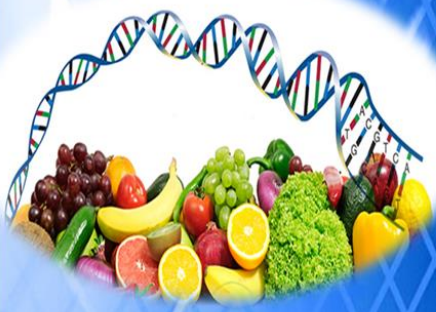
CAFT 2018-19

Biochemistry of Food Crops: From Omics Studies to Nutrient Analysis

(September 25th – October 15th , 2018)

Course Director : Dr. Shelly Praveen
Course Coordinators : Dr. Ranjeet R. Kumar
: Dr. Suneha Goswami



IMPORTANT DATES

Last date for receipt of application	: 25-08-2018
Intimation of selection	: 31-08-2018
Confirmation of participation by candidates	: 07-09-2018

Sponsored by
Indian Council of Agricultural Research

Division of Biochemistry
ICAR-Indian Agricultural Research Institute
New Delhi-12

The ICAR-Indian Agricultural Research Institute, New Delhi, invites applications from faculty members, and researchers of State Agricultural Universities/ICAR institutions under NARES system for a 21-day advanced training programme on, "**Biochemistry of Food Crops: From Omics studies to Nutrient analysis"** sponsored by the Indian Council of Agricultural Research, New Delhi, scheduled from **25th September to 15th October, 2018.**

About the Institute

The Indian Agricultural Research Institute (IARI) is the country's premier institution for agricultural research, education and extension. It has been serving the cause of science and society with distinction through basic research, generation of appropriate technologies and development of human resources. Recognizing the importance of biochemical studies in crop research, the Division of Biochemistry was created in 1966 with major emphasis on plant biochemistry, molecular biology and nutrition. Since its inception, the Division has acquired the best research, teaching and training facilities, and take legitimate pride in being recognized as the only Centre of Advanced Faculty Training in Biochemistry in NARS by ICAR ever since 1995.

Introduction about the Training Programme

A better nourished world is a healthier world. Yet, despite the significant steps the world has taken towards improving nutrition and associated health burdens over recent decades, this year's Global Nutrition Report shows that 2 billion people lack key micronutrients like iron and vitamin A, 155 million children's are stunted and 88% of countries face a serious burden of either two or three forms of malnutrition (childhood stunting, anemia in women of reproductive age and/or overweight in adult women). The current nutritional deficiency statistics claim that 842 million people around the globe are undernourished and close to 2 billion are suffering from "hidden hunger" due to inadequate intake of essential micronutrients. To leave no one behind, we must tackle this grave situation with integrated and holistic approach in order to achieve the global nutritional targets and catalyzing other developmental goals. There is a need to develop nutritionally enriched crop plants through breeding and genetic engineering approaches in order to feed the burgeoning population with high quality foods.

Characterizing the nutritional quality of the various food and horticultural crops is the first and foremost step towards this direction followed by elucidation of metabolic pathways involved in the biosynthesis and accumulation of nutritionally important phytonutrients and their further manipulation through genetic engineering. Omics approach has come in a big way to explore the various nutrient-associated genes/proteins in a high throughput manner in order to execute targeted nutrient based breeding for the development of nutrient-smart crops. To accomplish this herculean task, we required a trained human resource, which unfortunately is inadequate at present. Over the years, the faculty in the Division of Biochemistry, ICAR-IARI, New Delhi has acquired requisite expertise in this area and most of the infrastructure needed for this purpose has been put in place in the division. The current training programme has, therefore, been proposed with an objective to expose the teachers/researchers and scientists from ICAR and SAUs to these recent tools and techniques for their better understanding of food and nutritional security.

Objective

The major objective of the training programme is to provide hands-on-training to the young scientists, faculty and researchers on recent techniques and tools used for analysing the nutritional quality and enhancement of food crops. The training programme will focus on providing practical experience to the participants on the emerging biochemical/molecular biology tools, next-generation sequencing, gel-based and gel-free proteomics in addition to lectures by experts in the above mentioned areas, so as to enable them to use the techniques in their crop improvement research programmes.

Duration and Content of the Course

The training programme, comprising of lectures and practicals relevant to the title of course has been planned for 21 days. The lectures/practicals pertaining to identification of novel genes/ proteins associated with nutrition, the effects of foods and food constituents on gene expression and highlighting the importance of important biomolecules/antioxidants and anti-nutritional factors will be delivered / conducted by experts from IARI and other premier institutes. Furthermore, participants will also be exposed to advanced genomics, proteomics and genome editing tools.

Eligibility

I. Master's Degree in Plant Biochemistry, Plant Molecular Biology & Biotechnology and related disciplines.
II. The scientist must have 2 years working experience on biochemical/molecular biology techniques.
III. Working not below the rank of Assistant Professor and equivalent in the above mentioned subject under Agricultural University / ICAR Institutes.

Mode of Application and Selection

The scientists interested in participating CAFT course should apply through proper channel in the given proforma. The application from the candidates will be received online (ICAR mandate) using CBP vortal through http://iasri.res.in/cbp or under the link Capacity Building Programme at http://icar.org.in. After filling the online applications, take a printout of the application and get it approved by the competent authority of the organization and upload the scanned copy of application through CBP vortal on or before **25.08.2018**. However, an advance copy (*via* email) of the same may directly be sent to the course coordinators (ranjeetranjaniari@gmail.com; suneha08@gmail.com). Selection of participants will be from online applications. A total of 25 candidates will be selected for this course. The selection of the candidates will be done by a screening committee constituted for this purpose by the competent authority as per the ICAR guidelines. The list of selected candidates will be uploaded/displayed on the CBP vortal of ICAR on **31-08-2018**.The selected candidates will be informed individually also through E-mail. The participants are requested to keep in contact with the Director/Co-ordinators regarding their selection status.

TA/DA and Accommodation

The participants will be provided to-and-fro fare restricted, however, to AC-II-Tier train fare by the shortest route or as per actual whichever is lesser. The reimbursement will be made as per the stipulated ICAR guidelines in this regard. Participants should produce a certificate that they have not been given TA/DA by their host institute (Head of the Department/Institute) and the training period should be considered 'On Duty' by the participant's parent institution. Boarding and lodging for the participants will be provided at the IARI guest house and the charges will be met by the training programme.

Contact Details

COURSE DIRECTOR

Dr SHELLY PRAVEEN
CAFT Director & Head
Division of Biochemistry, ICAR-IARI
New Delhi-12

shellypraveen@hotmail.com
shellypraveen@gmail.com
head_biochem@iari.res.in
Mobile: 9868033132;Tel (O): 011-25842038

COURSE COORDINATORS

Dr. RANJEET R. KUMAR
Senior Scale Scientist
Division of Biochemistry, ICAR-IARI
New Delhi-12
ranjeetranjaniari@gmail.com
ranjeet_biochem@iari.res.in
Mobile : 8368958133

Dr. SUNEHA GOSWAMI
Senior Scale Scientist
Division of Biochemistry, ICAR-IARI
New Delhi-12
suneha08@gmail.com
Mobile : 9654542796

Centre for Advanced Faculty Training
Division of Biochemistry
ICAR-Indian Agricultural Research Institute
New Delhi 110 012

Application form for training programme
On
"Biochemistry of Food Crops: From Omics studies to Nutrient analysis"
(25th September – 15th October, 2018)

1. Name of the applicant (in block letters) :
2. Designation :
3. Present employer address :
4. Address to which reply should be sent :
   Phone: Office_____ Residence_____
   Mobile:_____ Fax:_____ E-mail: _____
5. Permanent Address :
6. Age and Date of Birth :
7. Sex :
8. Marital status :
9. Educational qualifications (graduation onwards)

Degree	Subject	Year	Percentage of marks/Division	Name of the University/Institution

10. Teaching/Research/Professional experience (mention post held):
a) Area of research
b) Publications during last five years (please attach list)
c) Indicate the future plans on utilizing the technical expertise gained from the training programme in your research (attach separate sheet, if necessary)
11. Indicate whether you have attended any Summer/Winter school/Short course/training programme during last five years under ICAR or any other organization

Signature of the Applicant

12. **Recommendations of the forwarding Institute**

Signature Designation:
Address: Date:

It is certified that the information was furnished by the office record and was found correct.