

| <u>CURRICULUM VITAE</u> | |
|---|--|
| Sardar Vallabhbhai Patel University of Agriculture & Technology Department of Dairy Microbiology College of Post Harvest Technology & Food Processing Meerut, Uttar Pradesh INDIA | drhpanwar@gmail.com Mobile: +91-950-1260-540 |

Harsh Panwar, Ph.D

Associate Professor

https://www.researchgate.net/profile/Harsh_Panwar

GOLD Fellow, University of South Australia, Australia
Commonwealth Scholar, Queen's University Belfast
DST INSPIRE Fellow
Associate Fellow, National Academy of Dairy Sciences India



Statistics

| | | | |
|---------------------|-----------------------|-------------------|----|
| <i>Publications</i> | 70 | | |
| <i>Citations</i> | 3419 (Google Scholar) | | |
| <i>h- index</i> | 26 | <i>i10- index</i> | 41 |
| <i>Orcid ID</i> | 0000-0003-4352-4229 | | |

Education

| | |
|------------------------|---|
| <i>Post-Doc</i> | University of South Australia, Adelaide, Australia |
| <i>Ph.D</i> | Doctorate in Dairy Microbiology from ICAR-National Dairy Research Institute, Karnal, Haryana (June, 2013) and Queens University Belfast (UK) through DST-INSPIRE Fellowship and Commonwealth Split Site Program |
| <i>Post Graduation</i> | Post Graduation in Microbiology from Kurukshetra University Kurukshetra with University Gold Medal (2007) |

Professional Affiliations/ Research Experience

| | |
|--|---|
| <i>Associate Professor</i> | Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut |
| <i>Assistant Professor</i> | Department of Dairy Microbiology, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, Punjab, India |
| <i>Scientist C (Research Scientist II)</i> | Department of Medical Microbiology, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh |

Awards & Scholarships

| | |
|------|--|
| 2024 | Best Teacher Award 2023, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana |
| 2024 | Best Researcher Award 2023, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana |
| 2021 | Associate Fellowship - National Academy of Dairy Sciences (India) |
| 2019 | AMI Young Scientist Award 2019 |
| 2019 | AMI RS Rana Memorial Award 2019 |
| 2019 | Indo - Australian Career Boosting GOLD Fellowship 2018-19 at University of South Australia, Adelaide, Australia |
| 2019 | Best Teacher Award 2019, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana |
| 2018 | Best Researcher Award 2018, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana |
| 2017 | Most Promising Young Dairy Microbiologist Award, Vets Club, Ludhiana |
| 2011 | COMMONWEALTH SCHOLARSHIP, United Kingdom |
| 2010 | DST-INSPIRE Fellowship, Govt. of INDIA |
| 2008 | Institutional Fellowship, ICAR-NDRI, Karnal |
| 2007 | UNIVERSITY GOLD MEDAL, Kurukshetra University Kurukshetra |

Extramural Grants / Completed-Ongoing Research Projects

| | |
|--|--------------------|
| <i>SERB-MoFPI</i> | <i>70.55 Lakhs</i> |
| <i>SERB-DST</i> | <i>27.53 Lakhs</i> |
| <i>DST-SEED Division</i> | <i>22.44 Lakhs</i> |
| <i>DBT</i> | <i>10.20 Lakhs</i> |
| <i>RKVY, Punjab Government</i> | <i>20.00 Lakhs</i> |
| <i>DST-National Post Doctoral Fellowship</i> | <i>19.20 Lakhs</i> |
| <i>ICAR - Niche Area</i> | <i>350 Lakhs</i> |
| <i>DST-SEED Division</i> | <i>14.00 Lakhs</i> |
| <i>MoFPI</i> | <i>41.00 Lakhs</i> |
| <i>DST - SEED Division</i> | <i>28.37 Lakhs</i> |
| <i>DST</i> | <i>4.5 Crores</i> |
| <i>Indian Oil Corporation Limited, Faridabad</i> | <i>30 Lakhs</i> |

Thesis Supervised

| M. Tech. | | | |
|-----------------|----------------|------------|----------------|
| Major Advisor | 04 (Completed) | Co-Advisor | 04 (Completed) |
| Ph.D. | | | |
| Major Advisor | 01 (Completed) | Co-Advisor | 03 (Completed) |
| | -- | | |

Certificate Courses

- Certificate Course: Liquid Nitrogen - its hazardous properties, University of South Australia
- Certificate Course: Biosafety 1 - Biosafety principles, University of South Australia
- Certificate Course: Office Ergonomics Assessment, University of South Australia
- Certificate Course: Respectful Behaviour, University of South Australia
- Certificate Course: Safety & Wellbeing at UniSA, University of South Australia
- Certificate Course: Chemical Safety Assessment, University of South Australia
- Certificate Course: Chemical Spills Management Assessment, University of South Australia
- Certificate Course: Environmental Awareness Assessment, University of South Australia
- Certificate Course: Managing Health & Safety Risks Assessment, University of South Australia
- Certificate Course: Incident Investigation, University of South Australia
- Certificate Course: Fume Cupboards, University of South Australia

List of Publications (*Corresponding author)

Singh, H., Padmaja, M., Thomas, A. M., **Panwar, H.**, Nasrul, S. I., Jyoti, & Singh, N. K. (2024). Molecular Survey of Tick-Borne Haemoparasites of Dogs by Multiplex Polymerase Chain Reaction from Punjab, India. *Acta Parasitologica*, 69(3), 1458-1470.

Sudha Rana, Swati Kapoor, Harsh Panwar, Vikas Kumar, Bal Vipran Chander Mahajan. (2024). Impact of packaging materials and storage durations on physico-chemical, techno-functional, antioxidant and oxidation properties of tomato seed protein isolate, *Journal of Stored Products Research*, Volume 106, 2024, 102284.

Heena, Kaushal, S., Kaur, V., Panwar, H., Sharma, P., & Jangra, R. (2024). Isolation of quinic acid from dropped Citrus reticulata Blanco fruits: its derivatization, antibacterial potential, docking studies, and ADMET profiling. *Frontiers in Chemistry*, 12, 1372560.

Heena, Sonia Kaushal, Anu Kalia, Harsh Panwar, Vishaldeep Kaur. (2024). Unraveling the chemical composition, antibacterial, antioxidant and cytotoxic potential of Citrus reticulata Blanco dropped fruit extracts, *Biocatalysis and Agricultural Biotechnology*, Volume 57, 2024, 103104.

Sandhu, N., Ankush, A. P., Singh, J., Raigar, O. P., Bains, S., Jindal, T., **Harsh Panwar** & Kumar, A. (2023). Integrating association mapping, linkage mapping, fine mapping with RNA seq conferring seedling vigor improvement for successful crop establishment in deep sown direct-seeded rice. *Rice*, 16(1), 46.

Wandhare, A. G., Chandra, M., & Panwar, H. (2023). Milk microflora with S. aureus alike colony characteristics limits its identification over selective and differential agar media. *Indian Journal of Dairy Science*, 76(2).

- Kumar, D., Mehta, N., Panwar, H., Chatli, M. K., & Malav, O. P. (2023). In-vitro evaluation of antibacterial and antioxidant activity of essential oils from oregano (*Origanum vulgare*) and lime (*Citrus aurantifolia*).
- Chaudhary, V., Katyal, P., Puniya, A. K., Panwar, H., Arora, M., Kaur, J., ... & Poonia, A. K. (2023). Pilot-scale process to produce bio-pigment from *Monascus purpureus* using broken rice as substrate for solid-state fermentation. *European Food Research and Technology*, 249(7), 1845-1855.
- Duche, R. T., Singh, A., Wandhare, A. G., Sangwan, V., Sihag, M. K., Nwagu, T. N., Harsh Panwar & Ezeogu, L. I. (2023). Antibiotic resistance in potential probiotic lactic acid bacteria of fermented foods and human origin from Nigeria. *BMC microbiology*, 23(1), 142.
- Singh, A., Duche, R. T., Wandhare, A. G., Sian, J. K., Singh, B. P., Sihag, M. K., ... & Panwar, H. (2023). Milk-derived antimicrobial peptides: overview, applications, and future perspectives. *Probiotics and Antimicrobial Proteins*, 15(1), 44-62.
- Duche, R. T., Nwagu, T. N., Singh, A., Wandhare, A. G., Sihag, M. K., Panwar, H., & Ezeogu, L. I. (2022). Bile salt hydrolase and cholesterol assimilation potential of lactobacilli from Nigerian fermented foods and human sources. *Indian Journal of Dairy Science*, 75(4).
- Chaudhary, V., Katyal, P., Panwar, H., Kaur, J., Aluko, R. E., Puniya, A. K., & Poonia, A. K. (2022). Antioxidative, anti-inflammatory, and anticancer properties of the red biopigment extract from *Monascus purpureus* (MTCC 369). *Journal of Food Biochemistry*, 46(9), e14249.
- Vishu Chaudhary, Priya Katyal, Anuj Kumar Poonia, Jaspreet Kaur, Anil Kumar Puniya, Harsh Panwar, Natural pigment from *Monascus*: The production and therapeutic significance, *Journal of Applied Microbiology*, Volume 133, Issue 1, 1 July 2022, Pages 18–38, <https://doi.org/10.1111/jam.15308>
- Thomas, A. M., Singh, H., Panwar, H., Sethi, R. S., & Singh, N. K. (2022). Duplex real-time PCR methods for molecular detection and characterization of canine tick-borne haemoparasites from Punjab state, India. *Molecular Biology Reports*, 49(6), 4451-4459.
- Padmaja, M., Singh, H., Panwar, H., Singh, N. K., & Singh, N. K. (2022). Development and validation of multiplex SYBR Green real-time PCR assays for detection and molecular surveillance of four tick-borne canine haemoparasites. *Ticks and Tick-borne Diseases*, 13(3), 101937.
- Chaudhary, V., Katyal, P., Panwar, H., Puniya, A. K., & Poonia, A. K. (2022). Evaluating anti-microbial and anti-oxidative potential of red biopigment from *Monascus purpureus*. *Environment Conservation Journal*, 23(1&2), 83-93.
- Goswami, M., Mehta, N., Panwar, H., Malav, O. P., & Bedi, J. S. (2022). In-vitro Assessment of antibacterial and antioxidant capacity of essential oils from cumin (*Cuminum cyminum*) and Lemon (*Citrus limon*) for Future Applications in Meat Industry.
- Singh, K. S., Singh, B. P., Rokana, N., Singh, N., Kaur, J., Singh, A., & Panwar, H. (2021). Bio-therapeutics from human milk: prospects and perspectives. *Journal of Applied Microbiology*, 131(6), 2669-2687.
- Dhillon, H. S., Gill, M. S., Kocher, G. S., Panwar, H., & Arora, M. (2021). Preparation of *Lactobacillus acidophilus* enriched probiotic mango juice. *Journal of Environmental Biology*, 42, 371-378.

Wandhare, A. G., Singh, A., Kaur, J., Sihag, M. K., Dar, R. A., Singh, K. S., Harsh Panwar & Gill, J. P. S. (2021). *Staphylococcus aureus*: significance, control and rapid detection across milk chain. *Indian Journal of Dairy Science*, 74(3).

Panwar, Harsh; Rokana, Namita; V, Aparna; Kaur, Jaspreet; Singh, Anamika; Singh, Jagnoor; Singh, Kumar; Chaudhary, Vishu; Puniya, Anil Kumar. 2020. Gastrointestinal stress as innate defense against microbial attack. *Journal of Applied Microbiology*. JAM-2020-1017 (Accepted – In Press). **IF 3.06**

Rabia Bhardwaj, Brij Pal Singh, Nitika Sandhu, Niharika Singh, Ravinder Kaur, Namita Rokana, Kumar Siddharth Singh, Vishu Chaudhary, **Harsh Panwar***. 2020. Probiotic mediated NF- κ B regulation for prospective management of type 2 diabetes. *Molecular Biology Reports*. 47: 2301-2313. **Citations 1, IF 2.107**

Prabhjot Kaur, Nitin Mehta, OP Malav, MK Chatli, **Harsh Panwar**. 2020. Antimicrobial, antioxidant and antibiofilm potential of peppermint (*Menthapiperita*) essential oil for application in meat products. *Journal of Animal Research*. 10 (1):33-40. **NAAS 5.68**

Niharika Singh, Ravinder Kaur, Brij Pal Singh, Namita Rokana, Gunjan Goel, Anil Kumar Puniya, **Harsh Panwar***. 2020. Impairment of *Cronobacter sakazakii* and *Listeria monocytogenes* biofilms by cell-free preparations of lactobacilli of goat milk origin. *Folia Microbiologica*. 65 (1): 185-196. **IF 1.44**

FMF Elshaghabee, Namita Rokana, **Harsh Panwar**, Knut J Heller, Jurgen Schrezenmeir. 2019. Probiotics for dietary management of non-alcoholic fatty liver disease. *Environmental Chemistry Letters*. 17: 1553-1563. **Citations 1, IF 4.617**

HN Punya, Nitin Mehta, Manish Kumar Chatli, Rajesh V Wagh, **Harsh Panwar**. 2019. In-vitro evaluation of antimicrobial and antioxidant Efficacy of thyme (*Thymus vulgaris* L.) essential oil. *Journal of Animal Research*. 9 (3): 443-449. **Citations 3, NAAS 5.68**

Namita Rokana, Brij Pal Singh, Nishchal Thakur, Chetan Sharma, Rohini Devidas Gulhane, **Harsh Panwar***. 2018. Screening of cell surface properties of potential probiotic lactobacilli isolated from human milk. *Journal of Dairy Research*. 85 (3): 347-354. **Citations 3, IF 3.08**

MK Kanth, Nitin Mehta, MK Chatli, OP Malav, Pavan Kumar, RV Wagh, **Harsh Panwar**. 2018. In-vitro assessment of antimicrobial, antibiofilm and antioxidant potential of essential oil from Rosemary (*Rosmarinus officinalis* L.). *Journal of Animal Research*. 8 (6): 989-998. **Citations 2, NAAS 5.68**

Rima Joon, Santosh Kumar Mishra*, Gurvir Singh Brar, **Harsh Panwar**, Pranav K Singh, Rekha Chawla, Amit kumar Barui . 2018. Evaluation of quality of yoghurt prepared from goat milk of Beetal breed. *Indian Journal of Dairy Science*. 71: 54-60. **Citations 2, NAAS 5.26**

Abderrahmen Merghni*, Emira Noumi, Ons Hadded, Neyla Dridi, **Harsh Panwar**, Ozgur Ceylan, Maha Mastouri, Mejdi Snoussi. 2018. Assessment of the antibiofilm and antiquorum sensing activities of *Eucalyptus globulus* essential oil and its main component 1,8-cineole against methicillin-resistant *Staphylococcus aureus* strains. *Microbial Pathogenesis*. 118: 74-80. **Citations 27, IF 2.58**

Chetan Sharma, Namita Rokana, Mudrit Chandra, Brij Pal Singh, Rohini Devidas Gulhane, Jatinder Paul Singh Gill, Pallab Ray, Anil Kumar Puniya, **Harsh Panwar***. 2018. Antimicrobial resistance: its surveillance, impact, and alternative management strategies in dairy animals. *Frontiers in Veterinary Science*. 4 (237): 1-27. **Citations 53, IF 2.029**

Santosh Kumar Mishra, RK Malik, **Harsh Panwar**, Amit Kumar Barui. 2018. Microencapsulation of reuterin to enhance long-term efficacy against food-borne pathogen *Listeria monocytogenes*. 3 Biotech. 8 (1): 23: 1-7. **Citations 6, IF 1.78**

Niharika Singh, Chetan Sharma, RD Gulhane, Namita Rokana, BP Singh, AK Puniya, Sampan Attri, Gunjan Goel, **Harsh Panwar***. 2018. Inhibitory effects of lactobacilli of goat's milk origin against growth and biofilm formation by pathogens: an in vitro study. Food Bioscience. 22: 129-138. **Citations 4, IF 3.22**

Sandeep Singh, Sunil Kumar Khatkar, **Harsh Panwar**. 2018. Effect of storage on the quality attributes of whey protein enriched milk chocolate. The Pharma Innovation Journal. 7(12): 427-431. **NAAS 5.03**

Nishchal Thakur, Chetan Sharma, Namita Rokana, Brij Pal Singh, Rohini Devidas Gulhane, Santosh Kumar Mishra, Sunil Kumar Khatkar, Anil Kumar Puniya, **Harsh Panwar***. 2018. In vitro assessment of antibiotic resistance pattern among Lactobacillus strains isolated from Goat milk. International Journal of Current Microbiology and Applied Science. 7 (1): 2108-2116. **NAAS 5.38**

Digvijayaditya Singh Mandhotra, Amrit Pal Singh Sethi, **Harsh Panwar**, SS Sikka. 2017. Effect of inclusion of probiotics consortium in the diets on growth, digestibility of nutrients and blood parameters in Labrador dogs. Indian Journal of Animal Nutrition. 34 (4): 463-466. **NAAS 5.02**

Kalawati M, Sudesh Kumari, JM Khurana, Amita Malik, Chetan Sharma, **Harsh Panwar**. 2017. One pot three component synthesis of spiro [indolo-3, 10'-indeno [1, 2-b] quinolin]-2, 4, 11'-triones as a new class of antifungal and antimicrobial agents. Chinese Chemical Letters. 28 (1): 136-142. **Citations 16, IF 3.83**

Chetan Sharma, Sachin Gulati, Nishchal Thakur, BP Singh, Sanjolly Gupta, Simranpreet Kaur, SK Mishra, AK Puniya, JPS Gill, **Harsh Panwar***. 2017. Antibiotic sensitivity pattern of indigenous lactobacilli isolated from curd and human milk samples. 3 Biotech. 7 (1): 53: 1-14. **Citations 13, IF 1.78**

Rima Joon, Santosh K Mishra, Gurvir Singh Brar, Pranav K Singh, **Harsh Panwar**. 2017. Instrumental texture and synergetic analysis of yoghurt prepared from goat and cow milk. The Pharma Innovation Journal. 6 (7, Part G): 971. **Citations 11, NAAS 5.03**

Dadi Bhaskar, Sunil Kumar Khatkar, Rekha Chawla, **Harsh Panwar**, Swati Kapoor. 2017. Effect of β -glucan fortification on physico-chemical, rheological, textural, colour and organoleptic characteristics of low fat dahi. Journal of Food Science and Technology. 54 (9): 2684-2693. **Citations 7, IF 1.84**

FMF Elshaghabee, Namita Rokana, Rohini Devidas Gulhane, Chetan Sharma, **Harsh Panwar***. 2017. Bacillus as potential probiotics: status, concerns, and future perspectives. Frontiers in Microbiology. 8(1490): 1-15. **Citations 162, IF 4.259**

Chetan Sharma, Romika Dhiman, Namita Rokana, **Harsh Panwar**. 2017. Nanotechnology: an untapped resource for food packaging. Frontiers in Microbiology. 8(1735): 1-22. **Citations 52, IF 4.259**

Bhaskara Nand, Kalawati Meena, Shruti Gupta, Jitender M Khurana, Amita Malik, Chetan Sharma, **Harsh Panwar**. 2017. Synthesis of novel 2-(3-aryl/ alkylaminopropoxy)-12-aryl xanthene derivatives as antifungal and antibacterial agents. Chemical Biology Letters. 4 (2): 81-90. **Citations 2, IF 0.89**

Chetan Sharma, Brij Pal Singh, Nishchal Thakur, Sachin Gulati, Sanjolly Gupta, Santosh Kumar Mishra, **Harsh Panwar***. 2017. Antibacterial effects of Lactobacillus isolates of curd and human milk origin against food-borne and human pathogens. 3 Biotech. 7 (1): 31: 1-9. **Citations 29, IF 1.78**

Ramandeep Kaur, Gurpreet Kaur, Santosh Kumar Mishra*, **Harsh Panwar**, Krishan Kumar Mishra, Gurvir Singh Brar. 2017. Yogurt: A nature's wonder for mankind. International Journal of Fermented Foods. 6 (1): 57-69. **Citations 3**

Nishchal Thakur, Namita Rokana, **Harsh Panwar***. 2016. Probiotics, selection criteria, safety and role in health and disease. Journal of Innovative Biology. 3 (1): 259-270. **Citations 16**

Harsh Panwar, Danielle Calderwood, Irene R Grant, Sunita Grover, Brian D Green*. 2016. Lactobacilli possess inhibitory activity against dipeptidyl peptidase-4 (DPP-4). Annals of Microbiology. 66 (1): 505-509. **Citations 14, IF 1.60**

Santosh K Mishra, Ravinder Malik, Krishan Kumar Mishra, **Harsh Panwar**, Amit Kumar Barui. 2016. Synergistic role of reuterin in combination with nisin against food borne pathogens in milk at refrigerated condition. International Journal of Fermented Foods. 5(2):79-85. **Citations 1, NAAS 3.53**

Harsh Panwar, Danielle Calderwood, Anna L Gillespie, Alastair R Wylie, Stewart F Graham, Irene R Grant, Sunita Grover, Brian D Green. 2016. Identification of lactic acid bacteria strains modulating incretin hormone secretion and gene expression in enteroendocrine cells. Journal of Functional Foods. 23: 348-358. **Citations 13, IF 3.19**

Smita Chaudhary, Panwar Jyoti, Yasmin Tabassum, Sharma Sonika, **Harsh Panwar**. 2015. An investigation on effect of different agricultural practices on soil microflora: a potential indicator of soil fertility. International Journal of Research in Biosciences. 4(2):8-20. **Citations 1, NAAS 2.99**

Harsh Panwar, Danielle Calderwood, Irene G, Sunita G, Brian Green. 2014. Lactobacillus strains isolated from infant faeces possess potent inhibitory activity against intestinal alpha-and beta-glucosidases suggesting anti-diabetic potential. European Journal of Nutrition. 53 (7): 1465-1474. **Citations 66, IF 4.44**

Ritu Chauhan, Aparna SV, **Harsh Panwar**, Rashmi HM, RK Duary, VK Batish, Sunita Grover. 2014. Amelioration of colitis in mouse model by exploring antioxidative potentials of an indigenous probiotic strain of *Lactobacillus fermentum* Lf1. Journal of Biomedicine and Biotechnology. 2014: 1-12. **Citations 29, IF 2.2**

Harsh Panwar*. 2014. Biologically active components of human and bovine milk as potent antimicrobial agents. Journal of Innovative Biology. 1 (2): 97-104. **Citations 7**

Harsh Panwar, H Mallapa Rashmi, Virender Kumar Batish, Sunita Grover. 2013. Probiotics as potential biotherapeutics in the management of type 2 diabetes-prospects and perspectives. Diabetes-Metabolism Research and Reviews. 29 (2): 103-112. **Citations 104, IF 4.758**

Katharine V Hand, Christine M Bruen, Fiona O'Halloran, **Harsh Panwar**, Danielle Calderwood, Linda Giblin, Brian D Green. 2013. Examining acute and chronic effects of short-and long-chain fatty acids on peptide YY (PYY) gene expression, cellular storage and secretion in STC-1 cells. European Journal of Nutrition. 52 (4): 1303-1313. **Citations 26, IF 4.44**

V Aparna Sudhakara, **Harsh Panwar**, Ritu Chauhan, Raj Kumar Duary, Rahul Kumar Rathore, Virender Kumar Batish, Sunita Grover. 2013. Modulation of anti-inflammatory response in lipopolysaccharide stimulated human THP-1 cell line and mouse model at gene expression level with indigenous putative probiotic lactobacilli. Genes and Nutrition. 8 (6): 637-648. **Citations 17, IF 2.76**

Smita Chaudhary, Jyoti Luhach, Pooja Mittal, **Harsh Panwar**, Chetan Sharma. **2013**. Biodegradation potential of indigenous Bacillus strains isolated from oil and sludge contaminated sites. Asian Journal of Microbiology, Biotechnology and Environmental Sciences. 15(1):85-92. **NAAS 4.93**

Anju A Achuthan, Raj Kumar Duary, Anupama Madathil, **Harsh Panwar**, Himanshu Kumar, Virender Kumar Batish, Sunita Grover. **2012**. Antioxidative potential of Lactobacilli isolated from the gut of Indian people. Molecular Biology Reports. 39 (8): 7887-7897. **Citations 9, IF 2.10**

Rashmi H Mallappa, Namita Rokana, Raj Kumar Duary, **Harsh Panwar**, Virender Kumar Batish, Sunita Grover. **2012**. Management of metabolic syndrome through probiotic and prebiotic interventions. Indian Journal of Endocrinology and Metabolism. 16 (1): 20. **Citations 90, IF 1.251**

Books

| S. No. | Title | ISBN and DOI |
|--------|--|--|
| 1. | Mitigation of Antimicrobial Resistance Volume 1 Tools and Targets (2020) Editors: Harsh Panwar, Chetan Sharma, Eric Lichtfouse | Springer Nature 978-3-030-53023-5 DOI: 10.1007/978-3-030-53024-2 |
| 2. | Mitigation of Antimicrobial Resistance Volume 2 Natural and Synthetic Approaches (2020) Editors: Harsh Panwar, Chetan Sharma, Eric Lichtfouse | Springer Nature 978-3-030-58258-6 DOI: 10.1007/978-3-030-58259-3 |
| 3. | Mukhopadhyay, C. S., Choudhary, R. K., Panwar, H., & Malik, Y. S. (Eds.). (2023). <i>Biotechnological Interventions Augmenting Livestock Health and Production</i> . | Springer |

Book Chapters: 11

Manuals: 02

International Conference: 06

Others: Actively contributed as ‘*Corona Warrior*’ during Covid-19 pandemic from April 20 – June 21

(HARSH PANWAR)