

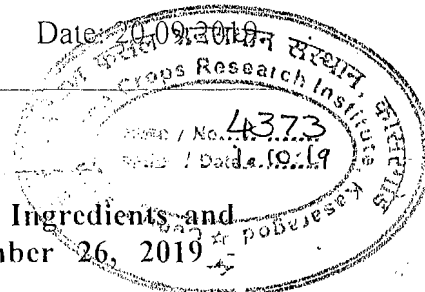


Division of Dairy Chemistry
National Dairy Research Institute
Karnal (Haryana)-132 001.



Dr. Bimlesh Mann
Principal Scientist and Head, DC

Date: 20/09/2019



Sub: Winter School on "Technological Advances in Functional Food Ingredients and Validation of Their Claims" from December 06 to December 26, 2019
Participation Reg.

Dear Sir/Madam,

Greetings from NDRI!!!

Dairy Chemistry Division of National Dairy Research Institute, Karnal is organizing a Winter School Training Programme on "Technological Advances in Functional Food Ingredients and Validation of Their Claims" from December 06 to December 26, 2019; sponsored by Agricultural Education Division (ICAR). This training programme is designed to impart the knowledge and hands-on-training to the faculty of ICAR institutes and SAUs on Functional Food Ingredients and Validation of Their Claims.

You are requested to kindly nominate one or two scientific personnel to participate in the Training Programme from your Institute who fulfil the eligibility criteria. As per the ICAR instructions, the interested candidates should register and apply online through 'Capacity Building Programme' (CBP) portal as mentioned in brochure. You are requested to kindly circulate the brochure to the interested technical personnel of your institute.

HRD

[Signature]
26/9/19

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27/9

Yours sincerely,

[Signature]
20/9/19
(Bimlesh Mann)

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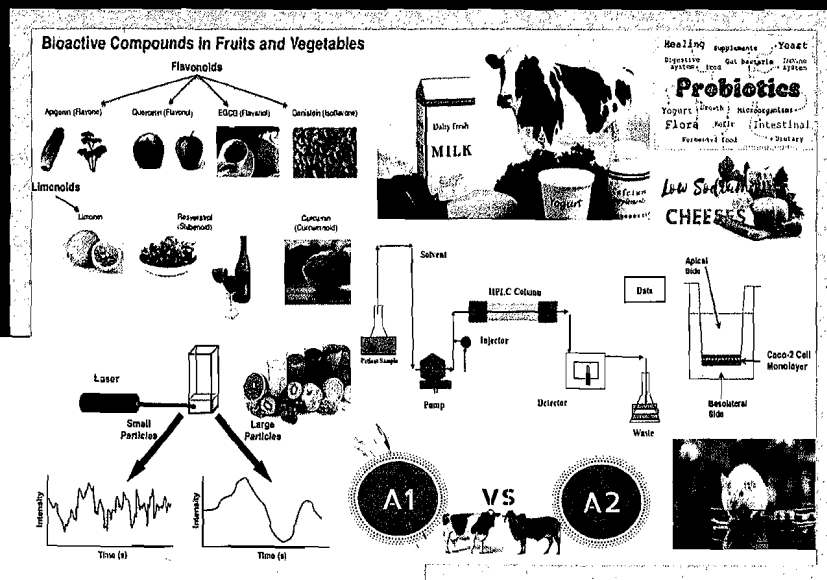
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Winter School

on

Technological Advances in Functional Food Ingredients and Validation of Their Claims

December 6-26, 2019



Sponsored by

**Agricultural Education Division
Indian Council of Agricultural Research**

Organized by

**ICAR-National Dairy Research Institute
Karnal - 132 001 (Haryana)**



ABOUT THE COURSE

Functional food science arose out of public need, and is made possible through the collaboration of different sciences. This field of research incorporates food science, nutrition, and medicine to produce food products there are combinations of food and pharmaceuticals. Functional food ingredient is any natural substance that may be a food or part of food and provides medical or health benefits, encompassing, prevention and treatment of diseases when incorporated in functional foods. Foods containing functional ingredients have received considerable interest because of their presumed safety, potential nutritional and therapeutic effects. This is the rationale of incorporating courses on functional foods as well as functional food ingredients in the curriculum of food science and technology related disciplines by various universities, particularly at postgraduate levels. This training programme is designed to impart the knowledge and hands-on-training to the young faculty of ICAR institutes and SAUs on this aspect of food science; so that participants will be able to share this knowledge to their students which in future get better placement in the relevant industries.

COURSE CONTENTS

Course curriculum for this training has been designed comprehensively to cover newer concepts in the development of processed foods containing functional ingredients and various biochemical & instrumental based analytical techniques to validate their nutrients and health claims.

SELECTED TOPICS TO BE COVERED

1. Recent developments in functional food ingredients and their applications
2. Membrane processing for preparation of protein rich dairy ingredients for various health promoting foods
3. Plant polyphenols, their health benefits and their interaction with food components
4. Stabilization of bioactive lipid in functional food and their bioavailability
5. Strategies to encapsulate plant bioactives for their delivery in functional foods and their release kinetics
6. Bioactive peptide enriched functional food ingredients and their stability during processing and gastrointestinal digestion
7. Health promoting components of the colostrum from different milch animals
8. Low sodium dairy products with special reference to different varieties of Cheeses
9. Concept of A1/A2 Milk and its detection techniques
10. Techniques for stabilization of probiotic microorganisms in dairy foods with respect to their viability during processing
11. Probiotics, their metabolites and mode of action

12. Validation of health benefits of probiotics dairy foods
13. Strategies to incorporate fat soluble vitamins in processed dairy foods and their stability
14. Methods for enrichment of calcium and iron in dairy foods and their bioavailability
15. Advances in low cholesterol dairy products and estimation of cholesterol in dairy products
16. Properties of the ingredients used in the preparation of dietetic foods and methods for their estimation
17. Methods for assessment and validation of biological activities of food ingredients, using animal model and through cell line model
18. Food Packaging Labels – Required Information with special reference to functional foods and nutraceuticals
19. Recent instrumental techniques for analysis of active components in health foods/supplements
20. Regulatory aspects of functional foods and nutraceuticals

Apart from this, there will be lectures on allied subjects such as statistical techniques, Intellectual property rights, commercialization of technologies etc. and visit to different facilities at NDRI & to a food/ Dairy Institutions nearby Karnal.

ELIGIBILITY

Applications are invited from those working in the cadre of Assistant Professor and above or equivalent in the National Agricultural Research System (NARS) including State Agricultural Universities (SAUs), Deemed to be Universities (DUs), and Central Agricultural Universities (CAUs) in the area of Dairy/ Food Science/ Livestock Products Technology etc. and engaged in teaching or research or extension. The selection of the participants will be based on likely benefits of their participation to the sponsoring Institute/ organization.

Maximum number of participants: 25

TRAVEL AND ACCOMMODATION

Selected participants will be paid for the journey, to-and-fro, restricted to AC-II-tier train fare by the shortest route or bus on submission of tickets & free boarding and lodging at NDRI will be provided as per the ICAR norms. Participants are required to produce the original of tickets in support of their claim (Air route is not permissible).

HOW TO APPLY

As per the ICAR instructions, the interested candidates should register and apply online through 'Capacity Building Programme' (CBP) portal as follows:



1. Visit the website <http://www.iasri.res.in/cbp/>
 2. Login using your user ID and Password. To create user ID use "Create New Account" link.
 3. After login, click on "Participate in Training" link and fill the Performa.
- Take a printout and send duly signed copy through proper channel to the Course Director by post along with registration fees.

The last date for receiving the nomination is October 14, 2019. The advance scanned copy of the nomination may be sent by email.

Note: The candidates will be notified about selection by third week of October 2019.

**All correspondence may be addressed to
course director and course coordinators**

Dr. Bimlesh Mann

Course Director and Head

Division of Dairy Chemistry

ICAR-National Dairy Research Institute

Karnal-132001 (Haryana)

Contact No. 9896245110 (M), 0184-2259143 (O), FAX: 0184-2250042

Email: bimleshmann@gmail.com, bmann@rediffmail.com

Course Coordinators

Dr. Rajan Sharma

Course Coordinator and Principal Scientist

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NDRI, Karnal-132001 (Haryana)

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E mail: rajansharma21@gmail.com

Dr. Richa Singh

Course Coordinator and Scientist

Dairy Chemistry Division

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E mail: richasingh.ndri@gmail.com

REGISTRATION FEE

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

IMPORTANT DATES

Last date of application | October 14, 2019 (Monday)

Communication to participants | October 21, 2019 (Monday)

Commencement of training programme | December 6, 2019 (Friday)

For Updates visit :

<http://www.iasri.res.in/cbp/>, www.ndri.res.in

Venue:

Division of Dairy Chemistry

ICAR-National Dairy Research Institute

Karnal-132001 (Haryana)

