

HOW TO APPLY

The complete application form in the prescribed format forwarded by Head of the institute or Department authority should reach the **Course Director, ICAR-IIAB on or before 30th Oct, 2023**. Selected candidates will be intimated by email on **3rd Nov, 2023**.

WHO CAN PARTICIPATE

B.Tech., M.Sc. and Ph.D. students of ICAR-Deemed to be universities/SAUs/CAUs/CUs/ other UGC recognized Universities and Research Institutes are eligible to apply. A maximum of 20 participants will be selected for participation in the training programme.

REGISTRATION FEES

No registration fee is to be paid; the programme is fully sponsored by ICAR-IIAB.

IMPORTANT DATES

Last Date for applications: **30th Oct, 2023**
Intimation of Selection: **3rd Nov, 2023**
Training Period: **6th - 10th Nov, 2023**

TRAVEL

No TA/DA will be provided by the organizing Institute.

FOOD and ACCOMMODATION

Food will be arranged at venue. Tea and snacks will be served during the programme and expenditure will be met by the organizing institute only. There is no accommodation provided by the institute.

Course Director

Dr. Sujay Rakshit
Director, ICAR-IIAB, Ranchi
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Course Co-Director

Dr. V.P. Bhadana
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Dr. Soumen Naskar

Pr. Scientist & Head (Acting), School of Genetic Engineering, ICAR-IIAB, Ranchi
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Course Coordinators

Dr. Shambhu Krishan Lal (Scientist), Dr. Avinash Pandey (Sr. Scientist), Dr. Sudhir Kumar (Sr. Scientist), Dr. K.U. Tribhuvan (Scientist), Dr. Sakshi Kaith (Scientist)

Venue

Lectures: Committee Room, CRTc, ICAR-IIAB
Practicals: CRTc LAB 2 & LRTC Lab, ICAR-IIAB



ICAR - Indian Institute of Agricultural Biotechnology

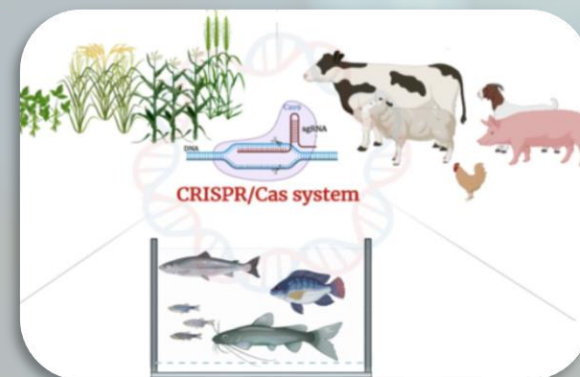
Organizing

Hands on Training

on

Genome Editing: A Paradigm Shift in Agricultural Innovation

Nov 6, 2023 – Nov 10, 2023



BACKGROUND OF THE TRAINING

Genome editing is powerful technology that has potential to modify any gene sequences and it enables genetic engineering to delete, substitute, and insert gene sequences. Due to high precision and wider applicability, it revolutioned new innovation across all the domain of life sciences including plant, animal and fisheries. In the field of crop sciences, it is utilized to create the mutant alleles and further these novel alleles incorporated in elite crop cultivars to make designer crops for different agronomical, quality and stress tolerant traits. Keeping its paramount importance in agriculture and to harness its potential, this genome editing training course is designed for students that will covers Principles of genome editing, overview of CRIPR/Cas9 based genome editing, and application of CRISPR/Cas9 based genome editing in plants and animals. Trainees will be exposed to hands on experience on guide RNA designing, vector selection, Preparation of guide RNA expression cassettes, identification of mutants, molecular characterization of mutant lines, etc. Case studies and future perspectives of this technology will be discussed among eminent researchers. The trainees will be acquainted with ethical concerns associated with this technology and also the legislatives guidelines adopted across the globe.

OBJECTIVES OF THE TRAINING

- To provide hands-on training on guide RNA designing and its cloning in CRISPR/Cas9 vector.
- To train the students in computational tools utilized in genome editing.
- To perform molecular characterization of genome edited plants.
- To develop the skilled manpower and harness the potential of genome editing in agriculture.

About the Organizing Institute

ICAR-Indian Institute of Agricultural Biotechnology Serves as a National Centre of Excellence in agricultural biotechnology for undertaking cutting edge research. The institute is working on genome editing in rice, legumes and oilseed crops for economically important traits. The institute hosts state of the art laboratory facilities for agricultural biotechnology. It offers B.Tech Biotechnology and M.Sc. Degree programme as a part of ICAR-IARI Mega University, New Delhi.

For Further information, please contact
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Dr. Sudhir Kumar
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COURSE OUTLINE

1. Lectures on Genome Editing and its application in agricultural genetic engineering

The lecture will be delivered in the forenoon session of the training programme and it covers basics and application of genome editing in agricultural biotechnology.

2. Hands on training in designing CRISPR/Cas9 based guide RNA expression cassettes

Hands-on training will be conducted on different aspects of genome editing like guide RNA designing, construct designing, plant transformation and molecular characterization of genome edited crops.

3. Group activities for designing of research proposals

Trainees will be exposed to group activities on research proposal designing based on genome editing technology.

4. Interactive discussions and evaluation

Trainees will be facilitated to make a brief presentation about the research proposal on genome editing.

Prevailing weather condition during the training period

The weather condition in Ranchi shall be pleasant during first week of November with temperature ranging from 25 °C to 30 °C.

ICAR-INDIAN INSTITUTE OF AGRICULTURAL BIOTECHNOLOGY, RANCHI

Application form for “Hands on training on Genome Editing: a paradigm shift in agricultural innovation from 6th Nov, 2023 to 10th Nov, 2023

1. Name		:		
2. Gender (Male or Female or others)		:		
3. Division and Degree programme		:		
4. Age and date of birth		:		
5. Communication address		:		
6. Phone & Email		:		
7. Permanent address (For use in case of emergency)		:		
8. Educational qualifications (From Intermediate onwards)		:		
Degree	Subject	Year	Percentage of marks/Division	Name of the University
i.				
ii.				
iii.				
9. Research activities				
a. Area of PhD or MSc research and title of approved thesis title		:		
b. Indicate the future plans on utilizing the technical expertise gained from the mentioned training programme in your research (Attach Separate Sheet if necessary)		:		
c. Indicate whether you have attended any similar training programme earlier		:		
10. Write in brief (not exceeding 100 words) about the expected benefits of this training.		:		

Signature of the Applicant

Forwarding note by Chairman/Guide

Endorsement & Seal of the Dean/Registrar