

**A Training programme on  
“Techniques and Tools of Plant Tissue Culture and Molecular Biology”**



***Course Coordinators:* Dr. A K. Bhatia**

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***Course Co-Coordinator* Dr. Minakshi Pal**

***Organized by*  
Centre for Plant Biotechnology,  
CCSHAU, New Campus, Hisar**

## **Objectives:**

The Centre has well equipped plant tissue culture laboratories and is engaged in the multiplication of elite germplasm of several crops through tissue culture. In view of the emphasis laid by the State Govt. to diversify farming and shift towards unconventional form of cultivation, this Centre has immense role in providing good quality planting material of crop plants, horticultural crops, forest trees and medicinal and aromatic plants to the farmers and other user departments. The Centre has also earned a name by multiplying elite germplasm of Aloevera, Sarpagandha, Stevia, Banana, Gladiolous, Bamboo, Eucalyptus, Chlorophytum, Dahlia, Potato, Strawberry, Mehandi, Sugarcane and other species through tissue culture.

The Department of Biotechnology, Government of India declared Centre for Research and Application in Plant Tissue Culture (CRAPTC) as the regional hardening facility during the 10th Five Year Plan under Consortium on Micropropagation Research and Technology Development. The Centre was renamed as CPB in October, 2007 to widen its research mandate. Within a few years of its existence, the Centre has earned a national renown for its contributions to Plant Tissue Culture.

It is necessary to inculcate these skills and expertise through systematic training of human resource. Realizing its responsibilities, CPB shall organize a training course aimed at early-career scientist/researchers/Students from universities and colleges of India working in fields of biotechnology. The Centre for Plant Biotechnology, CCSHAU, New Campus, Hisar is a leading institute of learning in the field and this training programme is designed to provide the participants with basic understanding and skills in use of techniques in Plant tissue Culture. The training programme will include invited lectures by experts as well as lectures by CPB faculty and practical classes.

## **Course contents:** For M.Sc/M.Tech students

The training beginning with basics of Plant Tissue Culture and molecular biology tools and techniques would provide exposition to the following main areas:

### **Plant Tissue Culture**

- Application & Importance of Plant Tissue Culture
- Cleaning and Washing techniques
- Laboratory Organization
- Media Preparation & their types
- Sterilization Techniques
- Aseptic inoculation techniques
- Micropropagation ,Genetic Fidelity testing and Genetic Diversity Analysis
- Hardening Techniques

### **Molecular Biology**

- Genomic DNA isolation from plants
- Quantification/Purification of DNA
- Gel electrophoresis of isolated DNA
- DNA Amplification of DNA using polymerase chain reaction

- Use of RAPD markers
- Use of ISSR primers.
- Analysis of amplified products

Project work /Dissertation may be carried out as per mandate of CPB

**FEE:**

- For M.Sc/M.Tech students: Rs. 4000/month for training on Plant Tissue Culture
- For M.Sc/M.Tech students: Rs. 5000/month for training on Molecular Biology

**Course contents:** For B.Sc/B.Tech

The training beginning with basics of Plant Tissue Culture and molecular biology tools and techniques would provide exposition to the following main areas:

**Plant Tissue Culture**

- Application & Importance of Plant Tissue Culture
- Cleaning and Washing techniques
- Laboratory Organization
- Media Preparation & their types
- Sterilization Techniques
- Aseptic inoculation techniques
- Micropropagation ,Genetic Fidelity testing and Genetic Diversity Analysis
- Subculturing for Multiplication
- Subculturing for Rooting
- Hardening Techniques

**Molecular Biology**

- Genomic DNA isolation from plants
- Quantification/Purification of DNA
- Gel electrophoresis of isolated
- DNA Amplification of DNA using polymerase chain reaction

**FEE:**

- For B.Sc/B.Tech) students: Rs. 3000/month for training on Plant Tissue Culture
- For B.Sc/B.Tech) students: Rs. 4000/month for training on Molecular Biology

**PROCEDURE FOR APPLICATION/SELECTION OF PARTICIPANTS:**

The training will be open for whole year. The duration of training will be vary from one month to six months. The training will be scheduled on 1<sup>st</sup> and 15<sup>th</sup> of every month.

The application form is also available on the website: [www.cpbhisar.org](http://www.cpbhisar.org)

**All correspondence may please be addressed to:**

Director (Technical)

Centre for Plant Biotechnology, CCS HAU,

New Campus, Hisar

Phone:01662-227088

Fax: 01662-271369

**Email:** [directorecpb@cpbhisr.org](mailto:directorecpb@cpbhisr.org)

[cpbtraininghisar@gmail.com](mailto:cpbtraininghisar@gmail.com)

*Photocopy of the application form is acceptable.*

**REGISTRATION FORM**  
**“Techniques and Tools of Plant Tissue Culture/ Molecular Biology”**

**Full name (in block letters)**

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**Course/Degree**.....

**Year/Semester**.....

**University/College/Institution Name**.....

**Training duration**.....**to**.....

**Present address**

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**Address for communication**

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**Mobile no.**.....

**Email**.....

**Recommendation from the Head of the Department:**

**Signature of the applicant**

**Date:**

**Place:**

**Signature & Seal of the  
Principal/Head of Department**

**Date:**

**Place:**

# **CENTRE FOR PLANT BIOTECHNOLOGY**

(Haryana State Council for Science & Technology)

Department of Science & Technology, Haryana

New Campus, CCSHAU, Hisar

(Telephone No: 01662-227088, Tel. cum Fax: 01662-271369)

## **Projects / Dissertation in Plant Tissue Culture/Molecular Biology”**

CPB provides facility of **Projects/ Dissertation** for Graduate and post graduate students of various institutes/colleges/universities on Plant Tissue Culture/Molecular Biology”. The interested candidates may submit their application duly signed by the Head of the Departments. The title and research work will be according to the mandate of CPB.

Director (T)

**REGISTRATION FORM**

**Projects / Dissertation in Plant Tissue Culture/Molecular Biology”**

**Full name (in block letters)**

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**Course/Degree.....**

**Year/Semester.....**

**University/College/Institution Name.....**

**Project/Dissertation duration.....to.....**

**Present address**

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**Address for communication**

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**Mobile no.....**

**Email.....**

**Recommendation from the Head of the Department:**

**Signature of the applicant**

**Date:**

**Place:**

**Signature & Seal of the  
Principal/Head of Department**

**Date:**

**Place:**

