

	Dr. Mahavir Singh
	Scientist
	College Central Laboratory College of Veterinary Sciences Lala Lajpat Rai University of Veterinary and Animal Sciences Hisar-125004, Haryana, India. Phone: 01662-256105 (O) Mobile: +91-9813284880 E-mail: drmahaviryadav@gmail.com
Educational Qualifications	2009 B.V.Sc. & A.H., CCSHAU, Hisar 2011 M.V.Sc., LUVAS, Hisar 2015 Ph.D., LUVAS, Hisar
Employment Details	Scientist: From 30-04-2016 to Till date.
Research Interests	Mastitis, Antimicrobial resistance and Infectious abortions
Fellowships/awards etc.	1. DST-INSPIRE fellowship for pursuing full time doctoral programme by Department of Science and Technology, Government of India. 2. Best poster presentation award-III by Indian society for Veterinary Immunology and Biotechnology (VIBCON-2015), India. 3. M-Ceft merit award by Allembic ltd. Veterinary division for securing overall second rank in B.V.Sc. & A.H. programme.
Membership of scientific societies	1. Life member, The Biotech Research Society of India 2. Life member, Indian Association of Veterinary Microbiologists and Immunologists.
Publications	Research Papers: 23 Review paper: 1 Short Communications: 2 Conference proceedings as full paper: 1 Chapter in manuals: 14 Extension leaflets: 2 Magazine/popular article: 1 Abstracts in Conferences/symposia: 13

Detailed List of Publications

Research Papers

1. Tomar, P., Singh, Y., Mahajan, N.K., Jindal, N. and **Singh, M.** (2017). Duplex PCR for direct detection of *Mycoplasma gallisepticum* and *Mycoplasma synoviae* from tissues of poultry affected with respiratory infections. *International Journal of Livestock Research*, 7(11): 280-286.
2. Dutt, R., Singh, G., **Singh, M.**, Sharma, M., Dalal, J. and Chandolia, R.K. (2017). Diagnosis of subclinical endometritis in Murrah buffaloes through cytobrush technique. *International Journal of Current Microbiology and Applied Sciences*, 6(11): 494-499.
3. Tomar, P., Singh, Y., Mahajan, N.K., Jindal, N. and **Singh, M.** (2017). Molecular detection of avian Mycoplasmas in poultry affected with respiratory infections in Haryana (India). *International Journal of Current Microbiology and Applied Sciences*, 6(6): 2155-2162.
4. **Singh, M.**, Yadav, P., Sharma, A., Garg, V.K. and Mittal, D. (2017). Estimation of mineral and trace element profile in bubaline milk affected with subclinical mastitis. *Biological Trace Element Research*, 176(2): 305-310.
5. **Singh, M.**, Sharma, A., Mittal, D., Yadav, P. and Charaya, G. (2016). Assessment of lactate dehydrogenase enzyme activity in milk as a marker for detection of subclinical mastitis. *Journal of Animal Research*, 6(2): 113-116.
6. **Singh, M.**, Sharma, A., Kumar, A., Mittal, D., Kumar, P. and Charaya, G. (2016). Relative expression of proinflammatory cytokines by Real Time PCR in milk somatic cells of subclinical mastitis affected buffaloes. *The Indian Journal of Animal Sciences*, 86(9): 991-993.
7. Gupta, R., Jindal, N., Arora, D., **Singh, M.** and Kapoor, P.K. (2016). Detection of Salmonella Typhimurium, Salmonella Enteritidis and Salmonella Gallinarum from suspected cases of Fowl Typhoid in poultry in Haryana. *The Indian Veterinary Journal*, 93(7): 44-47.
8. **Singh, M.**, Yadav, P., Garg, V.K., Sharma, A., Singh, B. and Sharma, H. (2015). Quantification of minerals and trace elements in raw caprine milk using flame atomic absorption spectrophotometry and flame photometry. *Journal of Food Science and Technology*, 52(8): 5299-5304.
9. Charaya, G., Kumar, A., Sharma, A., **Singh, M.**, Goel, P. and Mittal, D. (2015). Detection of *Streptococcus agalactiae* directly from milk by polymerase chain reaction in Murrah buffaloes. *The Haryana Veterinarian*, 54(2): 196-197.
10. Charaya, G., Kumar, A., Sharma, A., **Singh, M.** and Goel, P. (2015). Comparative efficacy of tylosin, enrofloxacin and ceftriaxone in treatment of buffaloes suffering from mastitis. *The Haryana Veterinarian*, 54(2): 154-156.
11. **Singh, M.**, Sharma, A., Mittal, D. and Charaya, G. (2015). Prevalence of bubaline subclinical mastitis along with microbial profile and sensitivity pattern. *The Haryana Veterinarian*, 54(2): 157-159.

12. Charaya, G., Sharma, A., Kumar, A., Goel, P. and **Singh, M.** (2015). Detection of major mastitis pathogens by multiplex polymerase chain reaction assay in buffalo milk. *The Indian Journal of Animal Sciences*, 85(2): 122-125.
13. **Singh, M.**, Sharma, A., Sharma, R., Mittal, D., Yadav, P. and Charaya, G. (2015). Estimation of acute phase proteins as early biomarkers of buffalo subclinical mastitis. *Asian Journal of Animal and Veterinary Advances*, 10(12): 894-902.
14. Sharma, A., Mittal, D. and **Singh, M.** (2015). Mastitis pathogens and their antibiogram- A study of 4387 bovine samples. *Intas Polivet*, 16(2): 252-255.
15. **Singh, M.**, Singh, A. and Sharma, A. (2014). Production and applications of an N-terminally-truncated recombinant beta-haemolysin from *Staphylococcus aureus*. *Biologicals*, 42: 191-198.
16. Charaya, G., Sharma, A., Kumar, A., **Singh, M.** and Goel, P. (2014). Pathogens isolated from clinical mastitis in Murrah buffaloes and their antibiogram. *Veterinary World*, 7(11): 980-985.
17. Charaya, G., Sharma, A., Kumar, A., **Singh, M.** and Goel, P. (2014). Polymerase chain reaction assay for diagnosis of *Escherichia coli* mastitis in Murrah buffaloes. *Journal of Cell and Tissue Research*, 14(3): 4485-4489.
18. **Singh, M.**, Sharma, A. and Singh, A. (2013). Duplex polymerase chain reaction for detection of coagulase and beta haemolysin genes of *Staphylococcus aureus* isolated from bovine clinical mastitis. *Veterinary Practitioner*, 14(2): 258-260.
19. **Singh, M.**, Sharma, A., Mittal, D. and Charaya, G. (2014). Prevalence and characterization of coagulase negative staphylococci associated with buffalo mastitis. *Indian Journal of Comparative Microbiology, Immunology and Infectious Diseases*, 35(2): 67-72.
20. Sharma, A., **Singh, M.**, Charaya, G. and Agnihotri, D. (2014). Bacterial isolates from uterine discharge of bitches and their antibiogram. *Indian Journal of Comparative Microbiology, Immunology and Infectious Diseases*, 35(1): 22-25.
21. Charaya, G., Sharma, A., Kumar, A., **Singh, M.** and Goel, P. (2015). Molecular detection of *Staphylococcus aureus* by polymerase chain reaction assay in mastitic milk. *Indian Journal of Comparative Microbiology, Immunology and Infectious Diseases*, 36(1): 18-21.
22. **Singh, M.**, Sharma, A. and Singh, A. (2013). Isolation and antibiogram of beta haemolytic *Staphylococcus aureus* associated with bovine clinical mastitis. *The Haryana Veterinarian*, 52: 54-56.
23. Charaya, G., Sharma, A., **Singh, M.**, Tiwari, S., Pankaj and Kumar, A. (2013). Subclinical mastitis at an organised farm: prevalence, etiology and antibiogram. *The Haryana Veterinarian*, 52: 30-32.

Review Papers

1. Kapoor, S., Sharma, H., Singh, M., Kumar, P., Ranjan, K., Kumari, A. and Khirbat, R. (2014). Equine herpesviruses: a brief review. *Advances in Animal and Veterinary Sciences*, 2(2S): 46-54.

Short Communications

1. Saini, G., Mahajan, N.K., Joshi, V., **Yadav, M.** and Nishant, C. (2017). PCR based detection of Newcastle disease virus from respiratory disease complex suspected poultry samples. *The Haryana Veterinarian*, 56(1): 100-101.
2. Tiwari, S., Sharma, A., Jain, V.K., **Singh, M.** and Charaya, G. (2014). Dry cow therapy in mastitis: Comparison of efficacy of an antibiotic and a non antibiotic teat sealant treatment in buffalo. *Indian Journal of Veterinary Medicine*, 34(2): 135-138.

Chapters in book

1. Sharma, A., Mittal, D. and **Singh, M.** (2015). Pashuchikitsa Mahavidyalaya ki kendriye paryogshala me uplabdh suvidhain v namuna bhejne ka tarika. In book: Kaise karein pashupalan (in Hindi). Editors: Singh, D. and Sheokand, B.S. pp. 137-140.
2. Mittal, D. and **Singh, M.** (2015). Dudharu pashuon main brucellosis rog v roktham. In book: Kaise karein pashupalan (in Hindi). Editors: Singh, D. and Sheokand, B.S. pp. 119-122.

Full Length Papers/lead papers in Conferences/Symposia

1. Mahajan, N.K., **Singh, M.** and Tomar, P. (2016). Zoonoses in poultry: A public health concern. A lead paper published in proceedings of XIV Annual Conference and National Symposium on “Innovative Approaches to Promote Food Safety and Reduce the Risk of Zoonotic Diseases in Context of Climate Changes” held from Nov. 21-22, 2016 at Udaipur, India. pp: 67-71.

Extension Leaflets

1. Mittal, D., **Singh, M.** and Mahajan, N.K. (2016). Brucellosis: Bachav va Roktham. Extension leaflet in Hindi.
2. Chhabra, R., **Singh, M.** and Singh, D. (2016). Pashuon me Thanella Rog: Kaisen Karen Pahchan. Extension leaflet in Hindi.

Popular/Magazine Articles

1. Sharma, A., Chhabra, A. and **Singh, M.** (2013). Diagnosis of mastitis and its prevention strategy at field level. In: Pashu Jan Kalyan Hindi patrika published by Director of Extension Education, LUVAS, Hisar.

Chapters in Manuals

1. **Singh, M.** and Chhabra, R. (2017). Acute phase proteins: Early biomolecules of inflammation. In: course compendium on “Microbial Genomics and Proteomics in Diagnosis and Control of Diseases of Veterinary Importance” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 42-45.
2. Chhabra, R., **Singh, M.**, Shrinet, G. and Gupta, N. (2017). Genomic approaches for the diagnosis and control of clinical and subclinical mastitis. In: Course compendium on “Microbial Genomics and Proteomics in Diagnosis and Control of Diseases of Veterinary Importance” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 22-25.

3. Chhabra, R., **Singh, M.**, Sharma, B.K. and Shrinet, G. (2017). Practical demonstration of CD4+ and CD8+ cells from mastitic milk. In: Course compendium on “Microbial Genomics and Proteomics in Diagnosis and Control of Diseases of Veterinary Importance” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 90-91.
4. Mittal, D., **Singh, M.** and Mahajan, N.K. (2017). Fluorescence polarization assay for quick diagnosis of brucellosis in animals. In: Course compendium on “Microbial Genomics and Proteomics in Diagnosis and Control of Diseases of Veterinary Importance” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 119-120.
5. **Singh, M.**, Chhabra, R. and Mittal, D. (2017). Identification and antibiotic sensitivity testing of bacterial pathogens associated with mastitis. Published in training manual “Diagnosis of Livestock Diseases: A Molecular Approach” held at Department of Animal Biotechnology from February 14 to March 06, 2017. pp: 66-68.
6. Mittal, D., **Singh, M.** and Mahajan, N.K. (2017). FPA and Brucella diagnosis. Published in training manual “Diagnosis of Livestock Diseases: A Molecular Approach” held at Department of Animal Biotechnology from February 14 to March 06, 2017. pp: 53-55.
7. Chhabra, R., **Singh, M.**, Kundu, P. and Narang, G. (2017). Analysis of the CD4+ and CD8+ cells of bovine milk and lymphocyte populations of chicken blood by flow cytometry. Published in training manual “Diagnosis of Livestock Diseases: A Molecular Approach” held at Department of Animal Biotechnology from February 14 to March 06, 2017. pp: 58-60.
8. Grover, Y.P. and **Singh, M.** (2012). Antibiotic resistance in bacteria. In: Course compendium on “Control of infectious diseases of animals with particular emphasis on FMD control programme” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 132-134.
9. **Singh, M.**, Sharma, A. and Singh, A. (2011). Expression and detection of recombinant *Staphylococcus aureus* β -haemolysin. In: Course compendium on “Molecular and cellular immunology techniques in animal health” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 108-109.
10. Grover, Y.P., **Singh, M.** and Sharma, A. (2011). Immunity to bacterial infections. In: Course compendium on “Molecular and cellular immunology techniques in animal health” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 82-86.
11. **Singh, M.** and Singh, A. (2011). Quantification by sandwich ELISA of TNF α in serum samples of LPS-treated and control groups of mice. In: Course compendium on “Molecular and cellular immunology techniques in animal health” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 99.

12. Singh, A. and **Singh, M.** (2011). Expression and detection of soluble single-domain antibody clones in *Escherichia coli*. In: Course compendium on “Molecular and cellular immunology techniques in animal health” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, LUVAS, Hisar. pp. 105-107.
13. Grover, Y.P. and **Singh, M.** (2010). Edible vaccines. In: Course compendium on “Modern trends in veterinary vaccines and diagnostics for the control of infectious diseases” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, CCSHAU, Hisar. pp. 37-44.
14. Sharma, A. and **Singh, M.** (2010). Diagnostics and vaccines against important bacterial diseases of animals. In: Course compendium on “Modern trends in veterinary vaccines and diagnostics for the control of infectious diseases” published by ICAR Centre of Advanced Faculty Training, Department of Veterinary Microbiology, CCSHAU, Hisar. pp. 45-58.

Data Sequences

1. **Singh, M.**, Singh, A. and Sharma, A. (2011). *Staphylococcus aureus* strain BF-MV1 beta-hemolysin (hly) gene, partial cds. GenBank accession no.: JN580071.1 published in NCBI.

Abstracts

1. Tomar, P., Singh, Y., Mahajan, N.K., Jindal, N. and **Singh, M.** (2017). Occurrence of *Mycoplasma gallisepticum* and *Mycoplasma synoviae* in poultry affected with respiratory infections in Haryana. Published in proceedings of 10th Annual Conference cum Workshop of Indian Association of Mycoplasmologists on the theme “Mycoplasma: Recent Perspectives” held at AIIMS, New Delhi from March 20-21, 2017. p 49.
2. Saini, G., Mahajan, N.K., Joshi, V. and **Singh, M.** (2016). Molecular epidemiology of infectious agents involved in respiratory disease complex in broilers in Haryana, India. Published in proceedings of XXV World’s Poultry Congress-2016 held at Beijing, China from September 5-9, 2016. p 430.
3. Kumar, A., Maan, S., Bansal, N., **Singh, M.**, Kumar, V., Mittal, D., Nanda, T. and Mahajan, N.K. (2016). Detection of *Brucella* spp. in ruminants and human beings using TaqMan probe based real time PCR and serological test. Published in proceedings of International Research Conference on “Brucellosis” held at National Agricultural Science Centre, New Delhi, India from Nov. 17-19, 2016. p 138.
4. Mittal, D., **Singh, M.**, Juhi and Mahajan, N.K. (2016). Surveillance of brucellosis in organized farms of cattle, buffalo and goat using RBPT and indirect ELISA. Published in proceedings of Brucellosis 2016 International Research Conference organized by DBT, Ministry of Science and Technology, New Delhi at NASC Complex, New Delhi from November 17-19, 2016.
5. Tomar, P., Mahajan, N.K. and **Singh, M.** (2016). A rare case of femoral head necrosis in broiler chicken flocks of Haryana. Published in proceedings of III AAHP Convention & National Symposium on “Poultry Health & Welfare Riding the Wave to the Future” held at Goa from October 20-21, 2016. p 62.

6. Tomar, P., Mahajan, N.K., **Singh, M.** and Jangir, B.L. (2016). An outbreak of coccidiosis in 6 days old broiler chicks in Haryana. Published in proceedings of 34th Annual Convention of ISVM & National Symposium held at GADVASU, Ludhiana from Feb. 17-19, 2016. p 255
7. **Singh, M.**, Sharma, A., Mittal, D. and Charaya, G. (2015). Prevalence of sub-clinical mastitis, aetiology and its antimicrobial sensitivity pattern. Published in proceedings of National Seminar on “Translational Research in Biotechnology for Improving Animal Health and Production” and 3rd Annual Meeting of Society of Veterinary Science and Biotechnology held at RAJUVAS, Bikaner. p 124.
8. **Singh, M.**, Sharma, A., Kumar, A., Mittal, D., Kumar, P. and Charaya, G. (2015). Relative expression of proinflammatory cytokines in milk somatic cells of subclinical mastitis affected buffaloes. Published in proceedings of XXII Annual Convention and National Symposium on “Immunomics and Proteogenomics in Livestock Health & Productivity” held at NRCE, Hisar. p 146.
9. **Singh, M.**, Sharma, A. and Charaya, G. (2014). Characterization of coagulase negative staphylococci associated with buffalo subclinical mastitis. Published in proceedings of ‘XXVIII annual convention of IAVMI and International conference on challenges and opportunities in animal health at the face of globalization and climate change’ held at DUVASU Mathura. p 1 (supplementary).
10. Sharma, H., Agnihotri, A., Lather, D., Mamta, **Singh, M.**, Charaya, G., Kumar, P., Thakur, V. and Sharma, A. (2014). Dog oral flora and their characterization. Published in proceedings of ‘XXVIII annual convention of IAVMI and International conference on challenges and opportunities in animal health at the face of globalization and climate change’ held at DUVASU Mathura. p 1-2 (supplementary).
11. Charaya, G., Kumar, A., Sharma, A., **Singh, M.** and Goel, P. (2014). Molecular detection of *Streptococcus dysgalactiae* and *Streptococcus agalactiae* associated with mastitis in Murrah buffaloes. Published in proceedings of ‘XXVIII annual convention of IAVMI and International conference on challenges and opportunities in animal health at the face of globalization and climate change’ held at DUVASU Mathura. p 80.
12. Charaya, G., Sharma, A., **Singh, M.**, Kumar, A. and Goel, P. (2014). Microorganisms associated with mastitis and their antibiogram in Murrah buffaloes. Published in proceedings of National Convention on “Role of Veterinarians in Quality Assurance of Livestock Products and International Trade” and 12th Convocation of National Academy of Veterinary Sciences (India). p 55.
13. **Singh, M.**, Sharma, A. and Singh, A. (2013). Cloning and sequence analysis of beta haemolysin of *Staphylococcus aureus* associated with bovine mastitis. Published in proceedings of International symposium on ‘Frontier Discoveries and Innovations in Microbiology and Its Interdisciplinary Relevance’ and 54th Annual Conference of Association of Microbiologists of India. p 472.