Application Form

Format for applying in Short
Training course on advance techniques and tools for functional genomics in crops
(To be sent directly to the Course Director/course coordinator of the Short Training Course
1. Full name (in block letters):
2. Designation:
3. Present employer and address:
4. Residential Address:
5. E-mail address:

- 6. Telephone No. (Self and one of family members):
- 7. Date of Birth & Age (as on July 1, 2017):
- 8. Gender (Male/Female):

. Academic record:	Degree Subjects	Main/Subsidiary	Year of Passing	University/Institution
	Ph.D.			
	M.Sc.			
	B.Sc.			
	Others			

- 10. Teaching/Research/Professional experience (mention post held) during last 5 years and number of publications.
- Research/Teaching/ Extension experience:

Designation with official seal.....

- No. of Publications:
- 11. Marital status (Married/Unmarried):
- 12. Discipline and field of specialization:
- 13. Mention if you have participated in any research seminar, Summer/Winter School/Short course etc. during the last 5 years under ICAR/other organizations:
- 14. Demand Draft of Rs. 50/- (in favour of "Comptroller, SKUAST-Jammu" payable at Chatha, Jammu) towards Registration (non- Refundable).

Bank draft/ postal order No	
Date	
Place	Signature of the
Applicant	
15. Recommendation of Forwarding Institute it is certified that	the information furnished above is true
and correct as per office record.	
Signature	Date

Note: This Proforma can be typed/photocopied (enlarged) and used.



ICAR Sponsored Short Training course



Advance techniques and tools for functional genomics in crops

[4th October to 13th October (10 days)]



Last date for Application 20 August, 2017

Course Director

Dr. Romesh K. Salgotra (Professor)

E-mail: rks 2959@rediffmail.com

Mobile: 09419153813

Course Coordinator Dr. Gyanendra Kumar Rai

(Assistant Professor) E-mail: gkrai75@gmail.com Mobile: 9419145785

Course Cocoordinator Dr. Anil Kumar Singh (Associate Professor)

School of Biotechnology, **Sher-e-Kashmir University of Agricultural Sciences** and Technology of Jammu Chatha, Jammu 180009

ABOUT SKUAST- JAMMU

Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST- Jammu) is a leading Farm University in North India with aspirations, commitment and missionary zeal to cater to the needs of society in general; and students and farming community in particular through region specific advances in education, research and extension. The University has a state of art infrastructure in the form of Faculty buildings, well equipped laboratories and research farms at Faculties of Agriculture and Basic Sciences at Chatha Campus; and Faculty of Veterinary Sciences and Animal Husbandry at R.S. Pura Campus, with headquarters located at Chatha, Jammu. Since its inception in 1999, the University has grown with rapid pace in terms of infrastructure and human resource. The University runs degree programmes at UG and PG (M.Sc. and Ph.D.) levels in Agriculture, Veterinary, Biotechnology, Agribusiness and allied fields. The University pursues high standard research through research projects funded by various central and state agencies.

SCHOOL OF BIOTECHNOLOGY (SBT)

The School of Biotechnology, an integral part of SKUAST- Jammu came into existence in 2010 with the sole aim to generate quality manpower with extensive knowledge, advanced technical know- how and outstanding academic potential in the subject. The School is offering B.Sc. (Hons.), M.Sc. and Ph.D. degree programmes to aspirants. The courses have been designed to keep the students abreast with latest technological know- how. The School has highly dedicated and competent core and adjunct faculty with diverse experience. The faculty members regularly update their knowledge and skill through advanced trainings in reputed national and international institutes and through interactions with eminent guest faculty.

INTRODUCTION

Plants are exposed to various biotic and abiotic stresses which limit growth and yield. Global climate change has drastic effect on the quantitative and qualitative parameters associated with yield in different agriculturally important crops. In order to feed the burgeoning population, we have to develop crops/ technologies which can mitigate the problem of climate change without compromising with the quality and yield of grains. In some of the crops like cereals, pulses, legumes etc. not much work has been done in order to decipher the mechanism associated with defense/ tolerance against different abiotic stresses. Similarly, on nutritional aspect, these crops are deficient in one or other essential amino acid which must be supplemented in the diet in order to have a healthy life. Functional genomics has come in a big way to identify the candidate genes associated with these parameters. Proteomics tool like gel based and gel free characterization of proteins have paved the way for the characterization of various metabolic pathways and potential proteins which can be used for the development of 'smart crops'. This training aims to introduce the participants with various techniques and tools used in molecular biology and biochemistry for dissecting various pathways associated with defense/ nutrition of plants. The participants will be provided hands on training in basic tools used in molecular biology and biochemistry to make them confident and competent in their future endeavors.

OBJECTIVES

The objective of this training is to give an opportunity to the teachers and young scientists working in the ICAR institutes and SAU's to learn recent techniques in molecular biology and biochemistry related with researchable topics in food crops.

COURSE OUTLINE

- DNA and protein extraction, purification and quantification.
- Differential protein/ isoenzyme expression analysis in crop under abiotic stress
- PCR based technique for molecular characterization using various molecular markers
- Gene cloning and characterization
- RNA isolation, purification, quantification and cDNA synthesis
- Expression analysis of target gene by semiquantitative RTPCR and Real Time PCR
- Metabolome profilling by GLC and HPLC
- Basic bioinformatics tools; sequence comparison, BLAST analysis and multiple sequence alignment; protein structure prediction and primer designing.

DURATION OF THE COURSE: 4th October, 2017 to 13th October, 2017 ABOUT JAMMU CITY

Jammu- the city of temple, is famous of the holy shrine of Sri Mata Vaishno Devi ji located in the Trikuta hills near Katra. The city is well connected with the rest of the country through rail, road and air. Apart from the holy shrine, there are other places of tourist interest in and around Jammu, viz. Patnitop, Mansar Lake, Raghunath Temple, Bahu Fort, Amar Mahal, Dogra Art Gallery etc. The climate of Jammu in October is usually pleasant.

ACCOMMODATION AND TRAVELLING ALLOWANCE

Participants will be provided free boarding and lodging as per ICAR norms for conducting short course. The trainees will be accommodated in the guest house of SKUAST-Jammu which is located at Railway Road, Rail head Jammu. Travel allowance to participants will be paid as per their entitlement for the class of travel, restricted to the maximum of ACII tier rail fare by the shortest route. Participants are requested not to bring family member as the accommodation is strictly limited for trainees only. 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. Local participants are not eligible for boarding and lodging, however, local hospitality *i.e.* working lunch, tea, *etc.* will be provided.

ELIGIBILITY

Participants from SAUs/ICAR Institutes/KVKs etc. in the cadre of Assistant Professors or equivalent and above from, Biochemistry/ Biotechnology/Vegetable Science/Plant Pathology/ Pant Breeding and Genetics/Crop Physiology/Agril. Horticulture and other concerned scientists are eligible. The number of participants for the programme will be limited to 25. Only 10 % internal participants are permitted.

APPLICATION AND SELECTION

- As per the ICAR instructions, the interested candidates should register and apply online through "Capacity Building Programme" (CBP) portal 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 Performa.
- 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
 last date for receiving the nomination is 25th Aug., 2017. The advance scanned copy of the
 nomination may be sent by email.

IMPORTANT DATES & NOTES

- Last date for receipt of application- 20/08/2017.
- Intimation to selected candidates-25/08/2017
- Confirmation by selected candidates-30/09/2017
- Candidates are informed to come with post paid mobile number only.

REGISTRATION FEE

The participants are required to pay the sum of Rs.50/- (Rupees fifty only) towards registration fee (Nonrefundable) in favour of "Comptroller, SKUAST- Jammu," in the form of bank draft or postal order.

CONTACT PERSONS & ADDRESS FOR CORRESPONDENCE

Course Director

Dr. Romesh Kumar Salgotra (Professor) School of Biotechnology, SKUAST-Jammu E-mail: rks 2959@rediffmail.com

Mobile: 09419153813

Course Coordinator

Dr. Gyanendra Kumar Rai (Assistant Professor)

E-mail: gkrai75@gmail.com Mobile: 9419145785