

Name and qualification: Dr.Kandeepan.G; B.V.Sc&A.H., M.V.Sc., Ph.D

Expertise: Livestock products technology, fresh meat and processed meat technology, animal by-products utilization, packaging of meat and meat products

Projects handled and at presently handling:

Sl.No.	Name	Institute	Project title	Duration	Funding agency	Total cost	Achievements
1.	Dr Kandeepan G (Principal Investigator)	National Research Center on Meat	Development of smart packaging nano-sensor for monitoring quality of meat	2016-19	ICAR-NRC on Meat	4.50 lakhs	Under progress
2.	Dr Kandeepan G (Principal Investigator)	Indian Veterinary Research Institute	Development of intelligent packaging sensors for monitoring quality and safety of meat and meat products in supply chain	2014-16	Ministry of Food Processing Industries, Govt. of India	48.5 lakhs	A sticker type time-temperature indicator (TTI) based on Urease-Carbamide enzyme substrate complex for monitoring quality changes due to frozen-thawed chicken sausages
3.	Dr Kandeepan G (Co-Principal Investigator)	Indian Veterinary Research Institute	Evaluation of Molasses Based Multi-nutrients Liquid Supplements for Improving Reproductive and Productive Performance in Buffaloes	2015-16	UPCAR, Govt.of Uttar Pradesh	25.00 lakhs	Assisted the PI in the selection of product-specific ingredients for developing antioxidant rich, molasses based multi-nutrient liquid supplement (MMLS) for buffalo calves.
4.	Dr Kandeepan G (Principal Investigator)	Indian Veterinary Research Institute	Monitoring meat safety in supply chain	2011-14	Indian Veterinary Research Institute	3.50 lakhs	Developed field kit for detection of meat safety Developed strip based indicator sensor and sachet type time temperature indicator sensor for detecting quality and safety of meat in storage condition
5.	Dr Kandeepan G (Principal Investigator)	Indian Veterinary Research Institute	A study on statewide yield of meat and by products of cattle, buffalo, sheep, goat, pig and poultry	2013-14	Ministry of Statistics and Programme Implementation, Govt. of India	6.00 lakhs	Collected data on meat and by products yields of buffalo, sheep, goat, pig and poultry
6.	Dr Kandeepan G (Co-Principal Investigator)	Indian Veterinary Research Institute	Development of essential oil formulation for biocontrol of spoilage organisms and pathogens of	2013-16	Indian Veterinary Research Institute	4.5 lakhs	Developing essential oil coated antimicrobial edible film for packaging of chicken patties

			health significance in foods of animal origin				
7.	Dr Kandeepan G (Co-Principal Investigator)	Indian Veterinary Research Institute	Service project: “Handling, processing, quality evaluation and disposal of livestock products”	2010-16	Indian Veterinary Research Institute	NA	Processing of meat and milk for sale and research
8.	Dr Kandeepan G (Principal Investigator)	National Research Centre on Yak	Outreach programme on monitoring of drug residues and environmental pollutants	2009-10	Indian Council of Agricultural Research	88.90 lakhs	Surveyed antibiotics and pesticides used in yak tracts of West kameng district of Arunachal Pradesh
9.	Dr Kandeepan G (Co-Principal Investigator)	National Research Centre on Yak	A socio-economic appraisal of yak rearing in Arunachal Pradesh	2009-10	National Research Centre on Yak	5.00 lakhs	Cost of production and marketing of yak products were worked out
10.	Dr Kandeepan G (Principal Investigator)	National Research Centre on Yak	Development of functional paneer from yak milk	2008-10	National Research Centre on Yak	11.50 lakhs	Developed dietary fiber enhanced low fat yak milk paneer. Inulin proved to be best with regard to its ability to improve quality attributes of low fat yak milk paneer. Designer paneer can be stored upto 12 days at refrigerated storage.

Important publications:

Vivek Shukla., **Gurunathan Kandeepan.**, Mangalathu Rajan Vishnuraj., and Arvind Soni. (2016). Anthocyanins based indicator sensor for intelligent packaging application. *Agricultural Research*, 5(2): 205–209.

Bhanu Pratap Singh., **Kandeepan Gurunathan.**, Vishnuraj Mangalathu Rajan and Jitendra Sharma (2016). Physicochemical quality assessment of vacuum packed frozen chicken sausages subjected to temperature fluctuations during storage. *Journal of Animal Research*, 6(5): 967-972.

Gurunathan Kandeepan (2016). Quality characteristics of ready to eat dumplings (momo) prepared from yak meat. *Fleischwirtschaft International*, 2: 126-131.

Talukder, S., Sharma, B.D., Mendiratta, S.K., **Kandeepan, G.**, Chauhan, G., and Agarwal, R.K. (2016). The effect of mulberry extracts incorporation on product quality of restructured chicken rolls. *Fleischwirtschaft International*, 2: 137-140.

Arvind Soni, **Kandeepan, G.**, Mendiratta, S.K., Vivek Shukla , Ashish Kumar (2016). Development and characterization of essential oils incorporated carrageenan based edible film for packaging of chicken patties. *Nutrition & Food Science*, 46 (1): 82 – 95.

- Bhanu Pratap Singh, **Kandeepan Gurunathan**, Vishnuraj Mangalathu Rajan and Hnialum Lalampuii (2015). Effect of temperature abuse on quality attributes of frozen chicken sausages, *Indian Journal of Poultry Science*, 50(2):203-207.
- Heena Sharma., Mendiratta, S. K. ., Ravi Kant Agrawal and **Kandeepan, G** (2015). Effect of clove and holybasil essential oil on sensory and microbiological quality of fresh chicken sausages. *Journal of Meat Science and Technology*, 3(4): 37-41.
- Shukla V, **Kandeepan G**, Vishnuraj MR (2015) Development of on package indicator sensor for real-time monitoring of meat quality, *Veterinary World*, 8(3): 393-397.
- Vivek Shukla, **Gurunathan Kandeepan** , Mangalathu Rajan Vishnuraj (2015). Development of on-package indicator sensor for real-time monitoring of buffalo meat quality during refrigeration storage. *Food Analytical Methods*, 8(6):1591-1597.
- Sanjay Kumar, **Kandeepan, G.**, Vishnuraj, M.R., Arvind Soni, Vivek Shukla and Bhanu Pratap Singh (2015). Resazurin dye reduction test for determining microbial quality of chevon meat. *Journal of Pure and Applied Microbiology*, 9(Spl.edition 2):333-338.
- Vivek Shukla, **Kandeepan, G.**, and M.R. Vishnuraj (2015). Evaluation of shelf life of buffalo meat in aerobic cold storage using physicochemical parameters. *Buffalo Bulletin*, 34 (4): 453-57.
- Arvind, **Kandeepan, G.**, Ravikant Agarwal and Vishnuraj, M.R. (2015). Antimicrobial effect of oregano and thyme essential oils coated carrageenan based edible film. *Journal of Pure and Applied Microbiology*, 9(2): 1657-1663.
- Vivek Shukla, **Kandeepan, G.**, Vishnuraj, M.R. and Mendiratta, S.K. (2015). Physicochemical changes related to protein degradation in buffalo meat at refrigerated storage. *Indian Veterinary Journal*, 92(6): 36-38.
- Giriprasad, R., Sharma,B.D., **Kandeepan,G.**, and Mishra, B.P. (2015). Microbiological assessment of aerobically packaged functional restructured buffalo meat steaks in LDPE bags during storage at refrigeration temperature. *Environment and Ecology*, 33(1B): 430-433.
- Giriprasad, R., Sharma,B.D., **Kandeepan,G.**, Mishra, B.P. and Yasothai, R. (2015). Shelf life evaluation of functional restructured buffalo meat steaks fortified with *Mousambi* peel powder and *Amla* powder at refrigerated storage ($4\pm 1^\circ\text{C}$). *International Food Research Journal*, 22(4): 1446-1453.
- Ashim Kumar Biswas, Chandra Kant Beura, Ajit Singh Yadav, **Kandeepan,G.**, and Asit Baran Mandal. (2015). Effect of microwave cooking on cold extruded poultry meat finger chips fortified with herbs. *Fleishwirtschaft International*, 30(2): 59-66.
- Vishnuraj MR., Talukder S., **Kandeepan G.**, Mendiratta S.K., Vivek Shukla., and Sharma B.D (2014).Development and evaluation of restructured chicken rolls incorporated with antioxidant rich fruit pulp. *Indian Journal of Poultry Science*, 49(3):297-301.
- Vishnuraj, M.R., **Kandeepan, G.**, Vivek Shukla, Mendiratta, S.K., Arun T.R. and Agarwal R.K. (2014). Estimation of Microbial Load in High Temperature Thawed Buffalo Meat using Fluorescein Diacetate (FDA) Hydrolysis Assay, *Journal of pure and applied microbiology*, 8(6): 4851-4857.

- Vishnuraj, M. R.; **Kandeepan, G.**, Shukla, Vivek (2014). Effect of higher temperature exposure on physicochemical properties of frozen buffalo meat. *Veterinary World*, 7(11): 909-915.
- Kandeepan.G.**, Anjaneyulu ASR, Kondaiah N, Mendiratta SK and Rajkumar RS (2013). Evaluation of quality and shelf life of buffalo meat keema at refrigerated storage. *Journal of Food Science and Technology*, 50(6):1069-1078.
- Mohapatra. S., **Kandeepan G.**, Mendiratta S.K., Soni B., Kumar B., Vishnuraj M.R. and Shukla V. (2013). Effect of fluid whey incorporation on quality of chevon nuggets. *Italian Journal of Food Science*, 25:379-383.
- Kandeepan, G.**, Anjaneyulu, A.S.R., Mendiratta, S.K., & Beura, C.K. (2013). Effects of storage condition on the quality of buffalo meat curry. *Fleischwirtschaft International*, 28(1): 46-52.
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- Kandeepan.G.**, Anjaneyulu ASR, Kondaiah N and Mendiratta SK (2011). Evaluation of changes in quality attributes of processed buffalo meat keema at ambient storage. *Fleischwirtschaft International*, 26(2): 79-84
- Kandeepan Gurunathan** & Sudhir Sangma. (2011). Comparison of quality characteristics of full fat and low fat paneer developed from yak milk. *International Journal of Dairy Technology*, 64(1): 117-120.
- Kandeepan, G.**, Anjaneyulu, A.S.R., Kondaiah, N., & Mendiratta, S.K (2011). Comparison of quality attributes of buffalo meat curry at different storage temperature. *Acta Scientiarum Polonorum Technologia Alimentaria*, 10(1): 83-95.
- Kandeepan G.**, Sangma S, Krishnan G and Chouhan VS (2011). Quality attributes of yak milk paneer. *The Indian Veterinary Journal*, 88(8): 40-41.
- Kandeepan, G.**, Sangma, S., Paul, V., & Jayakumar, S. (2010). Quality characteristics of low fat paneer developed from yak milk. *The Indian Journal of Animal Sciences*, 80(9):932-933.
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- Krishnan, G., Ramesha, K.P., **Kandeepan G.**, Chouhan, V.S. & Jayakumar, S. (2010). Effect of seasonal variation on primary physiological response of yak. *Indian Journal of Animal Sciences*, 80(3): 271.
- Kandeepan, G.**, & Anjaneyulu, A.S.R. (2010). Estimation of production cost of buffalo meat products for commercial venture. *Beverage & Food World*, 38(2): February 2011
- Kandeepan, G.**, Anjaneyulu, A.S.R., Kondaiah, N., & Mendiratta, S.K. (2010). Effect of age and gender on quality attributes of buffalo (*Bubalus bubalis*) meat patties. *Fleischwirtschaft International*, 25(6): 71-74.
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- Kandeepan, G.,** Anjaneyulu, A.S.R., Kondaiah, N., Mendiratta, S.K., & Suresh, R. (2009). Comparison of quality and shelf life of buffalo meat patties stored at refrigeration temperature. *International Journal of Food Science and Technology*, 44(11): 2176-2178.
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Any other information:

- **Outstanding faculty award:** 1
- **Certificate of excellence:** Young scientist-special mention: 1
- **Best paper (oral presentation) award:** 3
- **Best paper (poster presentation) award:** 2
- **Editorial Board Member** of Journal of Meat Science & Journal of Meat science and technology.