

1. **Name of the Applicant** : Dr. Suman Singh
2. **Mailing Address** : Professor and Chairperson
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3. **Educational Qualifications:**

M.Sc., Deemed University, N.D.R.I. Karnal, India	1998
Ph.D., Kurukshetra University, Kurukshetra, India	2005

4. **TOTAL EXPERIENCE**

Teaching (PG): 22 Years+
Research: 27 Years+

5. **Area of specialization:** Enzymology, Protein Biochemistry and Probiotics

6. **Research Projects completed:** 03

7. **Research Projects ongoing:** 01

8. **Ph.D. students supervised:** 10

9. **Ph.D. students under supervision:** 05

10. **M.Sc. students under supervision:** 03

11. **M.Sc. dissertation supervised:** 47

12. **Research papers published:** 56

13. **Conference Proceedings:** 30

14. **Books:** 08

15. **Chapter in books:** 02

16. **Total impact of Publications:** ~160

17. **Citations:** 948 (h index 18; i10 index 23)

18. **Life Member of Professional Bodies:** 02 (SBC and AMI)

19. **List of Publications in last 10 years:**

1. Tejinder Khaket, Davender Redhu, **Suman Dhanda**, Jasbir Singh (2015). *In silico* evaluation of potential DPP-III inhibitor precursors from dietary proteins. International Journal of Food Properties. 18: 499-507.
2. Pooja Attri, Tejinder Pal Khaket, Drukshakshi Jodha, Jasbir Singh and **Suman Dhanda** (2015). Biochemical and kinetic characterization of DING from the probiotic *Pediococcus acidilactici*. Applied Biochemistry and Biotechnology. 175: 1092-1110.
3. Tejinder Pal Khaket, Himanshu Aggarwal, Drukshakshi Jodha, **Suman Dhanda** and Jasbir Singh (2015). Parthenium hysterophorus in current Scenario: a toxic

- weed with industrial, agricultural and medicinal applications. *Journal of Plant Sciences*, doi:10.3923/jps.2015.
4. Tejinder Pal Khaket, **Suman Dhanda**, Druksakshi Jodha and Jasbir Singh (2015). Purification and biochemical characterization of Dipeptidyl peptidase II (DPP7) homologus from germinated *Vigna radiata* seeds. *Bioorganic chemistry*. 63:132.
 5. Tejinder Pal Khaket, **Suman Dhanda**, Druksakshi Jodha and Jasbir Singh (2016). Biochemical studies on dipeptidyl peptidase I (cathepsin C) from germinated *Vigna radiata* seeds. *Process Biochemistry*. 51: 1015-1027.
 6. Syma Ashraf Waiz, Mohammad Raies-ul-Haq, **Suman Dhanda**, Anil Kumar, T. Sridhar Gond, M.S. Chauhan, R.C. Upadhyay (2016). Heat Stress and antioxidant enzyme activity in bubaline (*Bubaline bubalis*) oocytes during in vitro maturation. *International Journal of Biometerology*, 60(9): 1357-1366.
 7. Preeti Chanalia, Dimpri Gandhi, Raman Kumar, Pooja Attri and **Suman Dhanda** (2016). Lactic acid production visa-a-vis biowaste management using lactic acid bacteria. *World applied Science Journal* 34(11): 1542-1552.
 8. Rajeev Kawatra, G. Pandu, **Suman Dhanda**, Davender Kumar, Tejinder Pal Khaket. Study of Genetic Polymorphism of 15 autosomal STR loci in three endogamous populations of Haryana, India. *Current Trends in Biotechnology and Chemical Research* Vol.5 (2).
 9. Raman Kumar, Preeti Chanalia, Dimpri Gandhi, **Suman Dhanda**, Rakhi (2016). Optimized extraction and characterization of Pectin from gooseberry and Strawberry pomace validated by Response Surface Methodology. *World applied Science Journal*. 34(6): 704-713.
 10. Dimpri Gandhi, Preeti Chanalia, Pooja Attri and **Suman Dhanda** (2016). Dipeptidyl peptidase-II from probiotic *Pediococcus acidilactici*: Purification and functional characterization. *International Journal of Biological Macromolecules* 93(A):919-932.
 11. Raman Kumar and **Suman Dhanda** (2017). Mechanistic Insight of Probiotics derived anticancer Pharmaceuticals: A road forward for cancer therapeutics. *Nutrition and Cancer* 69(3): 375-380.
 12. Preeti Chanalia, Dimpri Gandhi, Pooja Attri and **Suman Dhanda** (2017). Extraction, purification and characterization of low molecular weight Proline iminopeptidase from probiotic *L. plantarum* for meat tenderization. *International Journal of Biological Macromolecules*, December, 109: 651-663. DOI: 10.1016/j.ijbiomac.2017.12.092.
 13. Preeti Chanalia, Dimpri Gandhi, Pooja Attri and **Suman Dhanda** (2018). Purification and characterization of beta-galactosidase from probiotic *Pediococcus acidilactici* and its use in milk lactose hydrolysis and galactooligosaccharide synthesis. *Bioorganic Chemistry* 77, April, 176-189.
 14. Pooja Attri, Druksakshi Jodha, Jasbir Singh and **Suman Dhanda** (2018). Purification, kinetic and functional characterization of membrane bound dipeptidyl peptidase-III from *Pediococcus acidilactici* NCDC 252: a probiotic lactic acid bacteria. *Molecular Biology Reports* 45, 973-986.
 15. Neha Sikri, **Suman Dhanda** and Sunita Dalal (2018). Kinetics of urease inhibition by different fractions of *Cassia fistula*. *African Journal of Botany* 120, 274-279.

16. Rajeev Kawatra, **Suman Dhanda**, Jasbir Singh, Ajay Kumar and Raman Kumar (2018). Role of nanotechnology in advancement, automation and miniaturization of DNA fingerprinting. *Annals of Agri-Bio Research* 23(1), 11-20.
17. Poonam Bansal, Raman Kumar, Jasbir Singh and **Suman Dhanda** (2019). Next Generation Sequencing, Biochemical characterization, Metabolic pathway analysis of novel probiotic *Pediococcus acidilactici* NCDC 252 and its evolutionary relationship with other Lactic Acid Bacteria. *Molecular Biology Reports*. 46(6): 5883-5895.
18. Raman Kumar, Poonam Bansal, Jasbir Singh, **Suman Dhanda** and Jitender Kumar Bhardwaj (2020). Aggregation, adhesion and efficacy studies of probiotic candidate *Pediococcus acidilactici* NCDC 252: A strain of dairy origin. *World Journal of Microbiology and Biotechnology*; 36(1);10
19. Poonam Bansal, Raman Kumar, Phalguni Deswal and **Suman Dhanda** (2020). Computational Identification of Novel Genes in *Pediococcus acidilactici* ZPA017. *Research Journal of Biotechnology*, 15(3), 61-65.
20. Raman Kumar, Poonam Bansal, Sunita Dalal and **Suman Dhanda** (2020). *In silico* analysis and molecular docking studies of potential anti *Helicobacter pylori* compounds. *Research Journal of Biotechnology*, 15(5), 133-136.
21. Raman Kumar, Poonam Bansal and **Suman Dhanda** (2019). *In silico* Genome-Wide Analysis of the ATP-Binding Cassette Transporter Gene Family in *Pediococcus acidilactici* NCDC 252: A strain of Dairy Origin. *Annals of Biology*. 36(1): 12-14
22. Dimpri Gandhi, Preeti Chanalia, Poonam Bansal and **Suman Dhanda** (2020). Isolation and physicochemical characterization of peptidoglycan hydrolases of probiotic *Pediococcus acidilactici*. *International Journal of Peptide Research and Therapeutics*, <https://doi.org/10.1007/s10989-019-10008-3>. 26, 2119–2127.
23. Poonam Bansal, Raman Kumar, Jasbir Singh and **Suman Dhanda**. Production of extracellular alkaline serine protease from *Pediococcus acidilactici* NCDC 252: Isolation, purification, physicochemical and catalytic characterization (2020). *Catalysis letters*. 151, 324–337
24. Raman Kumar, Poonam Bansal, Jasbir Singh and **Suman Dhanda** (2020). Purification, partial structural characterization and health benefits of exopolysaccharides from potential probiotic *Pediococcus acidilactici* NCDC 252. *Process Biochemistry*, 99:79-86.
25. Poonam Bansal, Raman Kumar, Jasbir Singh and **Suman Dhanda** (2020). *In silico* analysis of *Pediococcus acidilactici* NCDC 252 genome revealed nineteen novel genes. *Gene Reports*, DOI: doi.org/10.1016/j.genrep.2020.100849. 21, 100849.
26. Shweta Dhanda, Parveen Kumar, Manjusha Choudhary and **Suman Dhanda** (2021). In vitro studies on anti-inflammatory, antioxidant and antihyperglycemic activities of potential probiotic *Pediococcus acidilactici* NCDC 252. *Research Journal of Biotechnology*; Vol, 16(12).
27. Pooja Attri, Druksakshi Jodha, Poonam Bansal, Jasbir Singh and **Suman Dhanda** (2021). Membrane Bound Aminopeptidase B of a Potential Probiotic *Pediococcus*

- acidilactici NCDC 252: Purification, Physicochemical and Kinetic Characterization. *International Journal of Peptide Research and Therapeutics*. 27, 1641-1655.
28. Raman Kumar, Poonam Bansal, Jasbir Singh and **Suman Dhanda** (2022). Assessment of therapeutic potential of Cell Free Supernatant of *Pediococcus acidilactici* NCDC 252: a novel potential probiotic of dairy origin. *Research Journal of Biotechnology*. 17, 59-66.
 29. Poonam Bansal, Raman Kumar, Jasbir Singh and **Suman Dhanda**. (2022). Characterization of starter cultures and nutritional properties of *Pediococcus acidilactici* NCDC 252: A potential probiotic of dairy origin. *Journal of Food Processing and Preservation*, 46(10), e16817.
 30. Poonam Bansal, Jasbir Singh and **Suman Dhanda**. (2022). Computational analysis of peptidoglycan hydrolase genes in *Pediococcus acidilactici* D3 genome. *Research Journal of Biotechnology*. 17(10), 86-89.
 31. Shweta Dhanda, Praveen Kumar, Poonam Bansal, Jasbir Singh and **Suman Dhanda** (2022). Identification, purification, characterization and biopreservation potential of antimicrobial peptide of *Pediococcus acidilactici* NCDC 252. *International Journal of Peptide Research and Therapeutics*. 29(1),15.
 32. Jaswinder Singh, Pooja, Praveen Kumar, Jasbir Singh, Suman Dhanda (2023). Impact of probiotics in alleviating type 2 diabetes risk in clinical trials: A meta-analysis study. *Human Gene*.
 33. Praveen Kumar and Suman Dhanda (2024). Chitosan encapsulation of *Pediococcus acidilactici* NCDC 252 improved its survival in simulated gastrointestinal conditions. **Process Biochemistry**. 138, 130-138.
 34. Rohit Nehra, **Suman Dhanda**, Kuldeep Singh, Himmat Singh, Praveen Kumar Bharti (2025). The symbiotic *Wolbachia* in *Anopheles* and its role in reducing the transmission of *Plasmodium*: updates and prospects (2025). *Archives in Microbiology* (In press).

20. Research Projects with title and funding agency:

1. Molecular cloning and characterization of gene encoding novel dipeptidyl aminopeptidase from goat brain: a functional homologue of DPP-III funded by SERC-DST* (Completed). *Young Scientist Award cum research project.
2. Screening, isolation, purification and characterization of extracellular enzymes from *Pediococcus acidilactici* funded by UGC (Completed).
3. Phenotypic, Biochemical and Molecular Characterization of *Pediococcus acidilactici*: a potential Biotherapeutic Agent funded by DST* (Completed). *Young Scientist Award cum research project.
4. Metagenome and Metaproteome analysis of LAB from colostrum of indigenous cows (Sahiwal, Tharparkar and Hariana) of Haryana for screening, isolation and characterization for their probiotic applications and biomarker identification funded by HSCSIT (Ongoing).

21. Editorial Services

Managing editor of “International Journal of Technology, Health and Sustainability”;
ISSN No. 3108-0723

22. Contribution to Institute Administration:

- Elected Member, Executive Council, K. U. Kurukshetra (2012-2014, 2018-2020).
- Hostel Warden, Uttra Bhawan, K. U. Kurukshetra (Nov. 2021 to Jan 2024).
- Member, Academic council, K.U. Kurukshetra.
- Member, UG Boards of Studies and PG Boards of Studies.
- Member, Admission committee, curriculum framing/revision committee, proctorial duties, anti-ragging committee. Inspection committees
- Member, Basic medical Scientist, Institutional Human Ethics Committee (IHEC) (2012-2014 and 2016-2018) and 2024 till date
- Member, Departmental research advisory committee.

23. Awards / Distinctions / Recognitions:

- Junior Research Fellowship of UGC at KU, Kurukshetra in 2001.
- Awarded Young Scientist Award cum research projects (2006, 2015) awarded by SERC Division of Department of Science and Technology (DST), New Delhi.

24. Foreign Countries visited:

- Germany (worked as RA in German Institute of Human Nutrition, Potsdam, Germany).
- USA (As invited speaker for International conference).

25. Talks Delivered:

- Invited talk was delivered in National Symposium in Nov, 2018 in LUVAS, Hisar,
- Lead speaker & Expert in 15th & 16th Uttarakhand State Science and Technology Congress (USSTC) 2020-22
- Talks delivered in National workshop, Refresher course and Faculty induction program.