

1. **Full name of the faculty member:** DR. KUNTAL ROY
2. **Designation:** ASSISTANT PROFESSOR
3. **Specialisation:** M.Tech. and Ph.D. in Dairy Technology
4. **Contact information:** Phone: 7003419693 e-mail ID:kuntalwbuaafs@gmail.com
5. **Academic qualifications:**

College/ university from which the degree was obtained	Abbreviation of the degree
ICAR-National Dairy Research Institute	Ph.D.
West Bengal University of Animal and Fishery Sciences	M. Tech.
West Bengal University of Animal and Fishery Sciences	B. Tech.

6. **Positions held/ holding or Work Experience:** Assistant Professor (6 Year 9 Month)

7. **Awards:**

- i. Awarded Best Oral Paper Presentation Award for the paper entitled “Best from Waste: Valorization of Rice Milling by-product into Biodegradable Packaging Material for Dairy Products” at the National Conference on Food Innovations, Food Allergies and Traditional Foods (FIFATF-2025) held at Sant Longowal Institute of Engineering and Technology (SLIET), Longowal, Punjab, during 11-12 December 2025.
- ii. Received the Young Professional Award from Vigyan Varta in 2020.
- iii. Received the Young Professional Award from Vigyan Varta in 2021.

8. **Other notable activities:**

9. **Publication:**

- a. Journals (National & International):**with NAAS, IF rating**

- i. **Roy, K.,** Debnath, A. and Singh, B. (2018). Estimation of production cost for ghee residue based snack. *The Pharma Innovation Journal* 2018; 7(10): 630-634. **(NAAS - 5.03)**
- ii. Manik, S., Debnath, A., Hossain, S., **Roy, K.,** Debnath, P. P., Haldar, L. and Ray, P. R. (2024). Formulation and characterization of novel dairy-based dip utilizing heat-acid-coagulated milk gel and whey. *Journal of Dairy Research*, 91(3): 343-348. **(NAAS – 8.10)**
- iii. Manik, S., Debnath, A., Hossain, S., **Roy, K.,** Debnath, P. P., Ray, P. R. and Haldar, L. (2025). Feasibility assessment of sensorial accepted novel dairy based dip during storage. *Indian Journal of Dairy Science*, 78(3): 201-207. **(NAAS – 6.20)**
- iv. Aparna, V. P. and **Roy, K.** (2025). Exploring the potential of pearl millet for eco-friendly sugar syrup production. *European Journal of Nutrition & Food Safety*, 17(1): 119–135. <https://doi.org/10.9734/ejnf/2025/v17i11624> **(NAAS - 5.14)**
- v. **Roy, K.,** Panjagari, N. R., Aparna, V. P., Yadav, D. N. and Behare, P. (2026). Machine Learning Assisted Prediction of Mechanical and Moisture Interaction Properties of Post-Maltodextrin-Extracted Rice Protein Based Films. *Journal of Agricultural Engineering (India)*, 63(3): 1–20. <https://doi.org/10.52151/jae2026633.2020> **(NAAS - 6.90)**
- vi. Aparna, V. P., Khamrui, K., Prasad, W. G., & **Roy, K.** (2026). 3D printing of dairy ingredients and milk products: Advances, challenges, and future perspectives. *Journal of Food Measurement and Characterization*. <https://doi.org/10.1007/s11694-026-04093-4> **(NAAS - 9.60)**

- vii. Rafiq, S. M., Miatur, S., **Roy, K.**, Mondol, M. S. A., Aparnna, V. P., Vikanksha, Dash, K. K., Khan, S. A., & Dar, A. H. (2026). Biophysical processing techniques for the valorization of oilseed meals into antioxidant peptides. *Food Physics*, 3: 100094. <https://doi.org/10.1016/j.foodp.2026.100094>
- viii. Rafiq, S. M., Miatur, S., Pandey, R., Chauhan, K., **Roy, K.**, Sharma, A. and Nayik, G. A. (2026). Lab-grown dairy: A comprehensive review of biotechnology, sustainability, consumer acceptance, and regulatory perspectives. In: Reference Module in Food Science. Elsevier. <https://doi.org/10.1016/B978-0-443-40334-7.00032-0>
- ix. Debnath, P. P., **Roy, K.**, Debnath, A. and Sanyal, M. K. (2022). Life cycle assessment and application of green technologies in dairy industry to reduce carbon footprint. *Indian Journal of Animal Health*, 61(2): 19-32.(NAAS-5.25)

b. Popular Articles:

- i. Hazra, S., Jadhav, V., Manik, S., Debnath, A. and **Roy, K.** (2020). Infrared Heating: An Alternate Way for Traditional Food Processing. *Vigyan Varta*, 1(8): 26-28.
- ii. Manik, S., **Roy, K.**, Debnath, A., Hossain, S. and Hazra, S. (2022). Glycomacropeptides: A key to cheese whey utilization. *Indian Dairyman*, 74(12).
- iii. **Roy, K.** (2020). Potential of Ghee Residue in Dairy Sector. In Compendium of National Seminar on 'Traditional Indian Dairy Products- Prospects of Commercialization', organized by Faculty of Dairy Technology, West Bengal University of Animal and Fishery Sciences, Mohanpur Campus, Nadia, Kolkata, West Bengal on 13th March, 2020. Pp: 50-52.

c. Books/ Books chapter:

- i. Debnath, P. P., **Roy, K.** and Debnath, A. (2021). Donkey Milk. In: *Non-Bovine Milk: Chemistry, Health Benefits and Future Scope*. New India Publishing Agency, New Delhi. pp: 81-93.
- ii. **Roy, K.**, Debnath, A. and Debnath, P. P. (2021). Buffalo Milk. In: *Non-Bovine Milk: Chemistry, Health Benefits and Future Scope*. New India Publishing Agency, New Delhi. pp: 1-29.
- iii. Mandal, R., Karmakar, P., **Roy, K.** and Rani, R. (2023). Heat and acid coagulated milk products: Physicochemical changes during processing and storage. In *The chemistry of milk and milk products*. Apple Academic Press. <https://doi.org/10.1201/9781003340706-18>
- iv. Debnath, A., **Roy, K.**, Debnath, P. P., Halder, L., Barman, A. K. and Veena, N. (2024). Microbiological analysis of dairy products. In: *Analytical methods for milk and milk products: Volume 3. Microbiological analysis, isolation, and characterization*. M. R. Goyal, N. Veena, & S. K. Mishra (Eds.), Apple Academic Press, pp. 81–212. <https://doi.org/10.1201/9781032676074-5>
- v. **Roy, K.**, Debnath, A., Mandal, R., Hossain, S., Karmakar, P. and Debnath, P. P. (2024). Physicochemical analysis of khoa and khoa-based sweets. In: *Analytical methods for milk and milk products: Volume 2. Physicochemical analysis of concentrated, coagulated, and fermented products*. M. R. Goyal, N. Veena, & S. K. Mishra (Eds.), Apple Academic Press. <https://doi.org/10.1201/9781032675817-3>
- vi. Poojitha, G., Chaganti, S. V. K., **Roy, K.**, Hazra, T. and Ramani, V. M. (2024). Physicochemical analysis of fermented milk products. In: *Analytical methods for milk and milk products: Volume 2. Physicochemical analysis of concentrated, coagulated, and fermented products*. M. R. Goyal, N. Veena, & S. K. Mishra (Eds.), Apple Academic Press. <https://doi.org/10.1201/9781032675817-6>

- vii. Mandal, R., Karmakar, P. and **Roy, K.** (2024). Physicochemical analysis of milk powder. In M. R. Goyal, N. Veena, & S. K. Mishra (Eds.), *Analytical methods for milk and milk products: Volume 2. Physicochemical analysis of concentrated, coagulated, and fermented products*. Apple Academic Press. <https://doi.org/10.1201/9781032675817-4>
- viii. Karmakar, P., Mandal, R. and **Roy, K.** (2024). Estimation of nutraceutical components of milk and milk products. In M. R. Goyal, N. Veena, & S. K. Mishra (Eds.), *Analytical methods for milk and milk products: Volume 2. Physicochemical analysis of concentrated, coagulated, and fermented products*. Apple Academic Press. <https://doi.org/10.1201/9781032675817-12>
- ix. Debnath, P. P., **Roy, K.** and Veena, N. (2024). Sampling methods of milk and milk products. In: *Analytical methods for milk and milk products: Volume 1. Moisture methods and chemical and compositional analysis*. M. R. Goyal, N. Veena, & S. K. Mishra (Eds.), Apple Academic Press. <https://doi.org/10.1201/9781032675732-5>
- x. Hazra, T., **Roy, K.**, Veena, N., Bumbadiya, M., Sindhav, R. G. and Chaganti, S. V. K. (2024). Compositional analysis of butter oil and clarified fat (ghee). In: *Analytical methods for milk and milk products: Volume 1. Moisture methods and chemical and compositional analysis*. M. R. Goyal, N. Veena, & S. K. Mishra (Eds.), Apple Academic Press. <https://doi.org/10.1201/9781032675732-11>
- xi. Debnath, P. P., Debnath, A., **Roy, K.**, Karmakar, P., Mandal, R. and Sarkar, J. R. (2024). Applications of enzyme based flavour components in dairy products. In: *Innovations in dairy sciences*. M. Parmar, T. Hazra, R. G. Sindhav, & C. H. V. K. Sudheendra (Eds.), NIPA GENX Electronic Resources & Solutions Pvt. Ltd., pp. 113–127.
- xii. **Roy, K.**, Debnath, P. P., Debnath, A., Mandal, R. and Karmakar, P. (2024). Alternative (eco-friendly) milk processing systems. In: *Innovations in dairy sciences*. M. Parmar, T. Hazra, R. G. Sindhav, & C. H. V. K. Sudheendra (Eds.), NIPA GENX Electronic Resources & Solutions Pvt. Ltd., pp. 1-10.
- xiii. Aparna, V. P., **Roy, K.**, Singh, S., Rose, H., Khamrui, K. and Gautam, A. K. (2025). Recent advancements in the application of blockchain, IoT, and fuzzy systems in food science and bioprocess development. In: *Artificial intelligence in food science: Transforming food and bioprocess development*. T. Sarkar & A. Haldorai (Eds.), Elsevier, pp. 281–302. <https://doi.org/10.1016/B978-0-443-26468-9.00012-6>
- xiv. **Roy, K.**, Aparna, V. P. and Jindal, H. (2025). Advanced testing techniques. In: *Technological advances and trends in cheese making*. S. M. Rafiq (Ed.), Springer, pp. 169–190. https://doi.org/10.1007/978-3-031-94476-5_10
- xv. Debnath, P. P., Debnath, A., **Roy, K.**, & Manik, S. (2024). Physicochemical analysis for casein, caseinates, and whey powder. In: *Analytical methods for milk and milk products: Volume 2. Physicochemical analysis of concentrated, coagulated, and fermented products*. M. R. Goyal, N. Veena, & S. K. Mishra (Eds.), Apple Academic Press. <https://doi.org/10.1201/9781032675817-9>