

UGC-SAP (DRS-I) Sponsored National Seminar on Plant Biotechnology: Challenges and Opportunities in 21st Century

March 3rd & 4th, 2014

IMPORTANT DATES

Abstract Submission 10th February, 2014

Last Date for Registration..... 10th February, 2014

Seminar Dates 3rd & 4th March, 2014

The detailed information including registration form can be downloaded from University website: www.jamiahamdard.edu

ADDRESS FOR ALL COMMUNICATIONS

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Convener

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Co-Convener

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ORGANIZED BY

Department of Biotechnology
Faculty of Science,
Jamia Hamdard, Hamdard Nagar,
New Delhi - 110062

VENUE:

Convention Center, Jamia Hamdard
(Hamdard University), New Delhi-62
Web: www.jamiahamdard.ac.in
www.jamiahamdard.edu



SUBMISSION OF ABSTRACTS

Abstracts not exceeding 250 words are invited only in MS word format on or before 10th Feb, 2014. Submission should be addressed to Professor M.Z. Abdin, Head, Department of Biotechnology, 2nd Floor, Jamia Hamdard (Hamdard University), Hamdard Nagar, New Delhi 62 and also a copy to be forwarded to mzabdin@rediffmail.com, (alternate mail-id: acherian@jamiahamdard.ac.in) Selected abstracts will be published as full papers in the form of a book of international standard.

REGISTRATION FEE

Registration fee of Rs.500/- for PG students and Rs.1000/- for Scientists/ Academicians may be sent through Bank Draft drawn in favour of Registrar, Jamia Hamdard, payable at New Delhi.

SPONSORSHIP

Industries/ NGOs/ Dealers are invited to sponsor the Seminar. The equipment, glassware, plasticware suppliers can exhibit their products during the two day seminar.

AWARDS

Posters will be evaluated by the team of eminent scientists and the selected posters will be awarded.

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ORGANIZING COMMITTEE

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Jamia Hamdard, New Delhi

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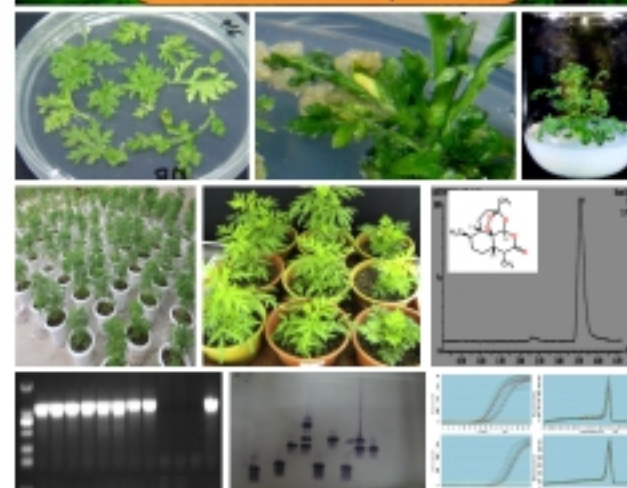
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Dr. K.C. Bansal, Indian Agriculture Research Institute
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Dr. Shamim Ahmad Ansari, Forest Research Institute

UGC-SAP (DRS-I) Sponsored

National Seminar on Plant Biotechnology: Challenges and Opportunities in 21st Century

March 03rd-04th, 2014



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Department of Biotechnology
Faculty of Science, Jamia Hamdard,
Hamdard Nagar, New Delhi - 110062

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DEPARTMENT OF BIOTECHNOLOGY

The Department of Biotechnology was established in 1997. It offers two formal programmes of study, two year post-graduate course leading to M.Sc. in Biotechnology and doctoral research leading to Ph.D degree. Besides, it also offers opportunity for post-doctoral research. The faculty members of the Department have been able to attract a large number of extramurally funded research projects. At present the department has eleven ongoing research projects sponsored by DBT, DST, CSIR, ICAR, DRDO, UGC, DOE, ISM&H, CCRUM, AYUSH, and World Bank.

The current research interests of the faculty members include: development of biomolecules by r-DNA technology, regulation of gene expression, vaccine development, enhancement of secondary metabolites in medicinal plants, molecular biology of infectious diseases, biotransformation of medicinal plants for better yield of medicinal compounds and transgenics of vegetable, floriculture and oil crops.

The Department has inter-institutional collaboration with ICGB (New Delhi), AIIMS (New Delhi), NII (New Delhi), Dabur Research Foundation (Ghaziabad), National Institute of Communicable Diseases (New Delhi), National Center for Biological Sciences (Bangalore), CDRI (Lucknow), TERI (New Delhi), IARI (New Delhi), JNU (New Delhi), University of Delhi South Campus (New Delhi), Institute of Genomics and Interactive Biology (New Delhi) and CDFD (Hyderabad). IIM (Jammu), ITRC (Lucknow), DRDO (New Delhi), University of Calcutta, Kolkata, Kalyani University, Kolkata.

The students of Biotechnology have high rate of success in NET/ICMR/DBT test for JRF. They have been selected in reputed institutions such as CCMB, CDFD, AIIMS, IISc, ICGB, NII, NCCS, NCBS, etc., besides placements abroad.

CENTRE FOR TRANSGENIC PLANT DEVELOPMENT

The Centre is a unit of Department of Biotechnology. It is equipped with the state of the art facilities to train the Ph.D and post doctoral students and to carry out research in various disciplines of plant and microbial biotechnology. The major R & D activities pursued includes cloning and characterization of novel genes linked with tolerance to biotic and abiotic stresses and quality traits of medicinal and crop plants; authentication and standardization of crude components of herbal formulations; nano vehicle assisted gene delivery and expression in medicinal and crop plants. The thrust areas of centre also include improving the quality of medicinal crops through genetic

engineering of metabolic pathways; in vivo and in vitro conservation of medicinal plants; proteomics of host-pathogen interactions; development of easy, rapid, sensitive, cost effective method for aflatoxigenic mould detection in the groundnut kernels and soil; and identification and quantification of aflatoxins in the food and feed. The centre has received grants from government agencies such as DST, DBT, Department of AYUSH, CCRUM, CSIR, ICMR, DRDO etc. for R&D projects carried out at the centre.

AREA OF FOCUS

In a world where population growth is outstripping food supply agricultural and especially plant biotechnology, needs to be swiftly implemented in all walks of life. Achievements today in plant biotechnology have already surpassed all previous expectations, and the future is even more promising. The full realization of the agricultural biotechnology revolution depends on both continued successful and innovative research and development activities and on a favorable regulatory climate and public acceptance. Human survival, vis-à-vis a continuous increase in agricultural productivity, depends on the effective merging of classical breeding with modern plant biotechnology and the novel tools it provides. While both drought and heat stress are already problems, the range over which they impact seriously on crop yields and the frequency with which they do it are both predicted to increase as a result of global warming. Plants will also have to cope with a steeply rising atmospheric CO₂ concentration. If the predictions of climate change are correct, global warming will cause changes in temperature at a rate unmatched by any temperature change over the last 50 million years. An often ignored aspect of global warming is the effect it will have on crop quality and food safety, as opposed to yield. Heat stress is also likely to affect the concentrations of free amino acids and sugars, with potentially profound effects on processing properties. One of the major technical hurdles impeding the advance of plant genetic engineering and biotechnology is the fact that the expression or manipulation of multiple genes in plants is still difficult to achieve. Although a small proportion of commercial genetically modified (GM) crops present 'stacked' or 'pyramided' traits, only a handful of products have been developed by introducing three or more novel genes. On the research front, a variety of conventional and more novel methods have been employed to introduce multiple genes into plants, but all techniques suffer from certain drawbacks

Biotechnology is now-a-days changing the agricultural

and plant scene in three major areas: (1) growth and development control, (2) protecting plants against the ever-increasing threats of abiotic and biotic stress, (3) expanding the horizons by producing specialty foods, biochemicals and pharmaceuticals. Plant-derived drugs in western countries also represent a huge market value. Currently one-fourth of all prescribed pharmaceuticals in industrialized countries contain compounds that are directly or indirectly via semi-synthesis, derived from plants. The most pharmaceutically important secondary metabolites are isolated from wild or cultivated plants because their chemical synthesis is not economically feasible.

The plant biotechnology implies the use of recombinant DNA techniques and in vitro cell biology in three major areas: As an aid to classical breeding; Generation of engineered (transgenic) organisms; integration of microorganisms into plant production systems.

The conference is intended to attract speakers and participants working on these aspects so as to provide a means of interaction and share their experiences.

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ACCOMMODATION

Participants in general are requested to make their own arrangement for accommodation, travel, boarding and lodging. However, few accommodations on first come first serve basis will be provided in the Campus Guest House (Scholar House) on request.

MAJOR THRUST AREAS

- Role of plant Biotechnology in meeting demands of Global warming
- Gene stacking in transgenic plants to improve productivity and quality
- Secondary metabolites : Molecular and Proteomics research
- Molecular markers for conservation of medicinal plants.
- In vitro culture and micropropagation of medicinal plants for increasing the production of secondary metabolites.
- Secondary plant metabolites and human health.

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**Plant Biotechnology : Challenges and Opportunities in
21st Century**

March 3rd & 4th, 2014

Registration Form

- 1) Name :
- 2) Designation :
- 3) Title of the Paper :
- 4) Address for Communication :
- 5) Mobile No. :
- 6) E-mail ID :
- 7) Accommodation required (Yes/No) :
If Yes, Specify Date :
- 8) Category of Participant :
- 9) Faculty/ Scholar/ PG student :
- 10) Academician/Scientist :
- 11) Registration Fee details :
DD Number : Rupees :
Bank : Date :
Place :

Certified that the above information is true and correct to the best of my knowledge and belief.

Signature of the Participant