

SAURABH KADYAN

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EDUCATION

- **Ph.D. (Nutrition and Food Science):** Florida State University, Tallahassee, FL, USA, 2022-Current
- **M.Tech. (Dairy Microbiology):** ICAR-National Dairy Research Institute (NDRI), Karnal, Haryana, India, (OGPA 8.9/10), 2013-2015
(*Thesis:* Development of "Three step-enzyme based kit" for detection of *E. coli* / coliforms in milk)
- **B.Tech. (Dairy Technology):** ICAR-National Dairy Research Institute (NDRI), Karnal, Haryana, India, (OGPA 8.3/10), 2009-2013

PROFESSIONAL EXPERIENCE

- **Graduate Research Assistant**, Department of Nutrition and Integrative Physiology, Florida State University, Tallahassee, FL, USA (January, 2022-Present)
- **Scientist** at ICAR-National Dairy Research Institute (NDRI), Karnal, India (July, 2018-Present)
- **Quality Assurance Executive** at Gujarat Cooperative Milk Marketing Federation (AMUL), Gujarat, India (August, 2015 - June, 2018)

HONORS AND AWARDS

1. Awarded **scholarship** 'Sandels Fund for Excellence' (2022-23) and 'Endowment for Excellence Fellowships & Scholarships Fund' (2021-22) by FSU College of Health and Human Sciences
2. **Best Thesis Award** and Citation with cash prize for Outstanding Research work in field of Dairy Processing during 2014-15 academic session
3. Recipient of **Merit Certificate** for M. Tech. (Dairy Technology, 2013-15) and B. Tech. (Dairy Technology, 2009-13) at ICAR-NDRI, Karnal
4. Secured **All India Rank 6** in **1st Junior Analyst Exam** conducted by Food Safety and Standard Authority of India (FSSAI) in January, 2018
5. **Certificate of Leadership** for Outstanding Product Launch Support during 2015-16 by Managing Director, GCMMF at QA Hoshin Kanri Meeting, Anand, Gujarat

PATENTS

Kumar, N., Lawaniya, R., Avinash, Arora, B., Raghu, H.V., Balhara, M., **Kadyan, S.** & Kumar, V. Marker enzymes and spore germination based assay for detection of *E. coli* in milk and milk products. Patent No. 367110. India. Granted.

PEER-REVIEWED RESEARCH ARTICLES

*Corresponding author; †Equal contribution

Bindal, S., **Kadyan, S.**, Saini, M., & Gupta, R. (2022). In-Situ and Cell-Free Goat Hair Hydrolysis by a Consortium of Proteases from *Bacillus licheniformis* Strain ER-15: Hair Hydrolysate Valorization by Melanin Extraction. *Waste and Biomass Valorization*, 1-18. DOI: [10.1007/s12649-022-01718-9](https://doi.org/10.1007/s12649-022-01718-9)

Srivastava, U., Nataraj, B. H., Kumari, M., **Kadyan, S.**, Puniya, A. K., Behare, P. V., & Nagpal, R. (2022). Antioxidant and immunomodulatory potency of *Lacticaseibacillus rhamnosus* NCDC24 fermented milk-derived peptides: A computationally guided in-vitro and ex-vivo investigation. *Peptides*, 170843. DOI: [10.1016/j.peptides.2022.170843](https://doi.org/10.1016/j.peptides.2022.170843)

Chandhni, P. R., Pradhan, D., Sowmya, K., Gupta, S., **Kadyan, S.**, Choudhary, R., ... & Grover, S. (2021). Ameliorative effect of surface proteins of probiotic lactobacilli in colitis mouse models. *Frontiers in microbiology*, 1973. DOI: [10.3389/fmicb.2021.679773](https://doi.org/10.3389/fmicb.2021.679773)

Kadyan, S., Rashmi, H. M., Pradhan, D., Kumari, A., Chaudhari, A., & *Deshwal, G. K. (2021). Effect of lactic acid bacteria and yeast fermentation on antimicrobial, antioxidative and metabolomic profile of naturally carbonated probiotic whey drink. *LWT*, 111059. DOI: [10.1016/j.lwt.2021.111059](https://doi.org/10.1016/j.lwt.2021.111059)

***Kadyan, S.**, Kumar, N., Lawaniya, R., Sharma, P.K., Arora, B., Tehri, N. (2020). Rapid and miniaturized method for detection of hygiene indicators, *Escherichia coli* and coliforms, in dairy products. *Journal of Food Safety*, 40, e12839. DOI: [10.1111/jfs.12839](https://doi.org/10.1111/jfs.12839)

PEER-REVIEWED REVIEW PAPERS

Wang, J.†, **Kadyan, S.†**, Ukhanov, V., Cheng, J., Nagpal, R., & Cui, L. (2022). Recent advances in the health benefits of pea protein (*Pisum sativum*): bioactive peptides and the interaction with the gut microbiome. *Current Opinion in Food Science*, 100944. DOI: [10.1016/j.cofs.2022.100944](https://doi.org/10.1016/j.cofs.2022.100944)

Kadyan, S., Sharma, A., Arjmandi, B. H., Singh, P., & Nagpal, R. (2022). Prebiotic Potential of Dietary Beans and Pulses and Their Resistant Starch for Aging-Associated Gut and Metabolic Health. *Nutrients*, 14(9), 1726. DOI: [10.3390/nu14091726](https://doi.org/10.3390/nu14091726)

Deshwal, G. K., Tiwari, S., Kumar, A., Raman, R. K., & ***Kadyan, S.** (2021). Review on factors affecting and control of post-acidification in yoghurt and related products. *Trends in Food Science & Technology*, 109, 499-512. DOI: [10.1016/j.tifs.2021.01.057](https://doi.org/10.1016/j.tifs.2021.01.057).

Deshwal, G. K., Tiwari, S., & ***Kadyan, S.** (2021). Applications of emerging processing technologies for quality and safety enhancement of non-bovine milk and milk products. *LWT*, 111845. DOI: [10.1016/j.lwt.2021.111845](https://doi.org/10.1016/j.lwt.2021.111845)

Deshwal, G. K., Akshit, **Kadyan, S.**, Sharma, H., Singh, A. K., Panjagari, N. R., & *Meena, G. S. (2021). Applications of reverse osmosis in dairy processing: an Indian perspective. *Journal of Food Science and Technology*, 1-13. DOI: [10.1007/s13197-020-04958-6](https://doi.org/10.1007/s13197-020-04958-6).

Mallappa, R. H., Balasubramaniam, C., Nataraj, B. H., Ramesh, C., **Kadyan, S.**, Pradhan, D., & *Grover, S. (2020). Microbial diversity and functionality of traditional fermented milk products of India: current scenario and future perspectives. *International Dairy Journal*, 104941. DOI: [10.1016/j.idairyj.2020.104941](https://doi.org/10.1016/j.idairyj.2020.104941)

BOOK CHAPTERS

Mallappa, R. H., Balasubramaniam, C., Amarlapudi, M. R., Kelkar, S., Adewumi, G. A., **Kadyan, S.**, ... & Grover, S. (2022). Role of probiotics in the prevention and management of diabetes and obesity. In Probiotics in the Prevention and Management of Human Diseases (pp. 321-336). Academic Press. **ISBN:** 978-0-12-823733-5

Kadyan, S., Deshwal, G. K., Mallappa, R. H., & Pradhan, D. (2022). Rapid Isothermal Nucleic Acid Dependent Techniques for on-Site Diagnosis of Foodborne Pathogens. In Biological and Chemical Hazards in Food and Food Products (pp. 63-90). Apple Academic Press.

Nayyar, S., **Kadyan, S.**, Parveen, H., Mallappa, R. H., & Pradhan, D. (2022). Antimicrobial Resistance In Food Grade Lactic Acid Bacteria. In Biological and Chemical Hazards in Food and Food Products (pp. 91-120). Apple Academic Press.

Tehri, N., **Kadyan, S.**, Singh, T. P., Tehri, P., & Vashishth, A. (2022). Modern Diagnostic Tools for Rapid Detection of Multidrug Resistance. In Emerging Modalities in Mitigation of Antimicrobial Resistance (pp. 79-99). Springer, Cham. DOI: [10.1007/978-3-030-84126-3_4](https://doi.org/10.1007/978-3-030-84126-3_4)

Mallappa, R. H., Balasubramaniam, C., Amarlapudi, M. R., Kelkar, S., Adewumi, G. A., **Kadyan, S.**, ... & Grover, S. (2022). Role of probiotics in the prevention and management of diabetes and obesity. In Probiotics in the Prevention and Management of Human Diseases (pp. 321-336). Academic Press. DOI: [10.1016/B978-0-12-823733-5.00006-4](https://doi.org/10.1016/B978-0-12-823733-5.00006-4)

Kadyan, S. & *Pradhan, D. (2020). Antifungal Lactic Acid Bacteria (LAB): Potential Use in Food Systems. In Mishra, S.K. & Goyal, M.R. (Eds.) Novel Strategies to Improve Shelf-Life and Quality of Foods: Quality, Safety, and Health Aspects. Apple Academic Press, USA. **ISBN:** 9781003010272

LECTURES IN TRAINING MANUALS

Kadyan, S. and Raghu, H.V. (2019). Microbiology Quality Analysis of Milk and Milk Products. In Instruction Manual on Milk Processing and Value Addition. BPD Unit, ICAR-NDRI. Pp: 18-29.

Pradhan, D., Singh, V. and **Kadyan, S.** (2019). Advancement in Antimicrobial Metabolites from Lactic Acid Bacteria and Its Application Spectra. In Winter School on Technological Advances in Functional Food Ingredients and Validation of their Health Claims. Dairy Chemistry Division, ICAR-NDRI. Pp: 126-131

Rashmi, H.M., **Kadyan, S.**, Pradhan, D. and Grover, S. (2019). Health benefits of Probiotics and Postbiotics. In CAFT training program on Emerging Trends in Bioprocess Technology in Dairy and Food Processing. Dairy Technology Division, ICAR-NDRI. Pp: 147-153.

TECHNIQUES & SOFT SKILLS

- ✓ *In-vivo* animal handling, intra-cardiac blood and tissue sample collections
- ✓ Neuromuscular and neurocognitive tests on rodents
- ✓ DNA/RNA extraction and gene expression analysis
- ✓ Body composition analysis (EchoMRI)
- ✓ GC-MS assisted metabolomic analysis
- ✓ Scanning Electron Microscope

- ✓ Ultrafiltration and SDS-PAGE
- ✓ Statistical tools (Design Xpert, Graphpad Prism)
- ✓ Project Planning and Execution
- ✓ Scientific Writing and Data Analysis

TEACHING ENGAGEMENTS

(at my home university)

Under-Graduate Courses

1. Starter Culture and Fermented Milk Products (DM-221)
2. Microbiology of Dairy Products (DM-222)
3. Quality and Safety Monitoring in Dairy Industry (DM-311)

Post-Graduate Courses

1. Food Microbiology (FS-614)
2. Microbiology of Fluid Milk and Dairy Products (DM-613)
3. Probiotics for Health Foods (DM-624)
4. Research Techniques in Dairy Microbiology (DM-625)

CONFERENCES ATTENDED (as a delegate)

- 11th India Probiotic Symposium on “Role of Gut Microbiota and Probiotics in Reducing Viral Infections – Mechanisms to combat them” organized by Gut Microbiota and Probiotic Science Foundation (India) on 13-14th March, 2021
- International Conference on ‘Proteomics for System Integrated Bio-Omics, One Health and Food Safety’ held at ICAR-National Dairy Research Institute, Karnal during 2-4th December, 2019

TRAININGS ATTENDED

1. **Virtual Workshop on “Food Safety”**

ICAR-National Dairy Research Institute along with Department of Food science, Purdue University, Indiana, USA during 4-7 January, 2021

2. **Massive Open Online Course (MOOC) on “COVID-19: The Pandemic”**

RK University, Rajkot, India from 11-15 May, 2020

3. **Workshop cum Training Programme on “Metabolomics: Basic Principles and Applications”**

ICAR-National Dairy Research Institute, Karnal under Institutional Development Plan, NAHEP project during 3-5 March, 2020

4. **Winter School on “Technological Advances in Functional Food Ingredients and Validation of health claims”**

ICAR-National Dairy Research Institute, Karnal sponsored by Agricultural Education Division, Indian Council of Agricultural Research during 06-26 December, 2019

5. **Workshop on Advances in Starter Culture Technology**

ICAR-National Dairy Research Institute, Karnal under Institutional Development Plan, NAHEP project on 12 December 2019

6. QMS Internal Auditor training program on ISO 9001:2015 Standard

ICAR-National Dairy Research Institute, Karnal during 3-5 October 2018

7. Training on Operation and Functioning of BSL-3 Laboratory

National Referral Centre on Milk Quality and Safety, ICAR-National Dairy Research Institute, Karnal from 23-29 June, 2014

MEMBERSHIP & ASSOCIATION

1. Member of **Florida Association of Food Protection** for the year 2022
2. Life time member of **Indian Dairy Association** [Membership No. **PP/NZ/LM/16698/HR**]

LANGUAGES

English (professional) and **Hindi** (Native)