

Curriculum Vitae- Dr Rupal S Tewari

Professional Summary

A seasoned veterinarian with a strong inclination towards molecular genetics and stem-cell biology. Proven and outstanding track record of working with state-of-the-art laboratory equipment in the best labs of India and Europe and performing the latest and cutting-edge procedures with discipline and focus.

Key achievements & highlights

- **Roslin Institute lab experience**-Hands-on experience of stem cell-culture and differentiation (specifically differentiating myoblasts into adipocytes).
- **Research Fellow, Department of Veterinary Science (physiology unit), University of Turin, Italy**
- **Recently published a research paper in a peer reviewed international journal**
- [Circulating skeletal muscle related microRNAs profile in Piedmontese cattle during different age.](#)
- **Tewari RS, Ala U, Accornero P, Baratta M, Miretti S. Sci Rep. 2021 Aug 4;11(1):15815. doi: 10.1038/s41598-021-95137-w.PMID: 34349188**
- Proven public speaking experience
- Excellent communication skills, written and spoken
- Full command on the use of Microsoft Excel, word, PowerPoint
- Expert in using GraphPad statistical analysis software tool
- Reliable, self-driven, great adapting attitude in new environment
- Ability to meet the deadlines and work in a dynamic environment
- Can work both independently and as leader to a group
- Excellent communication skills, written and spoken

Laboratory Skills

- **Cell-culture**
 - Isolating primary cells from skeletal muscle tissue
 - Initiating proliferation and differentiation of primary cells (myoblasts) into myotubes and adipocytes
 - Growing stable cell-lines such as 293T cells
 - Sterile media preparation
 - Transfection-transient (Lipofectamine) and electroporation
- **Molecular techniques**
 - DNA and RNA isolation from cultured cells, plasma, and tissues
 - Use of PCR machines, qRT-PCR (quantitative real-time PCR)
 - Gene editing (CRISPR-Cas-9)-primary steps including cDNA cloning
 - Agarose gel electrophoresis
- **Immunocytochemistry and immunohistochemistry**
 - Fixing the cells for immunofluorescence (confocal) microscopy
 - Cell staining with primary and secondary antibodies
 - Tissue sectioning
 - Analysis of mRNA expression by whole mount in-situ hybridization

- Processing of samples for Transmission electron microscopy (TEM), sectioning of resin blocks with the ultramicrotome, observation of grids with the Joel 100SX transmission electron microscope
- Immunoassays- set up and scoring of comet assay slides for DNA damage evaluation, cytogenic slides scoring (cytome assay) for chromosomal damage evaluation.
- Fixing and embedding the sections of C. elegans and staining to use under Scanning electron microscope (SEM)
- **Laboratory/Research instruments handling**
 - Light microscope, centrifuge machines-standard and high speed, incubators, pH meter, precision balance etc.
- **Other relevant skills**
 - Western blot and Flow-cytometry
 - Small-RNA sequencing data analysis
 - Plasmid vector construction
 - Production and purification of Digoxigenin (DIG)- labelled RNA by in-vitro transcription
 - Production of long dsRNA molecules by in vitro transcription, RNA interference (RNAi) by feeding
 - Hands on experience in pathological techniques including haematological and serological testing
 - Immunoassays- set up and scoring of comet assay slides for DNA damage evaluation, cytogenic slides scoring (cytome assay) for chromosomal damage evaluation.

Trainings:

- **Visiting researcher at the Roslin Institute, University of Edinburgh, Scotland (August-October 2021)**
- **'Non-Coding Genome' course- Institut Curie, Paris, France (Feb, 2020)**
- **University of Angers, France- Bioinformatics Summer School (July, 2018)**
- **Università di Pisa, Dept. of Clinical and Experimental Medicine - 'From Genes to Cells: A basic course of molecular, cellular and ultrastructural biology' (July, 2017)**
 - Secured 28/ 30 and 15 credits (CFU/ECTS)
- **Short Term Training:** Hi-tech Biotechnology Lab, Ome Research Facility, Department of Animal Biotechnology, College of Veterinary Science & Animal Husbandry, Anand, GJ, India

Conferences & Seminars attended:

- **VIB conference- "Revolutionizing Next-Generation Sequencing" – Antwerp, Belgium (March, 2017)**
- **Poster presentation at the 9th National Symposium of the Society for Conservation of Domestic Animal Biodiversity (SOCDAB), National Bureau of Animal Genetic Resources – Pune, MH, India (February, 2012)**
- **17th Annual Conference of Indian Association for the Advancement of Veterinary Research & National Symposium on 'Newer Challenges in Veterinary Research & Education Vis-à-vis Safe Animal, Food & Human Health' – Jabalpur, MP, India (March, 2010)**
- **10th Annual Conference of the Indian Society of Animal Genetics and Breeding and National Symposium on 'Conventional and New Age Breeding Technology for Livestock Centric Growth and Livelihood Security' – Chennai, TN, India (November, 2009)**

- **Professional experience as a Veterinarian**

- Worked as Veterinary Medical Officer for the Department of Animal Husbandry, State Government of UP, India for more than 2 years
- Head of a veterinary medical hospital with a staff of 05 personnel
- **Establishment and supervision of govt. funded 100 buffaloes dairy farm having 100 buffaloes, and poultry farm with 30,000 layer and broiler birds'**
- Responsible for the running and administration of a polyclinic used for serological testing of samples
- Daily responsibilities including medical treatment of farm animals (large, medium and small), domestic pets and birds. Plan and supervise the artificial insemination of buffaloes and cows
- Handling vetero-legal cases including post-mortem reporting, assist local law enforcement agencies in their investigation
- Regularly organize camps to educate ~ 500 local cattle farmers about artificial insemination, vaccination, nutrition, and general hygiene of animals

PhD research topic:

- **Research Fellow – Department of Veterinary Science, University of Turin, Italy (2018-2021)**
 - Research project: Circulating skeletal muscle related microRNAs profile in Piedmontese cattle during different age. Major advisor: Dr Silvia Miretti

Academics:

#	Degree	Institute	Year	Language of study	Details/ Achievements
1	Research Doctorate	Department of Veterinary Science for Animal Health and Food Safety, University of Turin, Italy	2018-2021	English	Project-Circulating microRNAs as biomarkers of various physiological processes underlying skeletal muscle growth in Piedmontese Cattle
1	Master's in veterinary science	Dept. of Animal Genetics & Breeding, Nanaji Deshmukh Veterinary Science University, Jabalpur, MP, India	20014-2016	English	Dissertation: Association of IL-8R and TLR-4 genes polymorphism with clinical and sub-clinical Mastitis in Frieswal cattle using PCR-SSCP method Minor: Veterinary Biochemistry

2	Doctor of Veterinary Medicine (DVM)	University of Veterinary Science and Animal Husbandry (DUVASU), Mathura, UP, India (First Veterinary College in Asia)	2009-20014	English	Scholarship holder Trained Veterinary doctor registered with Govt. of India (VCI Reg. # 003917)
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Personal Details

- **Languages:** English (native or bilingual proficiency), Hindi (native or bilingual proficiency), Italian (A1/A2 level)
- **Nationality:** Indian

