

Brief Biodata

Name	Dr. Rajiv Ranjan Kumar	
Designation	Principal Scientist (ARS)	
Discipline	:Livestock Products Technology	
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*** Education qualification (Graduation on wards)**

Degree	Subject (s)	Institute
MVSc	Livestock Products Technology	Indian Veterinary Research Institute, Izatnagar
Ph.D.	Livestock Products Technology	Indian Veterinary Research Institute, Izatnagar

Area of research

- Livestock Products Processing and quality authentication

Fellowships/Awards etc. (Not more than five)

1. **Best Trainee (Scientist) Award** for outstanding overall performance by securing 1st Rank in the 82nd FOCARS, NAARM, Hyderabad (2008).
2. **ICAR-Junior Research Fellowship** from 2002-2004 (All India Rank 2nd, Animal Science).
3. **CSIR-UGC-NET-JRF/SRF** for Ph.D. programme at Food Technology Division, BARC, Trombay (15.09.2004-21.02.2005).
4. **Outstanding Scientist Award** (in category of Science/Livestock Products) by VIFRA-2015.
5. **NTS-ICAR Fellowship** from 1997-2002 (All India Rank- 108th).

Patent/Technologies / Methodologies / System etc. (Not more than five) :

1. Food Animal Species Identification Kit.
2. Essential Oil Incorporated Emulsion Based Meat Nuggets with Reduced Microbial Load and Enhanced Shelf Life.
3. ICAR-IVRI Ready to Eat Meat Products (Bundle technology including emulsion based meat products, premium chicken soup, functional meat nuggets, vegetable incorporated meat products).
4. Carotenoid based assay to ascertain cattle origin of tissue
5. Harvesting of Chicken skin fat from poultry sleeves

Selected Publications: (Max. 20)

1. Av, V. R., Dubal, Z. B., OR, V. K., Kolhe, R., Dhanze, H., Rawat, S., ... & Viswas, K. N. (2026). Enterotoxin and biofilm producing *Staphylococcus aureus* and MRSA isolates from animal source foods sold in Assam. *Brazilian Journal of Microbiology*, 57(1), 45.

2. Sachan, A., Anand, S., Varma, R., Kumar, R. R., & Mohanty, A. K. (2025). Comparative extraction efficiency of solvent systems for phytochemicals from *Moringa oleifera*, *Madhuca indica*, and *Ficus nemoloris*. *The Journal of Phytopharmacology*, 14(6), 468–474.
3. Rahman, C. F., Kumar, R. R., Chand, S., Pattanaik, A. K., Raypa, P., Tarafdar, A., ... & Ajay, A. (2024). Keratin-based pet food produced through proteolytic hydrolysis of chicken feather: Characterisation and palatability study. *Process Biochemistry*, 146, 214–224.
4. Sagar, N. A., Agrawal, R. K., Singh, R., Talukder, S., Kumar, R. R., & Mendiratta, S. K. (2023). Quality and shelf life assessment of steam-cooked chicken fingers coated with essential oil nanoemulsions. *Food Bioscience*, 49, 101902. <https://doi.org/10.1016/j.fbio.2022.101902>
5. Kumari, S., Kumar, R. R., Mendiratta, S. K., Mahala, A., Kumar, A., & Jawla, J. (2023). Development of rapid and sensitive loop-mediated isothermal method for on-site visual identification of tissue origin of pig by using mitochondrial COI gene sequences. *Animal Production Science*. <https://doi.org/10.1071/AN22298>
6. Jawla, J., Kumar, R. R., Mendiratta, S. K., Agarwal, R. K., Singh, P., Saxena, V., Kumari, S., & Kumar, D. (2023). A novel paper-based loop-mediated isothermal amplification and lateral flow assay (LAMP-LFA) for point-of-care detection of buffalo tissue origin in diverse foods. *Journal of Food Safety*, e13038. <https://doi.org/10.1111/jfs.13038>
7. Jawla, J., Kumar, R. R., Mendiratta, S. K., Agarwal, R. K., Singh, P., Saxena, V., Kumari, S., Bobby, N., Kumar, D., & Rana, P. (2022). On-site paper-based loop-mediated isothermal amplification coupled lateral flow assay for pig tissue identification targeting mitochondrial COI gene. *Journal of Food Composition and Analysis*. <https://doi.org/10.1016/j.jfca.2021.104036>
8. Sagar, N. A., Agrawal, R. K., Singh, R., Talukder, S., Kumar, R. R., & Mendiratta, S. K. (2022). Quality and shelf life assessment of steam-cooked chicken fingers coated with essential oil nanoemulsions. *Food Bioscience*, 101902.
9. Jawla, J., Kumar, R. R., Mendiratta, S. K., Agarwal, R. K., Kumari, S., Saxena, V., Kumar, D., Singh, P., Bobby, N., & Rana, P. (2021). Paper-based loop-mediated isothermal amplification and lateral flow (LAMP-LF) assay for identification of tissues of cattle origin. *Analytica Chimica Acta*, 338220. <https://doi.org/10.1016/j.aca.2021.338220>
10. Chauhan, P., Kumar, R. R., Mendiratta, S. K., Talukder, S., Gangwar, M., Sakunde, D. T., & Meshram, S. K. (2021). In vitro functional efficacy of extracts from *Phyllanthus emblica*, *Eucalyptus globulus*, and *Tinospora cordifolia* as pancreatic lipase inhibitor and source of antioxidant in goat meat nuggets. *Food Chemistry*, 348, 129087. <https://doi.org/10.1016/j.foodchem.2021.129087>
11. Kumari, S., Kumar, R. R., Mendiratta, S. K., et al. (2021). Development of loop-mediated isothermal method and comparison with conventional PCR assay for rapid on-spot identification of tissue of cattle origin. *Journal of Food Science and Technology*. <https://doi.org/10.1007/s13197-020-04948-8>

12. Rahman, C. K. F., Sharun, K., Kumar, R. R., Chand, S., Bardhan, D., & Dhama, K. (2021). Impact of COVID-19 pandemic and lockdown on the meat consumption pattern in India: A preliminary analysis. *Journal of Experimental Biology and Agricultural Sciences*, 9(2), 172–182.
13. Talukder, S., Mendiratta, S. K., Kumar, R. R., Agrawal, R. K., Soni, A., Luke, A., & Chand, S. (2020). Jamun fruit (*Syzygium cumini*) skin extract based indicator for monitoring chicken patties quality during storage. *Journal of Food Science and Technology*, 57(2), 537–548. <https://doi.org/10.1007/s13197-019-04084-y>
14. Kumari, S., Kumar, R. R., Mendiratta, S. K., Kumar, D., Kumar, A., Kumar, D., Rana, P., & Jawla, J. (2020). On-site detection of tissues of buffalo origin by loop-mediated isothermal amplification (LAMP) assay targeting mitochondrial gene sequences. *Food Analytical Methods*. <https://doi.org/10.1007/s12161-020-01718-2>
15. Kumar, D., Kumar, R. R., Rana, P., Mendiratta, S. K., Agarwal, R. K., Singh, P., Kumari, S., & Jawla, J. (2020). On-point identification of species origin of food animals by recombinase polymerase amplification-lateral flow (RPA-LF) assay targeting mitochondrial gene sequences. *Journal of Food Science and Technology*. <https://doi.org/10.1007/s13197-020-04637-6>
16. Ahmad, S. R., Sharma, B., Irshad, A., Kumar, R., Malav, O. M., & Talukder, S. (2020). Effect of aerobic storage conditions on the quality of functional restructured buffalo meat fillets enriched with natural sources of dietary fibers and antioxidant components. *Journal of Food Processing and Preservation*. <https://doi.org/10.1111/jfpp.15072>
17. Sakunde, D. T., Kumar, R. R., Chand, S., Raypa, P., Devadason, P., Gangwar, M., Chauhan, P., Meshram, S., & Mendiratta, S. K. (2020). Effect of rendering temperature on collagen content from the poultry skin. *Journal of Animal Research*, 10(5), 705–711.
18. Kumari, S., Kumar, R. R., Mendiratta, S. K., Kumar, D., Rana, P., Kumar, D., & Jawla, J. (2019). Species-specific loop-mediated isothermal amplification (LAMP) assay for identification of tissue of cattle origin by targeting mitochondrial gene sequences. *3 Biotech*, 9, 69.
19. Kumar, R. R., Sharma, B. D., Mendiratta, S. K., Malav, O. P., Kumbhar, V. H., & Kumar, D. (2019). Efficacy of pine nut paste as functional ingredients in mutton nuggets. *Fleischwirtschaft International*, 2, 114–119.
20. Kumbhar, V. H., Kumar, R. R., Mendiratta, S. K., Choudhary, A., Kumar, D., Kumari, S., & Rana, P. (2019). Duplex PCR assay for identification of tissue of cattle and buffalo origin targeting mitochondrial cytochrome *b* gene. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*. <https://doi.org/10.1007/s40011-019-01102-z>

Full list of Publications :

Research Papers: 103, **Review articles:** 5, **Books:** 4, **Booklets/ Modules (Edited):** 21, **Semi technical Articles:** 24, **Training/Practical Manual:** 6, **Book chapter:** 16 , **Abstracts:** International-40, National-15

On-going research projects : Institution (1), Extramural (2)

- Analysis of differences in milk constituents of Frieswal and Sahiwal -PI

- Microbial-Based Agricultural Waste Management through Vermicomposting- PI
- Evolving Dairy Health: development and validation of a cathelicidin/alternative protein biomarker-based lateral flow assay for on-site mastitis detection and farmer awareness. - CCPI

Research Scholar

- PhD Scholar: Evaluation of Regulatory Effect of Simulated Gastrointestinal Digests (SGD) of Indigenous Cattle Milk and *Madhuca longifolia* (Mahua) Bark extract on Metabolic Disease-Associated Cellular Signalling Pathways