

DEPARTMENT OF BIOTECHNOLOGY AND MOLECULAR BIOLOGY
College of Basic Sciences & Humanities
CCS HARYANA AGRICULTURAL UNIVERSITY
HISAR-125 004, INDIA

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Dr. Kamla Chaudhary
Professor
Course Director

WS-BMB/06/2092-2126
04-09-06

Subject: **Winter School on ‘ Strategies for Gene Cloning & Expression for Value addition in Crop plants (Nov. 15 – Dec. 5, 2006)**

Dear Madam/ Sir,

It is my pleasure to inform you that Department of Biotechnology & Molecular Biology is organizing a three weeks training course on ‘ **Strategies for Gene cloning and Expression For value addition in Crop plants**’. This training programme is sponsored by ICAR, New Delhi in collaboration with Academy of Agricultural Research and Education Management at CCS Haryana Agricultural University, Hisar from November 15 to December 5, 2006. The course is open for the scientists/Teachers working in various SAUs and ICAR institutes. The main objective of this course is to provide training in various gene cloning strategies which are being used for transfer of foreign genes for value addition in crop plants. In addition, various other aspects of Agricultural Biotechnology such as molecular markers, gene tagging and genetic transformation will also be included.

The nominations for attending the above mentioned winter school are invited from State Agricultural Universities and ICAR institutes as per ICAR guidelines You are requested to kindly nominate one or two scientists from your University/ Institute. Preference will be given to Scientists/ Teachers who are engaged in teaching and research in related areas of Biotechnology and Molecular Biology.

The number of participants will be limited to 25 only. The last date for nominations is **30th September 2006**. The selected candidates will be informed by 10th October, 2006.

The course circular and application form is enclosed for your kind information and action at your end please.

With kind regards,

Yours sincerely

(Kamla Chaudhary)
Course Director

To
Vice Chancellor

Winter School

on

Strategies for Gene Cloning & Expression
for Value addition in Crop plants

(November 15 – December 5, 2006)



organized by

**DEPARTMENT OF BIOTECHNOLOGY & MOLECULAR BIOLOGY
CCS HARYANA AGRICULTURAL UNIVERSITY
HISAR 125 004 (HARYANA)**

Winter School
On
Strategies for Gene Cloning & Expression
For Value addition in Crop plants
(November 15-December- 5, 2006)

India has achieved self-sufficiency in food grains through green revolution by means of integrated crop management programs using available elite varieties in the country. There is a need to improve the important traits of crop plants with respect to not only disease and pest resistance but for better nutritional quality as well. The second green revolution is possible through the use of recombinant DNA techniques for value addition in different crop plants. Considerable success has been achieved through genetic engineering of elite varieties in developing resistance against insect pests, herbicides, fungal and viral pathogens. However, in India, despite having so much of genetic diversity in flora and fauna, only a few laboratories are working on the isolation of novel genes from indigenous bio-resources. Most of the genes, which are being used for development of transgenics, have been obtained from other countries, which do not express well in different genetic background of indigenous cultivars. Therefore, there is a need to isolate genes/ promoter sequences from indigenous available germplasm and use for the development of transgenic crops for agronomically important traits. Keeping this in view, BMB Dept. is organizing a three weeks training program on '**Strategies for Gene Cloning & Expression For Value addition in Crop plants**' at CCS Haryana Agricultural University, Hisar from November 15- December 5, 2006. Twenty-five young Indian Scientists engaged in Teaching and Research in areas related to Biotechnology and Molecular Biology in various SAUs and ICAR Institutions all over the country will be considered for training. The training shall include lectures/ practicals by the eminent scientists working in this University and other institutions on the following aspects:

Lectures:

Applications of recombinant DNA technology in agriculture – present status; Recombinant DNA techniques for gene transfer in plants; Plant and Microbial genes for value addition in crop plants; Gene cloning strategies for value addition in crop plants; Genomic libraries, cDNA libraries, promoter libraries; Methods of Plant genetic transformation; Genetic engineering for improving nutritional quality of crop plants; Development of transgenic plants for improved tolerance against salinity and drought; resistance against insect/pests and pathogens; Production of novel metabolites by plants; Metagenomics; IPR and related issues Breeder's rights and patenting in WTO regimes; Bio safety Issues related to genetically engineered organisms; Education policies for molecular biology and biotechnology in India.

Practicals:

Plasmid DNA isolation, Vector construction; Methods of Gene isolation and Gene cloning; Genetic transformation in Bacteria and plants with recombinant plasmids; Preparation of genomic library of *Bacillus thuringiensis*, yeast, chickpea and *Brassica juncea*; Preparation of cDNA library of *Brassica juncea* and chick pea; Genetic transformation of crop plants using *Agrobacterium*.; Analysis of putative transgenics using PCR and western blotting; Use of Molecular markers for tagging and detection of genes for various agronomic traits.

Venue

Department of Biotechnology & Molecular Biology, CCS Haryana Agricultural University, Hisar

The Department of Biotechnology & Molecular Biology was established in 1997. The major areas of research in the BMB department are micropropagation of important crop plants, ornamentals, forest and horticultural trees; development of transgenics for resistance to biotic and abiotic stresses in rice, chickpea, cotton & *Brassica*; marker-assisted selection for biotic stresses in sorghum & other crops; DNA fingerprinting in chickpea, pigeon pea, sunflower, pearl millet, ornamentals, medicinal & aromatic plants and metabolic engineering for starch biosynthesis. molecular characterization of *B. thuringiensis* strains effective against insect pests; Cloning of amylases, xylanase and cellulases in *E.coli* and *Saccharomyces cerevisiae*; PHB production by rhizobia.

Weather in Hisar in November-December is cold and woollens will be required. Hisar is nearly 165 km North-West of Delhi. It is convenient to reach Hisar by Bus from ISBT Kashmiri Gate, N-Delhi. Train link is also available.

Eligibility:

This course is open to the scientists/Teachers working in various SAUs and ICAR institutes, working not below the rank of Assistant Professor/ or equivalent. Preference will be given to Scientists/ Teachers who are engaged in teaching and research in Biotechnology/ related areas. Applicant should not be more than 45 years of age at the time of application.

Applicant should have at least two years experience in the related field.

Registration:

The interested persons should send their applications (through proper channel) along with Postal Order or **Demand Draft of Rs. 50/- payable** at CCS HAU, Hisar, in favour of **The Course Director, Winter School on 'Strategies for Gene Cloning & Expression For Value addition in Crop plants'**.

Travel:

Actual fare to-and-fro for journey by Train 1st Class or AC second class or as per entitlement or Bus will be paid as per provision of ICAR. TA will be paid by the shortest route, on production of tickets/certificate by the participant. DA will be paid from the date of departure to date of arrival in lieu of incidental charges.

Accommodation:

The participant will be provided with lodging and boarding facilities on the university campus during the course as per provision of ICAR.

Selection:

Last date for receipt of applications (with e-mail address)

30th September 2006.

The selected candidates will be informed on or before

10th October, 2006.

The selected candidates should confirm their participation by

25th October, 2006,

POSITIVELY else their candidature will be presumed cancelled.

Dr. Kamla Chaudhary

Course Director

Department of Biotechnology &

Molecular Biology

CCS Haryana Agricultural University

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ACADEMY OF AGRICULTURAL RESEARCH & EDUCATION MANAGEMENT
DIRECTORATE OF HUMAN RESOURCE MANAGEMENT,
CCS HAU HISAR

FORMAT FOR NOMINATION
(Make copies if required)

1. Name:
2. a) Designation:
b) Department/Office :
3. Name of the Training
4. Date of joining:
5. Date of birth:
6. Address of communication:

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Telephone. Office Residence...
Fax.. E mail.....

7. Qualifications:

Degree	Year	University	Subject
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8. Experience:

Position Held	Date From	Date To	Institution	Nature of duties
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9. Details of courses already attended.

10. Accommodation: Required/Not required

Signature of the Participant

CERTIFICATE OF THE SPONSORING AUTHORITY

Ms./Mr./Dr..... is hereby nominated for participation in-----
-----being organized by the Academy of Agricultural
Research and Education Management, Directorate of Human Resource Management, CCSHAU,
Hisar from **November, 15 to December 5, 2006**. He/ She will be relieved by the office during the
training.

The registration fee will be born by the department.

Signature of the Competent Authority
(Office seal)