Dr. Meenakshi Virmani

Designation	**Principal Scientist**
	Department of Veterinary Physiology and Biochemistry College of Veterinary Sciences Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS) Hisar -125004 (Haryana) India Phone: 01662-256121(O) Mobile: +919468322522 E-mail: mvirmani@luvas.edu.in
Educational Qualifications	• 2002: Ph.D. Veterinary Physiology, COVS, CCS HAU, Hisar • 1997: M.V.Sc., Veterinary Physiology, COVS, CCS HAU, Hisar • 1995: B.V.Sc. & A.H., COVS, CCS HAU, Hisar
Employment Details	• Principal Scientist, LUVAS: 21.04.2022 - continuing • Senior Scientist, LUVAS: 21.04.2019-20.04.2022 • Scientist, LUVAS: 17.07.2010-20.04.2019 • Veterinary Surgeon, Haryana Govt.: 05.05.2010-16.07.2010 • Assistant Professor, GADVASU, Ludhiana: 06.02.2007 to 04.05.2010
Research Interests	• Veterinary Physiology/Animal Physiology with research interest in Reproductive Physiology, Renal Physiology and Endocrinology
Students Guided	• As Major Advisor: 05 M.V.Sc. and 1 Ph.D. student
Research Projects Handled/Undergoing	*State Plan Schemes* • Physiological and Endocrinological Investigations for Augmenting Reproduction and Production in Farm Livestock • Role of Supplements in Improving the Quality of Frozen Semen of Murrah Buffalo Bulls • Supply of Injection Material to Farmers for Induction of Lactation in Infertile Cattle. Self-Finance 31-APP Scheme (Upto Year 2012) *External projects* • Up gradation of Existing Semen Laboratory for Strengthening of A.I. Services and Providing Animal Infertility Diagnostic Facilities to Livestock owners (RKVY-RAFTAAR Year 2021 to 2024) • Integrated Magneto-Acousto-Dielectrophoresis based Microfluidics for the Sorting of Bovine Spermatozoa (DBT, India - Year 2024 onwards) • Development of Indigenous FACS device for Enrichment of X chromosome bearing Spermatozoa in Bovine Semen (DBT, India - Year 2024 onwards) • Identification of Estrous Specific Molecule in the Buffalo Urine Through Metabolomics Approach (Institutional project Year 2021 to 2023) • Meat & Egg Sustainability through integrated poultry productivity improvement (NLM funded- Year 2022 to 2026)

	• Establishment of Embryo Transfer-In-Vitro Fertilization (IVF) Laboratory and Production of High Genetic IVF Embryos from Indigenous Cattle of Haryana (RKVY-RAFTAAR funded) • Genetic Improvement and Conservation of Indigenous Breed – Hariana (RKVY funded -Year 2015 to 2018) • Strengthening of Existing Biochemistry Laboratory for Diagnostic Aids to the Farmers- (RKVY Funded - Year 2013 to 2016)
Publications	**Total Research Papers Published:** 58 **>8.0 NAAS rating:** 10 **6-8 NAAS rating:** 13 **Google Scholar index** **Research Citations**: 556 **h-index**: 14 **i-10index**: 18 **Review papers Published:** 12 **Books Published:** 01 **Manuals:** 06 **Book Chapters:** 05 **Chapters in Practical/ Training Manuals:** 15 **PopularArticles:** 16 **Abstracts in Conferences:** 86
	Research publications (Best 10 only) • Kanwar, A., **Virmani, M.**, Chaudhary, K., Kumar, S., Lakhani, P., Kumar, R., & Panihar, N. (2026). Effects of Ashwagandha-derived silver nanoparticles on pre- and post-thaw semen quality in bulls. *Frontiers in Veterinary Science, 12*, Article 1709707. https://doi.org/10.3389/fvets.2025.1709707 • Bansal, K., Jhamb, D., Yadav, U., Meel, M., Gupta, A., Bala, R., **Virmani, M.**, Punetha, M., Kumar, D., & Kumar, P. (2025). Determination of the optimal ejaculate concentration of a buffalo bull for successful semen cryopreservation. *Frontiers in Veterinary Science, 12*, Article 1594298. https://doi.org/10.3389/fvets.2025.1594298 • Pavulraj, S., Virmani, N., Bera, B. C., Joshi, A., Anand, T., **Virmani, M.**, Singh, R., Singh, R. K., & Tripathi, B. N. (2017). Immunogenicity and protective efficacy of inactivated equine influenza (H3N8) virus vaccine in murine model. *Veterinary Microbiology, 210*, 188–196. • Pavulraj, S., Bera, B. C., Joshi, A., Anand, T., **Virmani, M.**, Vaid, R. K., Shanmugasundaram, K., Gulati, B. R., Rajukumar, K., Singh, R., Misri, J., Singh, R. K., Tripathi, B. N., & Virmani, N. (2015). Pathology of equine influenza virus (H3N8) in murine model. *PLoS ONE, 10*(11), e0143094. https://doi.org/10.1371/journal.pone.0143094 • Solanki, A., Pandey, A. K., Jangra, H., Saini, P., Kumar, S., Kaushik, R., **Virmani, M.**, Kumar, R., Verma, R., & Bangar, Y. (2025). Exogenous melatonin improves blastocyst developmental competence and levels of antioxidants in indigenous donor cattle under heat stress. *Theriogenology, 246*, 117549. https://doi.org/10.1016/j.theriogenology.2025.117549 • Khirbat, R., Nanda, T., Kumar, A., **Virmani, M.**, Gupta, A. K., Maan, S., & Joshi, V. G. (2025). HY antigen-based immuno-segregation strategies for bovine X sperm enrichment. *Theriogenology*, Article 117474. https://authors.elsevier.com/a/1l3dM,28LhNXiM

	• Arjun, V., Kumar, P., Dutt, R., Kumar, A., Bala, R., Verma, N., Jerome, A., **Virmani, M.**, Patil, C. S., Bhardwaj, S., Kumar, D., & Yadav, P. S. (2022). Effect of mitochondria-targeted antioxidant on the regulation of the mitochondrial function of sperm during cryopreservation. *Andrologia*, Article e14431. https://doi.org/10.1111/and.14431 • Arjun, V., Kumar, P., Dutt, R., Kumar, A., Bala, R., Verma, N., Jerome, A., **Virmani, M.**, Patil, C. S., Singh, S., & Kumar, D. (2021). Is addition or removal of seminal plasma able to compensate for the dilution effect of buffalo semen? *Andrologia, 53*, Article e14123. • Vijayalakshmy, K., Kumar, P., **Virmani, M.**, Pawaria, S., Lalaji, N. S., Sharma, P., Rajendran, R., Yadav, P. S., & Kumar, D. (2018). A novel combination of silane-coated silica colloid with hybrid RNA extraction protocol and RNA enrichment for downstream applications of spermatozoal RNA. *Andrologia*, Article e13030. • Sarangi, A., Singh, P., **Virmani, M.**, Yadav, A. S., Sahu, S., Ajithakumar, H. M., Kumari, A., & Rath, A. P. (2017). Effect of antioxidants supplementation on the quality of Beetal buck semen stored at 4°C. *Veterinary World, 10*(10), 1184–1188.
Awards/ Fellowships/ Recognition received	• Merit Scholarship during M.V.Sc. degree. • Merit Scholarship during Ph.D. degree • 'Best Thesis award' to M.V.Sc. thesis of my student Dr. Vijayalakshmy Kennedy by Animal Physiologist Association (APA) (2018) • 'Sushila Pathak Memorial Award for Best Thesis' for Masters in Veterinary Sciences by National Academy of Veterinary Nutrition and Animal Welfare to M.V.Sc. thesis of my student Dr. Vijayalakshmy Kennedy (2019) • 'Best M.V.Sc thesis award' for the thesis of my MVSc Student Dr. Vijayalakshmy Kennedy from Society of Animal Physiologists of India (SAPI) (2020) • 'Sushila Pathak Memorial Award for Best Thesis' for Masters in Veterinary Sciences by National Academy of Veterinary Nutrition and Animal Welfare to M.V.Sc. thesis of my student Dr. Arushi Kanwar (2022) • 'Certificate of Appreciation' for organizing Third Convention of Society of Veterinary Biochemists and Biotechnologists of India (SVBBI) and symposium on 'Bridging Biochemical Interventions and Environmental Remediations for One Health Improvement' at College of Veterinary and Animal Sciences, LUVAS, Hisar, Haryana, during 2-3 November, 2018
Membership of Professional Scientific Societies	• Life member, Delhi Veterinary Association • Member, Haryana Veterinary Council • Life member, Society for Immunology and Immunopathology (SIIP), India • Life member, Society for Animal Physiologists of India (SAPI) • Life member, Indian Society for Buffalo Development (ISBD)
Editorial board of Scientific Journal	• Indian Journal of Comparative Microbiology, Immunology and Infectious Diseases (Year 2013 – 2016)

	• Animal Reproduction Update
Any Other (if any)	• Associated with Directorate of Human Resource Management, Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar (Year 2018-2026)