Dr. (Mrs) Geeta Shukla, Professor,

Department of Microbiology,

Panjab University, Chandigarh, -160014

India

Educational background

- M.Sc. (HS), Microbiology, Panjab University, Chandigarh (1983)
- Ph.D., Microbiology, Panjab University, Chandigarh (1991)

Professional background

- Professor, Panjab University, Chandigarh (2012- onwards)
- Associate Professor, Panjab University, Chandigarh (2009-2012)
- Reader, Panjab University, Chandigarh (2006-2009)
- Sr. Lecturer, Panjab University, Chandigarh (1999-2006)
- Lecturer, Panjab University, Chandigarh (1995-1999)

Important awards and fellowships of academies

- UGC independent fellowship (Research Associate), Department of Microbiology, Panjab University, Chandigarh (1994-95)
- CSIR independent fellowship (Research Associate), PGIMER,Chandigarh, (1992-93)
- Cover page contest awarded for Canadian Journal of Microbiology

Main area of work

- Materno-foetal relationship in murine malaria during pregnancy with special reference to molecular mechanism of placental pathology.

- Modulation of murine giardiasis by the supplementation of probiotics in normal /malnourished/ renourished mice.
- Isolation, characterization and assessment of probiotics/synbiotic as the natural biointervention in biofilm formimg bacteria, diet modifier and life style diseases (colorectal cancer, metabolic syndrome and atherosclerosis).

Research projects completed : 7

Thesis Supervising and Supervised

Ph.D. Thesis Supervised	Ph.D. Thesis Supervising	M.Sc. Thesis Supervised	M.Sc. Thesis Supervising
16	3	35	3

Publications (International & National Journals): 75

Chapters in Book: 5

Membership of Learned Societies and other Academic Bodies

- Life Member, Association of Microbiologist of India.
- Life Member, Punjab Academy of Sciences.
- Life Member, Journal of Parasitology and Applied Animal Biology.
- Member of Students Aid Society of Ankur School (2005-2007).
- Member of Ankur School Management Committee (2005-2007, 2019- onwards).

Important publications

1. Kamboj S, Soni S K, Shukla G (2023). Preparation, characterization, and safety assessment of statistical optimized probiotic supplemented herbal wine from Tinospora cordifolia. *3 Biotech 13*(4):118.
2. Chandla S, Harjai K, Shukla G (2022). Combinatorial therapeutic strategy of biogenics derived from *Lactobacillus fermentum* PUM and zingerone against *Pseudomonas aeruginosa* PAO1 induced surgical site infection: An experimental study. Probiotics & Antimicro. Prot https://doi.org/10.1007/s12602-022-09944-2.
3. Chandla S, Harjai K, Shukla G (2021). Synergistic Effect of Biogenics Derived from Potential Probiotics Together with Zingerone Against Biofilm Formation by *Pseudomonas aeruginosa* PAO1. Probiotics & Antimicro. Prot. https://doi.org/10.1007/s12602-021-09763-x.
4. Khanna S, Bishnoi M, Kondepudi KK, Shukla G (2021). Synbiotic (Lactiplantibacillus GSSK2 and isomalto-oligosaccharides) supplementation modulates pathophysiology and gut dysbiosis in experimental metabolic syndrome. Sci. Rep, 11:21397.
5. Sharma B, Shukla G (2020). Supplementation of Phytase Producing Probiotic *Pediococcus acidilactici* BNS5B Ameliorates the Bioavailability of Iron in Female BALB/c Mice Fed with Phytic Acid Rich Diet. Austin J Nutr Metab, 7(5): 1094.
6. Sharma B, Shukla G (2020). Isolation, Identification, and Characterization of Phytase Producing Probiotic Lactic Acid Bacteria from Neonatal Fecal Samples Having Dephytinization Activity. Food Biotechnol, 34(2):151.
7. Chandel D, Uppal S, Mehta SK, Shukla G (2020). Preparation and Characterization of Celecoxib Entrapped Guar Gum Nanoparticles Targeted for Oral Drug Delivery against Colon Cancer: An In-Vitro Study. J Drug Deliver Ther, 10(2-s):14.
8. Khanna S, Bishnoi M, Kondepudi KK et al (2020). Isolation, characterization and anti-inflammatory mechanism of probiotics in lipopolysaccharide-stimulated RAW 264.7 macrophages. World J Microbiol Biotechnol, 36:74. https://doi.org/10.1007/s11274-020-02852-z.
9. Khanna S, Walia S, Kondepudi KK et al (2020). Administration of indigenous probiotics modulate high-fat diet-induced metabolic syndrome in Sprague Dawley rats. Antonie van Leeuwenhoek, 113:1345.
10. Sharma M, Shukla G (2020). Administration of Metabiotics Extracted From Probiotic *Lactobacillus rhamnosus* MD 14 Inhibit Experimental Colorectal Carcinogenesis by Targeting Wnt/β-Catenin Pathway. Front Oncol, 10:746.

11. Chandel D, Sharma M, Chawla V, Sachdeva N and Shukla G (2019). Isolation, characterization and identification of antigenotoxic and anticancerous indigenous probiotics and their prophylactic potential in experimental colon carcinogenesis.Sci Rep, 9(1):14769.
12. Sharma M, Chandel D and Shukla G (2019). Antigenotoxicity and Cytotoxic Potentials of Metabiotics Extracted from Isolated Probiotic, MD 14 on Caco-2 and HT-29 Human Colon Cancer Cells. Nutr Cancer, doi: https://doi.org/10.1080/01635581.2019.1615514
13. Sharma B and Shukla G (2019). Optimization, Purification and Characterisation of phytase from isolated probiotic *Pediococcus acidilactici* BNS5B. Int J Curr Microbiol Appl Sci. 8(9): 2060-2081
14. Shukla G, Kamboj S and Sharma B (2019). Comparative Analysis of Antigiardial Potential of Heat Inactivated and Probiotic Protein of Probiotic Lactobacillus rhamnosus GG in Murine Giardiasis. Probiotics Antimicrob Proteins, doi: https://doi.org/10.1007/s12602-018-9506-8.
15. Shukla G, Sharma A, Bhatia R and Sharma M (2019). Prophylactic Potential of Synbiotic (Lactobacillus casei and Inulin) in Malnourished Murine Giardiasis: an Immunological and Ultrastructural Study. Probiotics Antimicrob Proteins, 11(1):165.
16. Sharaf LK and Shukla G (2018). Probiotics (Lactobacillus acidophilus and Lactobacillus rhamnosus GG) in Conjunction with Celecoxib (selective COX-2 inhibitor) Modulated DMH-Induced Early Experimental Colon Carcinogenesis. Nutr Cancer, 70(6):946.
17. Sharaf LK, Sharma M, Chandel D and Shukla G (2018). Prophylactic intervention of probiotics (L.acidophilus, L.rhamnosus GG) and celecoxib modulate Bax-mediated apoptosis in 1,2-dimethylhydrazine-induced experimental colon carcinogenesis. BMC Cancer, 18(1):1111.
18. Sharma V, Harjai K and Shukla G (2017).Effect of bacteriocin and exopolysaccharides isolated from probiotic on P. aeruginosa PAO1 biofilm. *Folia Microbiol* ;DOI 10.1007/s12223-017-0545-4.
19. Sharma L and Shukla G (2017). Placental Malaria: a new insight into the pathophysiology. Front Med (Lausanne), 4:117; doi: 10.3389/fmed.2017.00117.
20. Verma A and Shukla G (2014). Synbiotic (*Lactobacillus rhamnosus* + *Lactobacillus acidophilus* + inulin) reduces oxidative stress and colonic damage in 1,2-dimethylhydrazine dihydrochloride induced colon carcinogenesis in Sprague Dawley rats - a long term study. *European Journal of Cancer Prevention*.23(6):550.

21. Verma A and Shukla G (2013). Probiotics *Lactobacillus rhamnosus GG, Lactobacillus acidophilus* suppresses DMH induced procarcinogenic fecal enzymes and preneoplastic aberrant crypt foci in early colon carcinogenesis in Sprague Dawley rats. *Nutrition and Cancer.* 65(1): 84.

22. Verma A and Shukla G. (2013). Administration of prebiotic inulin suppresses 1,2 dimethylhydrazine dihydrochloride induced procarcinogenic biomarkers fecal enzymes and preneoplastic lesions in early colon carcinogenesis in Sprague Dawley rats. *Journal of Functional Foods.* http://dx.doi.org/10.1016/j.jff.2013.02.006.

23. Sharma L and Shukla G (2013). Treatment of pregnant Balb/c mice with sulphadoxin pyromethamine or choloroquinine abrogates *Plasmodium berghei* induced placental pathology. *Parasitology International.* Doi 10.1016/j.parint213.08.016.

24. Goyal N and Shukla G (2012). Probiotic *Lactobacillus rhamnosus GG* modulates the mucosal immune response in *Giardia intestinalis*-infected Balb/c mice. *Digestive Diseases and Sciences.* DOI : 10.1007/s10620-012-2503-y.

25. Sharma L, Kaur J, Rishi P and Shukla G (2012). *Plasmodium berghei*: Influence of infection on the oxidant and antioxidants levels in pregnant BALB/c mice. *Experimental Parasitology* 131: 215.

26. Shukla, G., Sidhu, R. K. and Verma, A. (2012). Restoration of anthropometric, biochemical and histopathological alterations by *Lactobacillus casei* supplementation in renourished *Giardia intestinal* infected BALB/c mice. *Antonie van Leeuwenhoek.* DOI: 10-1007/s/0482-012-9713-3

27. Sharma L, Kaur J, Shukla G (2012). Role of oxidative stress and apoptosis in the placental pathology of *Plasmodium berghei* infected mice. *Plos One*; 7: e32694.

28. Shukla, G. and Sidhu, R. K. (2011). *Lactobacilli casei* as a probiotic in malnourished *Giardia lamblia*-infected mice: a biochemical and histopathological study. *Can. J. Microbiol.* 57(2):127.

29. Shukla, G., Kapila, A., Sharma, L. (2011). *Lactobacilli casei* ameolaretes the jejunum brush border alterations in *Giardia lamblia* infected BALB/c mice. *Int. J. Probiotics and Prebiotics* 6 (3/4):187.

30. Shukla, G. and Sidhu, R. K. (2011). Effect of *Giardia duodenalis* in protein malnourished and renourished mice. *Central European Journal of Medicine.* 6 (6): 762.