

Brief Biodata

Name	:	Dr. Anjali	
Designation	:	Scientist	
Discipline	:	Cattle Physiology and Reproduction	
Email	:	anjalibramhane@gmail.com	
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★ **Education qualification** (Graduation on wards)

Degree	Subject (s)	Institute
B.V.Sc & A.H.	Veterinary science and Animal husbandry	Chhattisgarh Kamdhenu University, College of veterinary science and animal husbandry, Anjora, Durg
M.V.Sc	Veterinary Physiology	Deemed university, ICAR- IVRI, Izatnagar
PhD	Veterinary Physiology	Deemed university, ICAR- IVRI, Izatnagar

❖ **Area of research**

Dr. Anjali's research focuses on Animal Physiology, Stress Physiology, Gene Editing, and Assisted Reproductive Technologies (ARTs). Her work includes understanding thermotolerance mechanisms in cattle, molecular responses to heat stress, CRISPR-Cas9-based gene editing, and in vitro fertilization (IVF). Currently, her primary focus is on gene editing to enhance climate resilience and productivity in livestock, particularly through modulation of stress-responsive genes in cattle.

❖ **Fellowships/Awards etc. (Not more than five)**

1.	Pt. Teerath Prasad Mishra Memorial Gold Medal in B.V.Sc & A.H Programme
2.	Dau Shri Vasudev Chandrakar Kamdhenu Vishwavidyalaya Gold Medal
3.	Smt. Kamala Mandal Memorial Young Scientist Award

❖ **Selected Publications: (Max. 20)**

1.	Anjali, G.V., Sarma, L., Kittur, P.M., Kumar, A., Punetha, M., Pathak, M.C., Verma, V., Samad,
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	H.A., Maurya, V.P., Chouhan, V.S. and Singh, G., 2023. Comparative assessment of thermoadaptability between Tharparkar and Sahiwal based on biochemical profile and gene expression pattern under heat stress. <i>Livestock science</i> , 270, p.105189.
2.	Anjali, VK, G., Sarma, L., Tripathi, M., Verma, M.R., Verma, V., Pathak, M.C., Samad, H.A., Maurya, V.P., Chouhan, V.S. and Singh, G., 2023. Thyroid hormone dynamics of Tharparkar and Sahiwal cattle during induced heat stress. <i>Tropical Animal Health and Production</i> , 55(1), p.57.
3.	Anjali, Kumar, A., Nanda, R., Samad, H.A., Maurya, V.P., Singh, G. and Chouhan, V.S., 2024. Transcriptional profiling of GDF9 and ITS Signaling receptors in goat granulosa and theca cells. <i>Indian Journal of Small Ruminants (The)</i> , 30(1), pp.41-45.
4.	Anjali, Punetha, M., Kumar, A., Tripathi, M.K., Kishor Kumar, D.G., Khanna, S., Nanda, R., Yadav, P., Sharma, S., Maurya, V.P. and Singh, G., 2025. Application of CRISPR/Cas9 for GDF9 Gene Editing in Caprine Granulosa Cells: Effects on Receptor Signalling and FGF2 Response. <i>Reproduction in Domestic Animals</i> , 60(10), p.e70128.
5.	Mahajan, S., Pande, M., Chand, N., Anjali, Sirohi, A.S., Kumar, S., Saha, S., Kumar, A., Mohanty, A.K. and Mitra, A., 2025. Oxidative stress, serum metabolites, inflammatory cytokine changes associated with lumpy skin disease in cattle. <i>BMC Veterinary Research</i> , 21(1), p.696.
6.	Kittur, P.M., Karthiga, K., Sarma, L., Gururaj, Anjali, Lata, K., Verma, V., Samad, H.A., Chouhan, V.S., Singh, G. and Maurya, V.P., 2024. Astaxanthin supplementation ameliorates simulated heat stress by regulating physio-biochemical responses in Sirohi goats. <i>Veterinary Research Communications</i> , pp.1-8.
7.	Mishra, V., Patel, P.K., Bhoomika, Anjali, Shukla, A., Sharma, A. and Patel, B., 2019. Climate change and its impacts on global health: A.
8.	D. G., Kishor Kumar; M., Pashupathi; Anjali; Panigrahi, Manjit; C. L., Madhu; M., Kesavan; Singh, Thakur Uttam; Kumar, Dinesh; Parida, Subhashree. Leptin Increases Nitric Oxide Level Via Increase In INOS Expression In Early Pregnant Mouse Uterus. <i>Exploratory Animal & Medical Research</i> , 13(1).
9.	Nanda, R.,Anjali, Senthamilan, S., Doneriya, G., Punetha, M., Singh, G. and Chouhan, V.S., 2021. Ovum Pick-up in Ruminants. <i>Animal Reproduction Update</i> , 1(1), pp.46-50.
10.	Pande, M., Kumar, S., Tyagi, S., Sirohi, A.S., Chand, N., Soni, Y.K., Mahajan, S., Saha, S., Sharma, Anjali., Sarika and Rajoriya, J.S., 2024. Endogenous Tissue Inhibitor of Metalloproteinase-2 Levels Are Associated With High-Quality Neat Semen but Unrelated to Sperm Cryoresistance in Bulls. <i>Reproduction in Domestic Animals</i> , 59(11), p.e14741.
11.	Tripathi, M.K., Jose, B., Khanna, S., Kumar, P., Konda, Anjali., Chauhan, V.S., Sarkar, M. and Singh, G., 2021. CRISPR mediated BMP15 gene knockout in Caprine granulosa cells. <i>Pharma Innov</i> , 10(7), pp.252-255.
12.	Tejaswi, V., Bosco, J., Verma, V., Anjali, Pathak, M.C., Samad, H.A., Tiwari, A.K., Chouhan, V.S., Maurya, V.P., Sarkar, M. and Singh, G., 2022. Seasonal alterations in blood biochemical parameters among zebu and crossbred cattle. <i>Biological Rhythm Research</i> , 53(12), pp.1941-1949.
13.	Rajawat, N., Kant, L., Majumder, S., Madhusudan, A.P., Samad, H.A., Anjali, Chauhan, V.S.,

	Singh, G. and Maurya, V.P., 2026. Evaluation of Fecal Cortisol as a Non-Invasive Indicator of Experimentally Induced Heat Stress in Sirohi Goats (<i>Capra hircus</i>). <i>Small Ruminant Research</i> , p.107817.
14.	Sarma, L., Singh, S., Anjali and Dutta, D., 2025. Challenges and Future Directions for Next-Generation Drug Delivery Systems. In <i>Next-Generation Drug Delivery Systems</i> (pp. 571-596). New York, NY: Springer US.
15.	Divya, D., Mohanty, A.K., Kumar, S., Patel, V., Kumar, R., Anjali, Pande, M., Kumar, S., Patel, A. and Kanaka, K.K., 2026. Nanotechnology in Improving Animal Husbandry Using Genetic Approaches. In <i>Nanobiomaterials in Animal Husbandry</i> (pp. 469-496). Singapore: Springer Nature Singapore.
❖ On-going research projects	
	Investigation of Heat Stress Impact on Frieswal Cattle and Enhancement of their Thermo-Tolerance through HSP40 Gene Modulation (PI)