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# **Qualifications:**

- Ph.D., (2008) Livestock Products Technology; Minors: Animal Biochemistry and Veterinary Public Health, Indian Veterinary Research Institute, Izatnagar, Bareilly (UP) – 243 122.
- M.V.Sc., (2005) Livestock Products Technology; Minor: Veterinary Public Health, Indian Veterinary Research Institute, Izatnagar, Bareilly (UP) – 243 122.
- **B.V.Sc.**, (2003) College of Veterinary Science and Animal Husbandry Jabalpur (JNKVV) Madhya Pradesh- 482001.

## Current Research Area:

- Characterization of goat milk properties from different breeds in various seasons.
- Shelf stable healthier goat meat products.

## Major Research Accomplishments:

- Development and quality evaluation of fibre enriched designer chicken nuggets having low sodium and fat.
- Value addition of meat byproducts through processing and quality evaluation of ready-to-eat meat pattes.
- Standardization and quality evaluation of goat meat nuggets with healthier fatty acid profile.
- Standardization and quality evaluation of low salt goat meat pickle.
- Processing and characterization of goat meat products enriched with dietary fibres, antioxidant dietary fibres, natural antioxidants and pseudocereals.
- Development and quality evaluation of sheep and goat meat products added with nuts, guava, bael pulp residue and aloe vera gel.

## Awards:

- Secured 7th rank in All India Entrance Examination for Master in Veterinary Sciences, conducted by Indian Council for Agricultural Research (ICAR) in the year 2003.
- Awarded with Junior Research Fellowship (JRF) by ICAR for pursuing M.V.Sc.
- Awarded Senior Research Fellowship (SRF) by IVRI for pursuing Ph.D. program.

- Recipient of best oral paper presentation at V convention of Indian Meat Science Association and National Symposium on Emerging technological changes to meet the demands of domestic and export meat sector, February 7-9, 2013 at NRC on Meat, Hyderabad.
- Recipient of best poster presentation at ISSGPU National Seminar on "Small ruminants: National scope on upscaling productions to products value addition and their safety" held on November 9-10, 2017, at ICAR-CIRG, Makhdoom, Mathura (UP).

## Training:

- Participated NAIP sponsored training programme on "Advances in Nutrient Use Efficiency in Livestock Production System" from 28.01.2012 to 10.02.2012 at CIRG, Makhdoom.
- Participated CCPI, NAIP, Izatnagar sponsored "SAS software training programme" organized at Agricultural Knowledge Management Unit, CIRG, Makhdoom from 9-14<sup>th</sup> January, 2012.
- Participated ICAR sponsored summer school on "Opportunities in value addition and challenges in quality control of meat products including slaughterhouse by-products" from 04<sup>th</sup> to 24<sup>th</sup> July, 2012 at Veterinary College and Research Institute, Namakkal.
- Participated ICAR sponsored summer school on *"Food Quality and Safety: Recent Advances in Evaluation Techniques"* at Central Institute of Post-Harvest Engineering and Technology, Ludhiana from August 5-25, 2014.

## Patents and Technology:

- Functional Mutton Nugget with Low Salt, Low Fat and High Dietary Fibre
- Process to develop functional chevon nuggets with healthier fatty acid profile. A. K. Verma and V. Rajkumar. Complete patent filed. Application No. 2069/DEL/2014 dated 30-03-2014.
  Publications:
  - Das, A.K., Anjaneyulu, A.S.R., Kondaiah, N. and Verma A.K. 2007. Effect of levels of full-fat soy paste on quality of goat meat patties. *Journal of Food Science and Technology*, 44:3, 323-326.
  - Das, A.K., Anjaneyulu, A.S.R., Verma, A.K. and Kondaiah, N. 2008. Physicochemical, Textural, Sensory Characteristics and Storage Stability of Goat Meat Patties Extended with Full-Fat Soy Paste and Soy Granules. *International Journal of Food Science and Technology*, 43: 383-392.
  - Verma, A.K., Lakshmanan, V., Das, A.K. Mendiratta, S.K. and Anjaneyulu, A.S.R. 2008. Physico-chemical and functional quality of buffalo head meat and heart meat. *American Journal of Food Technology*, 3 (2): 134-140.

- Verma, A.K., Lakshmanan, V., Das, A.K. Mendiratta, S.K. and Anjaneyulu, A.S.R. 2008. Quality characteristics and storage stability of patties from buffalo head and heart meats. *International Journal of Food Science and Technology,* 43:1798-1806.
- Verma, A.K., Sharma, B.D. and Banerjee, R. 2009. Quality characteristics and storage stability of low fat functional chicken nuggets with salt substitute blend and high fibre ingredients.
  Fleischwirtschaft International, 24 (6): 52-57.
- Verma, A.K., Sharma, B.D. and Banerjee, R. 2010. Effect of sodium chloride replacement and apple pulp inclusion on the physico-chemical, textural and sensory properties of low fat chicken nuggets. *LWT-Food Science and Technology*, 43: 715-719.
- Verma, A.K. and Banerjee, R. 2010. Dietary fibre as functional ingredient in meat products: a novel approach for healthy living a review. Journal of Food Science and Technology, 47(3):247–257.
- Verma, A.K. and Banerjee, R. 2012. Low-sodium meat products: Retaining salty taste for sweet health. *Critical Reviews in Food Science and Nutrition,* 52(1): 72-84.
- Das, A.K., Rajkumar, V., Verma, A.K. and Swarup, D. 2012. *Moringa oleiferia* leaves extract: A natural antioxidant for retarding lipid peroxidation in cooked goat meat patties. *International Journal of Food Science and Technology*, 47: 585-591.
- Verma, A.K., Banerjee, R. and Sharma, B.D. (2012). Quality of low fat chicken nuggets: Effect of sodium chloride replacement and added chickpea (*Cicer arietinum* L.) hull flour. *Asian-Australasian Journal of Animal Sciences*, 25(2): 291-298.
- Verma, A.K., Sharma, B.D. and Banerjee, R. (2012). Quality characteristics of low fat chicken nuggets: Effect of common salt replacement and added bottle gourd (Lagenaria siceraria L.). *Journal of the Science of Food and Agriculture,* 92: 1848-1854.
- Banerjee, R., Verma, A. K., Das, A.K., Rajkumar, V., Shewalkar, A. A. and Narkhede, H. P. (2012). Antioxidant effects of broccoli powder extract in goat meat nuggets. *Meat Science*, 91: 179-184.
- Verma, A.K., Rajkumar, V., Banerjee, R., Biswas, S. and Das, A.K. (2013). Guava (*Psidium guajava* L.) powder as an antioxidant dietary fibre in sheep meat nuggets. *Asian-Australasian Journal of Animal Sciences*, 26 (6): 886-895.
- Gadekar, Y.P., Sharma, B.D., Shinde, A.K., Verma, A.K. & Mendiratta, S.K. (2014). Effect of natural antioxidants on quality of cured, restructured goat meat product during refrigerated storage (4±1°C). Small Ruminant Research, 119, 72-80.

- Rajkumar, V., Das, A. K., Verma, A. K. (2014). Effect of almond on technological, nutritional, textural and sensory characteristics of goat meat nuggets. *Journal of Food Science and Technology*, 51(11), 3277-3284.
- Das, A.K., Rajkumar, V. & Verma, A.K. (2015). Bael pulp residue as a new source of antioxidant dietary fibre in goat meat nuggets. *Journal of Food Processing and Preservation,* 39, 1626-1635.
- Banerjee, R., Verma, A. K., Narkhede, H.P., Kokare, P.G., Manjhi, A. & Bokde, P.M. (2015). Cauliflower powder in pork meatballs: effects on quality characteristics and oxidative stability. *Fleischwirtschaft International*, 30 (1), 97-102.
- Umaraw, P., Pathak, V., Rajkumar, V., Verma, A.K., Singh, V.P., Verma, A.K. (2015).
  Assessment of fatty acid and mineral profile of Barbari kid in longissimus lumborum muscle and edible byproducts. *Small Ruminant Research*, 132, 147–152.
- Verma, A.K., Banerjee, R. and Sharma, B.D. (2015). Quality characteristics of low fat chicken nuggets: effect of salt substitute blend and pea hull flour. *Journal of Food Science and Technology*, 52(4), 2288-2295.
- Das, A.K., Rajkumar, V., Verma, A.K., Patra, G., Pradhan, S. & Biswas, S. (2016). Quality and acceptability of meat nuggets with fresh Aloe vera gel. *Asian-Australasian Journal of Animal Sciences*, 29 (5), 702-708.
- Mir, N. A., Tyagi, P. K., Biswas, A., Tyagi, P. K., Mandal, A., Sheikh, S. A., Deo, C., Sharma, D., & Verma, A. K. (2017). Impact of feeding chromium supplemented flaxseed based diet on fatty acid profile, oxidative stability and other functional properties of broiler chicken meat. Journal of Food Science and Technology, 54(12), 3899-3907.
- Mir, N. A., Tyagi, P. K., Biswas, A. K., Tyagi, P. K., Mandal, A. B., Kumar, F., Sharma, D., Biswas, A. and Verma, A. K. (2018). Inclusion of flaxseed, broken rice and distillers dried grains with solubles (DDGS) in broiler chicken ration alters the fatty acid profile, oxidative stability and other functional properties of meat. European Journal of Lipid Science and Technology, DOI: 10.1002/ejlt.201700470
- Mir, N. A., Tyagi, P. K., Biswas, A. K., Tyagi, P. K., Mandal, A. B., Wani, M. A., Deo, C., Biswas, A., & Verma, A. K. (2018). Performance and meat quality of broiler chicken fed a ration containing flaxseed meal and higher dietary lysine levels. The Journal of Agricultural Science, 156(2), 291-299.