How to Apply ?

The participants are required to fill out the Google form on the link and upload the advance copy. Google Form: Click here
https://forms.gle/qbWYQkQdwbmPkjVL6

The candidates should fill the attached performa and send the duly approved copy to
winterschooldtndri@gmail.com

Registration Fees

The participants are required to pay the sum of Rs 50/- as registration fee (nonrefundable) in the form of Indian Postal Order/ Demand Draft in favor of "ICAR UNIT, NDRI" payable at Karnal.

Travel, Boarding and Lodging

Lodging and boarding facilities will be provided to all selected participants by the organizers. Accommodation will be on sharing basis. Travel allowance (TA) for participants from SAUs and other ICAR institutions will be reimbursed as per their entitlement, restricted to a maximum of AC II Tier fare by the shortest route. Reimbursement will be made in accordance with ICAR guidelines upon submission of original travel tickets. Air travel is not permissible. No daily allowance (DA) will be paid to the participants.

Important Dates

Last Date of Application	:	25.12.2025
Communication to Participants	:	29.12.2025

Chief Patron

Dr. Dheer Singh
Director & Vice-Chancellor
ICAR-NDRI, Karnal

Patrons

Dr. A.K. Singh
Joint Director (Academic)
ICAR-NDRI, Karnal

Dr. Rajan Sharma
Joint Director (Research)
ICAR-NDRI, Karnal

Dr. D.N. Yadav
Head & Principal Scientist
Dairy Technology Division, ICAR-NDRI, Karnal

Course Director

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Winter School

on

Translational Research in Dairy-based High Protein Ingredients and Foods: Addressing the Technological and Nutritional Challenges

Jan 15 - Feb 04, 2026

Sponsored by

Agricultural Education Division
Indian Council of Agricultural Research

Organized by

Dairy Technology Division
ICAR-National Dairy Research Institute
Karnal-132001 (Haryana) INDIA

www.ndri.res.in

About ICAR-NDRI

ICAR-National Dairy Research Institute is a premier institution of dairying and acclaimed for its contribution in generating quality human resource, carrying out excellent R&D work and assistance in promotion of Indian Dairy sector. The institute undertakes basic and applied research, teaching and extension activities towards dairy development, animal productivity enhancement, development of new products and processes for the benefit of millions of dairy farmers and consumers. Karnal is located on NH-1, equidistant (~125 Km) from New Delhi and Chandigarh. The city is well connected by road and train. Buses for Karnal can be availed from ISBT Bus Stand, New Delhi.

About the Course

High-protein foods have gained significant consumer attention in recent years due to increasing awareness of nutrition, fitness, and overall wellness. Among these, high-protein dairy foods hold particular significance because of their superior nutritional quality, balanced amino acid profile, and high digestibility compared to plant-based proteins. Dairy proteins such as casein and whey are recognized for their excellent functional and bioactive properties, which support muscle growth, satiety, and metabolic health. Consequently, they are widely incorporated into health drinks, yoghurts, cheese, and nutritional supplements. However, developing high-protein dairy products presents challenges related to flavour, texture, solubility, and heat stability, which can affect consumer acceptance and shelf life. To overcome these barriers, industries are increasingly collaborating with research institutions to explore innovative technologies such as membrane filtration, enzymatic hydrolysis, and protein fortification using novel dairy ingredients. In this context, this course will play a vital role in empowering scientists, academicians, and professionals in the dairy and food processing sectors with advanced knowledge and hands-on training.

Course Contents

- Current market trends and opportunities in high-protein dairy foods
- Advances in fractionation and separation of milk proteins
- Technological advances in the production of milk protein concentrate
- Protein-protein interactions for manufacturing composite protein powder blends
- Challenges and developments in high protein milk and whey-based beverages
- Valorization of whey to protein-dense whey-based cheeses
- Milk derived bioactive proteins and peptides as functional food ingredients
- Commercially available high protein dairy ingredients and products in Indian market and a way forward
- Protein-based emulsions for targeted delivery systems
- Recent developments in protein-based fat replacers
- 3-D printing of high protein foods: Principle, methodology and future scope
- Scientific advancements in development of high-protein traditional Indian dairy products
- Engineering properties of protein formulations
- Predictive modelling in the development of high protein foods
- Analytical tools for characterization of high-protein dairy foods
- Recent trends in the packaging of high-protein dairy foods
- Challenges in high protein dairy products: An industrial perspective
- Proteomic analysis of dairy starters for formulating high protein foods
- Application of machine learning in developing dairy formulations

In addition to the aforementioned topics, several other specialized lectures by subject matter experts will be conducted to provide an in-depth understanding of recent scientific and technological advancements in high-protein dairy research. Furthermore, an industrial visit will be arranged to facilitate experiential learning and to acquaint participants with state-of-the-art processing technologies and innovation practices adopted in the dairy industry.

Eligibility

The candidate must possess a Master's degree in Agriculture or any of its allied disciplines. In addition, the applicant should be working at a position not below the rank of Assistant Professor or an equivalent post and working in the area of Dairy Science/Food Science/Food Science and Technology/Livestock Products Technology or allied disciplines under National Agricultural Research System (NARS) including State Agricultural Universities (SAUs), Deemed to be Universities (DUs), and Central Agricultural Universities (CAUs). The number of participants for the course will be limited to 25. The selection of participants will be made based on the likely benefits of their participation to the sponsoring institute or organization.

Winter School on

Translational Research in Dairy-based High Protein Ingredients and Foods: Addressing the Technological and Nutritional Challenges

15 January to 4 February 2025

1. Name (in block letters) :
2. Designation :
3. Present employer address :
4. Permanent address :
5. Date of birth :
6. Gender :
7. Teaching/research/professional experience (mention post held) during last five years and numbers of publications. :
8. Mention if you have participated in any research seminar, Summer/Winter/Short Course etc. during last five (5) years under I.C.A.R./ Other organizations :
9. Online Payment/Transaction Details (attach copy of payment receipt) :
10. Academic Record

Sr. no.	Degree	Discipline	Year	University
1.	Ph.D			
2.	Master			
3.	Bachelor			
4.	Others			

Signature of the applicant Date .... Place ....

11. Recommendation by forwarding Institute : ....

Signature .... Designation ....

Address .... Date ....