association of Microbiologist of India and International Symposium on Emerging Discoveries in Microbiology. Organized by School of Life Science, JNU, New Delhi on December 07-10, 2015.
15. Gupta A., Chikindas M.L., **Tiwari S.K.** (2015) Mechanism of action and biochemical properties of enterocin LD3 purified from *Enterococcus hirae* LD3 (poster presentation). 56th Annual Conference of Association of Microbiologist of India and International Symposium on Emerging Discoveries in Microbiology. Organized by School of Life Science, JNU, New Delhi on December 07-10, 2015.
16. **Tiwari S.K.**, Noll K.S., Cavera V.L., Chikindas M.L. (2015) Design and synthesis of hybrid bacteriocins from enterocin E50-52 and pediocin PA-1 for improved therapeutic potential. Poster presentation. International conference on "New Horizons in Biotechnology (NHBT-2015)" Organized by Biotech Research Society, India and CSIR-IIST Tiruvananthapuram held on November 22-25, 2015.
17. **Tiwari S.K.** (2015) Design of synthetic-hybrid bacteriocins from enterocin E50-52 and pediocin PA-1 for therapeutic applications. Oral presentation. World Congress on Biotechnology. Organized by Omics International, USA held on October 05-07, 2015 in New Delhi.
18. **Tiwari S.K.** (2015) Design of Antimicrobial Peptides for Therapeutic Applications: Structure-Function Analysis. National Conference on Therapeutic Potential of Natural Products: Current Innovations & Future Trends. Joint Secretary. Organized by Department of Genetics, MDU, Rohtak on March 19, 2015.
19. **Tiwari S.K.** (2015) Microbial Peptides: Discovering Novel Antibiotics. (invited talk) Department of Bioscience and Biotechnology, Banasthali University, Rajasthan. February 6, 2015.
20. **Tiwari S.K.** (2014) Bacteriocins and Halocins: Finding Alternative to Antibiotics. International Conference in Emerging Trends in biotechnology (Poster presentation). Organized by School of Life Science, JNU. November 6-9, 2014.
21. **Tiwari S.K.** (2014) Bacteriocins of Lactic Acid Bacteria: An alternative to Clinical Antibiotics (Oral Presentation). International Conference on Frontier Discoveries and Emerging Opportunities in Life Sciences. Organized by School of Biological Sciences, Dr. Hari Singh Gaur University, Sagar, M.P. February 13-15, 2014.
22. Kumar V. and **Tiwari S.K.** (2013) Identification of *Haloferax larsenii* HA1 and characterization of halocin HA/1 (Poster Presentation). International Conference in advances in Biotechnology and bioinformatics

- (ICABB 2013) & X Convention of the Biotech Research Society, India. Organized by Dr. D. Y. Patil Vidyapeeth, Pune and The Biotech Research Society, India. November 25-27, 2013.
23. Kumar V. and **Tiwari S.K.** (2013) Biochemical characterization of antimicrobial peptide from *Haloferax larsenii* HA/3 (Poster Presentation). 54th Annual Conference of Association of Microbiologists of India (AMI 2013). Platinum Jubilee Celebrations of Association of Microbiologists of India (Estd: 1938) & International Symposium on Frontier Discoveries and Innovations in Microbiology and its Interdisciplinary Relevance. Organized by Department of Microbiology, M. D. University, Rohtak. November, 17-20, 2013.
 24. Kaur, R., Poonam and **Tiwari S.K.** (2013) Characterization of bacteriocins produced by lactic acid bacteria isolated from mulberry rhizosphere (Poster Presentation). 54th Annual Conference of Association of Microbiologists of India (AMI 2013). Platinum Jubilee Celebrations of Association of Microbiologists of India (Estd: 1938) & International Symposium on Frontier Discoveries and Innovations in Microbiology and its Interdisciplinary Relevance. Organized by Department of Microbiology, M. D. University, Rohtak. November, 17-20, 2013.
 25. Gupta, A. and **Tiwari S.K.** (2013) Purification and Characterization of Plantaricin LD1 from *Lactobacillus plantarum* LD1 (Poster Presentation). 54th Annual Conference of Association of Microbiologists of India (AMI 2013). Platinum Jubilee Celebrations of Association of Microbiologists of India (Estd: 1938) & International Symposium on Frontier Discoveries and Innovations in Microbiology and its Interdisciplinary Relevance. Organized by Department of Microbiology, M. D. University, Rohtak. November, 17-20, 2013.
 26. **Tiwari S.K.** (2013) Design of Antimicrobial Peptides for Therapeutic Application: Structure-Function Analysis. Indo-US Research Fellows Conclave Organized by Indo-US Science and Technology Forum (IUSSTF), New Delhi in partnership with Science and Engineering Research Board (SERB), Department of Science and Technology (DST), Government of India at Marriott Hotel, Pune. March 15-17, 2013.
 27. **Tiwari S.K.** (2012) Characterization of peptide antibiotics of lactic acid bacteria and Haloarchaea (Poster Presentation). National Symposium on "Microbes in Health and Management". Organized by School of Life Sciences, Jawaharlal Nehru University, New Delhi. March 12-13, 2012.
 28. **Tiwari S.K.** (2012) International Conference on "Towards Better Innovation Ecosystem" (attended), Organized by Indian National Academy of Engineering, New Delhi. September 20-21, 2012.
 29. Gupta, A. and **Tiwari S.K.** (2012) Characterization of bacteriocins produced by *Lactobacillus hilgardii* LD/1 and *Enterococcus faecium* LD/3 (Poster Presentation). International Conference on Industrial Biotechnology; IX Convention of the Biotech Research Society, India; Indo-Italian Workshop on Food Biotechnology: Industrial Processing, Safety and Health. Organized by Department of Biotechnology, Patiala University, Patiala. November, 21-23, 2012.
 30. Gupta, A. and **Tiwari S.K.** (2012) Probiotic potential of lactic acid bacteria from batter of Dosa (Poster Presentation). International Conference on Microbial World: Recent Innovation and Future Trends. 53rd Annual Conference of AMI organized by KIIT University, Bhubaneswar, Odisha. November, 22-25, 2012.
 31. **Tiwari S.K.**, Srivastava S. and Chikindas M.L. (2011) Purification and Characterization of Bacteriocins of Lactic Acid Bacteria: Peptide Modifications and Structure-Function Relationship. (Poster Presentation) Proteomics: New Developments and Grant Challenges. Organized by US HUPO, Raleigh, NC, USA, March 20-23, 2011.
 32. Gupta, A. and **Tiwari, S.K.** (2011). Characterization of bacteriocins produced by different strains of lactic acid bacteria isolated from fermented foods (Poster presentation). 52nd Annual Conference of AMI, PU, Chandigarh, Nov. 03 – 06, 2011.
 33. Gupta, A. and **Tiwari, S.K.** (2011). Characterization of bacteriocins of different sp. of *Enterococcus* (Poster presentation). 6th National Conference on Thermodynamics of Chemical and Biological Systems. Organized by Indian Chemical Society, MDU, Rohtak, Nov. 02 – 04, 2011.
 34. **Tiwari S.K.** (2010). Application of Lactic Acid Bacteria in Food Safety (Oral Presentation) National Symposium on biotechnology in India: Current Status and Future Scope. Organized by Academy of Innovative Research, Jaipur. 30th March 2010.
 35. **Tiwari S. K.** (2010) Colloquium on Microbial Technology for Human Benefits (attended), Organized by AMI at M.D. University, Rohtak. 7th August, 2010.
 36. **Tiwari S.K.** and Srivastava S. (2009). Purification and Characterization of plantaricin LR14: A Novel Two-Peptide Bacteriocin from *Lactobacillus plantarum* LR/14 (Poster presentation). 50th Annual Conference of AMI, National Chemical Laboratory, Pune, December 15-18, 2009.
 37. **Tiwari S.K.** and Srivastava, S. (2009) Plantaricin LR14: A Novel Peptide Antibiotic from *Lactobacillus Plantarum* LR/14" (selected for oral presentation). 3rd Congress of European Microbiologists - FEMS 2009, Gothenburg, Sweden. June 28-July 2, 2009.
 38. **Tiwari S.K.** (2009) Life science Conclave 2009, India: The Emerging Life Science Global Destination, New Delhi (attended), 27-28 August, 2009.

39. Gupta A. and **Tiwari S.K.** (2008) Industrial Applications of Lactic Acid Bacteria. International Conference on Molecular Biology and Biotechnology: ICMBB-2008, Member of organizing Committee, Banasthali University, Rajasthan. Oct 19-21, 2008.
40. **Tiwari S.K.** (2008) Probiotics for human health. Jubilee Conference on Women's Education: Vision and Mission of Women's Universities in a Global Society (attended), Banasthali University, Rajasthan. Nov 11-13, 2008.
41. **Tiwari S.K.** and Srivastava, S. (2008) Purification and Characterization of plantaricin LR14: A Two-Peptide Bacteriocin from *Lactobacillus plantarum* LR/14 (accepted for oral communication) EMBO world lecture course in 'Recent Developments in Macromolecular Crystallography' National Chemical Laboratory, Pune, November 9-14, 2008.
42. **Tiwari S.K.** and Srivastava, S. (2006) A Bacteriocin with Broad Host Range from *Lactobacillus plantarum* LR/14-A Potential Food Biopreservative (accepted for oral communication). The 20th International ICFMH Symposium food safety and food biotechnology: diversity and global impact. Alma Mater Studiorum, Bologna, Italy, Aug 29 - Sept 02 2006.
43. **Tiwari S.K.** (2005). Characterization and purification of bacteriocin isolated from natural isolate of *Lactobacillus plantarum* LR/14 (Oral presentation). 46th Annual Conference of AMI, Osmania University, Hyderabad, Dec. 8-10, 2005.
44. Srivastava S., Kumar M. and **Tiwari S.K.** (2004). Synthesis and characterization of bacteriocin produced by lactic acid bacteria isolated from rhizosphere (accepted for oral presentation) 4th Asian Conference on Food and Nutrition Safety, Bali, Indonesia, March 2-5, 2004.
45. **Tiwari S.K.**, Kumar M., and Srivastava, S. (2004). Identification and Characterization of bacteriocins isolated from environmental isolates of *Lactobacillus plantarum* LR/14 and *L. lactis* LR/6 (Poster presentation). Bioconvergence 2004, Thapar Institute of Engineering and Technology, Patiala, Punjab, India, Nov. 18-20 2004.
46. **Tiwari S.K.** and Srivastava, S. (2004). Production and characterization of bacteriocin from an environmental isolate *Lactobacillus plantarum* LR/14 (Poster presentation). 45th Annual Conference of AMI, NDRI, Karnal, Nov. 23-25, 2004.
47. Srivastava S., **Tiwari S.K.**, Kumar M., and Viridi J.S. (2003). Probiotic potential of bacteriocin producing environmental isolates of lactic acid bacteria (Poster presentation). International Seminar and workshop on "Fermented Foods, Health Status and Social Well-being" Institute of Rural Management, Anand, Gujarat, Nov. 13-14, 2003.
48. **Tiwari S.K.**, Kumar M., Srivastava S. and Viridi J.S. (2003). Bacteriocin production by some natural isolates of *Lactobacillus* sp (Poster presentation). Microbes and Human resistance, 44th Annual Conference of AMI India, University of Agricultural Sciences, Dharwad, Nov. 12-14, 2003.

Seminar/workshop organized

1. Convener of National Conference on Natural Products and Human Health: Opportunities and Challenges in Present Scenario (9-10th April 2021). Organized by M. D. University, Rohtak and UGC-STRIDE Programme.
2. Course Coordinator, GIAN Program on Translational health science for health promotion, food and feed funded by Ministry of Human Resource Development Ministry, New Delhi (planed on 26^{-31st} March 2020, postponed due to COVID-19)
3. Workshop on Bioethics in Research: A need or compulsion on 15.11.2018
4. National Seminar on Intellectual Property Rights Protection on 03.11.2018
5. National workshop on DNA Forensics-The Brouhaha or The Science on 21.11.2017
6. Conference cum workshop on Skill development in molecular techniques on 12.11.2016
7. National Conference on Genetic diversity and therapeutic potential of natural products on 17.09.2016
8. Workshop on Advanced Forensic Aspects of CSI & Fingerprint Investigation on 21.11.2015
9. National Conference on Therapeutic Potential of Natural Products: Current Innovations & Future Trends on 19.03 2015
10. National seminar on Molecular Pathology of Human Genetic Diseases on 23.08.2014
11. National seminar on Discovery of new concepts in Genetics and Molecular Biology on 25.10.2013
12. National seminar on Novel Antimicrobials: An Alternative to clinical antibiotics on 14.09.2013