

**Business development in Agro-biotechnology is an intensive hands on training programme imparting technical knowledge and developing entrepreneurial skills in different thrust areas, which will be covered in four modules each of 10 days duration.**

#### **Module A: Plant Tissue culture**

Plant tissue culture is the art of *in vitro* multiplication of commercially important plant species for their large-scale clonal propagation, conservation and management. Thousands of plants can be propagated in less space and short time. There is high demand for quality planting material. The programme will impart training for establishment of tissue culture as a viable enterprise.

##### **Contents**

1. Stock and Media preparation.
2. Mass propagation using different propagating techniques.
3. Hardening and acclimatization.

**Duration:** 10 days (June 02–June 11, 2008)

#### **Module B: Techniques in Genetic Engineering**

This module comprises of principles and techniques in molecular biology such as DNA isolation, purification and separation and bacterial transformation.

##### **Contents**

1. Genomic DNA and plasmid DNA isolation from bacteria.
2. Restriction digestion, transformation and gel electrophoresis.
3. PCR amplification.

**Duration:** 10 days (June 12- 21, 2008)

#### **Module C: Organic Farming and Mushroom Cultivation**

This course illustrates role of organic farming and beneficial soil microbes in agriculture and forestry. It comprises of practical training on mass production and quality assurance of microbial inoculants. Mushroom cultivation covers the production of edible fungi using agricultural wastes.

##### **Contents**

1. Mass production of microbial inoculants, including quality control measures.
2. Analysis of soil (pH, EC, organic carbon, Ava. N and Ava. P).
3. Illustrate techniques of composting.
4. Quality spawn production.
5. Cultivation of mushroom using agricultural wastes.

**Duration:** 10 days (June 23–July 02, 2008)

#### **Module D: Food Processing and Food Safety**

The course will cover importance and the need of food processing and food safety and minimize post-harvest losses through value addition of agricultural produce. It will provide an insight for setting up of food processing units.

##### **Contents**

1. Various aspects on food quality testing.
2. Product development and its shelf study.
3. Heavy metal analysis by AAS and pesticides by GC.

**Duration:** 10 days (July 03-12, 2008)

##### **Course Fee**

Rs. 16,000/- @ Rs. 4000/- per module per participant. (Course fee includes only Programme fee and course material; Boarding/lodging and travel to be borne by the candidate; Campus hostel accommodation can be provided on request on chargeable basis)

**No of Seats:** 25 in each module

**Last date for registration:** April 15, 2008

### **REGISTRATION FORM**

#### **Business Development in Agro-Biotechnology**

**June 02-July 11, 2008**

1. Name \_\_\_\_\_
2. Father Name \_\_\_\_\_
3. Affiliation \_\_\_\_\_
4. Qualification \_\_\_\_\_
5. Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Module Option      A       C   
(Please tick)          B       D   
                                 All modules
7. Phone No. \_\_\_\_\_  
Fax No \_\_\_\_\_  
E-mail: \_\_\_\_\_

I am enclosing a demand draft/cheque No. \_\_\_\_\_ dated \_\_\_\_\_ for Rs. \_\_\_\_\_ /cash in favour of STEP-TIET.

Date \_\_\_\_\_

Signatures \_\_\_\_\_

For further information, please contact:

#### **Dr. Dinesh Goyal**

Executive Director

STEP

Thapar University

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### **Thapar Technology Campus**

The Thapar Technology Campus (TTC) located on the 250-acre campus in Patiala, Punjab has the unique distinction of having a Trinity of Technical Education and Research Institutions in a single campus in the country. Apart from the Thapar University (TU), the other two institutions are the Thapar Center for Industrial Research & Development (TCIRD) and the Thapar Polytechnic. The Thapar Technology Campus is among the leading privately managed grant-in-aid institutions of the country offering academic programs in various disciplines of Engineering and Biotechnology. The TIFAC-CORE established at TU in the year 2000 under the "Mission reach 2020" program of DST conducts research and academic programs in the area of agro and industrial biotechnology.

Department of Science and Technology has established Science and Technology Entrepreneurship Park (STEP) at Thapar University (TU), Patiala to cater to the demand of industrial ventures in the area of biotechnology and to create an atmosphere for a) innovation and entrepreneurship, b) active interaction between academic and industries, c) sharing ideas, knowledge, experience and facilities, d) development of new technologies and their rapid transfer to the end user. A STEP creates the necessary climate for innovation, information exchange and opening new avenues for students, teachers, researchers and industrial managers to grow in a trans-disciplinary culture, each understanding and depending on the other's inputs for starting a successful economic venture.

To

**Dr Dinesh Goyal**  
**Executive Director**  
**STEP**  
**THAPAR UNIVERSITY**  
**Patiala-147 004**  
**(Punjab)**

**Science & Technology Entrepreneur's Park**  
(Department of Science & Technology)  
Government of India, New Delhi

## **STEP-TU**

**Organises**

**6-Week Summer Training on**

**Business Development**

**in**

**Agro-Biotechnology**

**(JUNE 02 – JULY 11, 2008)**



**Science & Technology Entrepreneurs' Park**  
**THAPAR UNIVERSITY**  
**PATIALA- 147 004, PUNJAB**  
**[www.thapar.edu](http://www.thapar.edu)**