



INFORMATION BROCHURE



**ICAR Sponsored**  
**Ten Days Short Training Course**



**Opportunities of Naturally  
Occurring Nutraceuticals as Potent  
Alternate Medicines of Future**

**5<sup>th</sup> March 2022 - 14<sup>th</sup> March, 2022 (Hybrid Mode)**

Course Director

Dr. Imtiyaz Murtaza (Prof. & Head)

**Division of Basic Sciences and Humanities,  
Faculty of Horticulture, SKUAST-K**

## CHIEF PATRON

### PROF. NAZIR AHMAD GANAI

Hon'ble Vice Chancellor SKUAST-Kashmir

## PATRON

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## CO-PATRON

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## COURSE COORDINATORS

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### MRS. FAUZIA SHAFI

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## COURSE CO-COORDINATORS

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### DR SAIMA M. WANI

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## Important Dates

Last date for receiving duly filled applications	26-02-2022
Intimation to selected candidates	27-02-2022
Last date of confirmation by selected candidates	28-02-2022
Training Period	05-03-2022 to 14-03-22

## Eligibility

Participants from SAU's/ICAR institute/ KVKs etc. in the cadre of Assistant Professors or equivalent or above from the disciplines of Biochemistry/ Biotechnology/ Plant Physiology/Microbiology /Food Technology/Horticulture/ or any other allied discipline are eligible. The number of participants for the programme is limited to twenty-five only out of which 10 % internal participants are permitted.

## Registration Fee

The Participants are required to pay a sum of Rs. 50 (Fifty only) towards Registration fee (nonrefundable) as a demand draft or Indian Postal order in the name of Comptroller, SKUAST-K, Shalimar Campus, Srinagar, Kashmir, J&K,190025.

## About The University

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Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir is a prestigious Agricultural University located in Kashmir, Union Territory of J&K, India. With its main campus and Faculty of Horticulture in Shalimar, Srinagar, the University has multiple campuses, colleges, and research and extension centers across the Kashmir Valley and Ladakh Union Territory.

It is a matter of great satisfaction that SKUAST-K has recently got 6th Rank among all the Agricultural universities of the country and has come out with flying colors in the recently declared Atal Ranking of Institutions on Innovation Achievements (ARIIA). The research infrastructure, educational base and extension education services provided by SKUAST-K are playing a pivotal role in supporting the UT of J&K in its efforts for overall development of economy in agriculture and allied sectors.

## About The Division

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The relevance and importance of Basic Sciences and Humanities in socio-economic aspects of farming community are recognized as a vital component and in this direction the Division of Basic Sciences & Humanities was established in February 2017 under the Faculty of Horticulture, SKUAST-K. The Division is a multidisciplinary and over the period of time has been progressing with fast pace in the field of Biochemistry, Plant Physiology and Microbiology, which resulted in development of some important technologies of economic importance as recognized by Indian Patent Office by granting patent within this short span of time. Further, the research on nutraceutical attributes of crops, biofortification, nutrigenomics, functional foods, nutritional deficiencies, bioprospecting of underutilized crops, development of organic fertilizers, hydroponics, seed invigoration, physiology of stress and physiological disorder management and studies on plant microbe interaction has paved a plinth in consequent advanced research in these areas. The Division has three mandates viz., Teaching, Research and Extension in the field of Biochemistry, Plant Physiology and Microbiology.

## Course Background

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In the present era, the universal trend has shifted from synthetic to food based medicine due to their lesser side effects. Although there is regular advancement in modern medicines, but numerous diseases especially oxidative stress related disorders are also increasing day by day across the world at very fast pace. Epidemiological studies and case controlled studies suggest that consumption of fruits and vegetables can prevent many oxidative stress related degenerative diseases including hypertension, cardiovascular disease, cancer, aging and other health conditions due to the presence of bioactive constituents with nutra-pharmaceutical properties. It has been found that most widely grown temperate horticultural crops including fruits like apple, pear, berries, cherries, peaches, plums nuts and greenleafy vegetables, tomato, turnip, cucumber etc are hub of pharmaceutically significant nutraceuticals particularly carotenoids, alkaloids, glycosides, phenolics, flavonoids, volatile oils, steroids etc. Due to the presence of these potential nutraceuticals they can act as powerful instrument against acute and chronic diseases, thereby promoting optimal health, longevity, and quality of life. Although, these nutraceutical are nature's wonderful medicines however, even today majority of them lack necessary data to convince the regulators and consumers alike of their efficacy, dose and toxicity. Due to this gap the pharmaceuticals thus represent the single entity with well established mode of action and targeted to treat a specific disease. Though, exploitation of such potent nutraceuticals is in its infancy stage, but in near future production of these nutraceuticals on large scale is a reality. In order to capture the pharmaceutical share, such potential nutraceutical should be evaluated thoroughly through sufficient pre clinical and clinical tests to become a well established nutra-pharmaceutical that can in turn help to address health insecurity related problems due to potential nutritional, safety and therapeutic effects, as compared to synthetic therapeutic agents. From last few years aggressive research work is being carried out across the world on providing scientific justifications for using such bioactive compounds as chemopreventive and chemotherapeutic agents. In this direction we have also reported chemopreventive, anti-cancerous and anti-diabetic properties of several fruit and vegetable based nutraceuticals including diosgenin, quercetin, fisetin, lutein, luteolin, etc. with special reference to colon cancer, prostate cancer pancreatic cancer under preclinical conditions. These bioactive compounds need further clinical investigations before recommending them as alternate medicines against various oxidative stress related degenerative diseases in humans.

## Objectives and Outline of the Training

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Nutraceuticals are products, which in addition to nutrition, are also used as medicine. A nutraceutical product may be defined as a substance, which has physiological benefit or provides protection against chronic diseases. Further, they may be used to improve health, delay the aging process, prevent chronic diseases, increase life expectancy, or support the structure or function of the body. Nowadays, nutraceuticals are receiving considerable interest due to safety and potential chemopreventive /chemotherapeutic effects. Thus, the overall program will aim at acquainting the participants with the nutraceutical potential of naturally occurring foods as potent alternate medicines.

### Travel, Boarding and Lodging

The participants will be paid for the journey, to and fro, restricted to AC-II/III-tier train fare or bus. Actual TA will be paid on submission of tickets by the participants. TA will be paid from the place of duty to the venue location and back by the shortest route. The participants will have to make their own arrangements to reach the university guest house. Srinagar is well connected by air and road. City transport service is available to reach the university. Participants are advised to make their return journey reservations before leaving for Srinagar.

Due to unavailability of train link from Jammu to Srinagar participants will be paid shared taxi fare which are frequently available at taxi stands of Jammu and Srinagar. Participants should ask for ticket/receipt from drivers/ travel agency of vehicle which are necessary for reimbursement of TA. Participants will be provided free boarding and lodging by SKUAST-Kashmir as per ICAR norms for conducting Short Course. Participants are requested to inform the Course Director well in advance about their arrival and departure including date and time for the convenience of their stay during the course.

Candidates are informed to come with post-paid SIM card only. Local participants are not eligible for boarding and lodging, however, local hospitality i.e. working lunch, tea, etc. will be provided.

## How To Apply

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- As per the ICAR instructions, the interested candidates should register and apply online through 'Capacity Building Programme' (CBP) portal of ICAR as follows:
- Visit the website <http://www.iasri.res.in/cbp> or click on Capacity Building Programme link under <http://www.icar.org.in>
- Login using your user ID and Password. To create user ID use "Create New Account" link.
- After login, click on "Participate in Training" link and fill the Proforma.
- Take a printout of the application and get it approved by the competent authority of the institute/SAU. Upload the scanned copy of application through the above portal or send duly signed copy through proper channel to the Course Director by post along with registration fee. The advance scanned copy of the nomination may be sent by email

## Weather of Srinagar

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During the February and starting March temperature is little bit colder. The temperature range is 0°C to 16°C. Participants are advised to bring warm clothing along with them.

## All correspondence may be addressed to :

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