

A 5 Day Course on **BIOPROCESS ENGINEERING AND BIOFACTORIES**

6 - 10 May 2018

Block N22, IBD UTM Johor Bahru, Johor

OBJECTIVE This course is designed an integrated structure to give broad overview on topics that govern both science and technology in bioprocess research and industries. It includes the technical and professional information required to start up, establish and grow this type of industries. The first part of this course will focus on the process related issues such as: Biofactories used, cultivation strategies and systems, bioprocess design and control using different types of bioreactors, down-stream processing and scaling up. This will include hands-on training for design and operation of high cell density cultivation platform for recombinant protein production. The second part will give complete over view about the production facility from start of the project up to the production process and how to carry out all project steps according to the guidelines of the cGMP. The third part will be focused on the regulatory issues related to biotechnological product to ensure the production of safe product and how to protect this high-tech product(s) under the different Intellectual Properties Regulations (IPR) at different levels.

COURSE CONTENTS

- 1.0 Process
- 1.1 Biofactories in biotechnology (from Gene to bioproduct)
- 1.2 Cultivation requirements for different types of Biofactories
- 1.3 Sterile Manufacturing
- 1.4 Bioprocess Technology (Operation modes and scale)
- 1.5 Bioreactors, Type and Design
- 1.6 Bioprocess Control (on-line, off-line, in-line systems)
- 1.7 Bioprocess Platform Design
- 1.8 New Platforms in Biopharmaceutical Industries
"Case study: High cell density Platform for Bioprocess Industries"
- 1.9 Bioprocess Scaling up (Art and Science)
- 1.10 Down-stream Processing
- 1.11 Final Product Formulations

(This part of the module will include Practical training on Bioprocess platform design, Cell banking, Cultivation systems, Bioreactor operation Trouble shooting and Scaling up. Training will also include how to interpret the data collected during bioreactor cultivation.)

Case of study: High cell density cultivation Platform for recombinant production. protein

- 2.0 Facility (cGXP requirements)
- 2.1 cGMP Basic Requirements
- 2.2 cGMP Guidelines for Biopharmaceuticals
- 2.3 cGMP for Building and Utilities
- 2.4 API Manufacturing Area design and flow (personal, material, product and waste)
- 2.5 HVAC system for clean room
- 2.6 cGMP and Equipments
- 2.7 cGMP and Manufacturing Processes
- 2.8 GLP and cGMP requirements
- 2.9 Validation
- 2.10 Biosafety in Biopharmaceutical facilities
- 3.0 Regulations in Biotech. Industries.
- 3.1 Working with GMO in Biotech facility (Research and Manufacturing)
- 3.2 Risk Assessment
- 3.3 Intellectual Property Right (IPR) in Biotechnology Protecting What?, Where? and When?
- 3.4 Bioethics for Biopharmaceuticals

WHO SHOULD ATTEND *This course is designed for M.Sc. and Ph.D. students, scientists and professionals in the biotechnology, biopharmaceutical and pharmaceutical industries who need a comprehensive overview and hands-on training on bioprocess, cGMP and regulations.*

Enquiry |
 INSTITUTE OF BIOPRODUCT DEVELOPMENT
 UNIVERSITI TEKNOLOGI MALAYSIA
 81310 UTM Johor Bahru, Johor
 tel +607.553 6486
 fax +607.553 6464
 Mrs Asrin | asrin@ibd.utm.my
 IBD UTM Jalan Sultan Yahya Petra
 54100 Kuala Lumpur
 tel +603.2615 4406
 fax +603.2693 7921
 Mrs Yatie | nikyati@ibd.utm.my



Prof. Dr. rer. Nat. Hesham A. El Enshasy | Prof. Dr. rer. Nat. Hesham A. El Enshasy is currently a Professor at IBD. He holds a PhD. in Industrial Biotechnology from TU Braunschweig, Germany and holds various postdoctoral positions at Ohio State Univ. and Germany Research Centre for Biotechnology (GBF), which now has changed its name to Helmholtz Centre for Infection Research. He established different research and industrial platforms for the production of biopharmaceutically important compounds using microbial and non-microbial cells. He also organized different training courses on operation and maintenance of biotechnology equipment both for upstream and downstream applications. Dr. El Enshasy is also working as consultant for biobusiness, technology transfer and biotech. facility design/auditing for many biopharmaceutical companies in Egypt, Belgium, Greece, USA, China and Malaysia.



Prof. Dr. Shang-Tian Yang | Shang-Tian Yang is Professor of Chemical and Biomolecular Engineering at the Ohio State University, where he has been on the faculty since 1985 and currently teaches courses in Biotechnology and Bioprocess Engineering. He is also the director of Ohio Bioprocessing Research Consortium and has worked with any companies in commercial technology development. Dr. Yang has broad research involves biocatalysis, cell culture, tissue engineering, functional genomics, and microfluidic biochips for high-throughput cell-based assays and biodiagnostics. He has more than 150 scientific publications and 13 patents in the bioengineering field. He is also a co-founder and two biotechnology startup companies. Dr. Yang received his B.S. Degree in Agricultural Chemistry from National Taiwan University and M.S. and Ph.D. Degrees in Biochemical Engineering from Purdue University. He is an elected fellow of American Institute of Medical and Biological Engineering and an active member of American Chemical Society (ACS). He also serves as an Associate Editor for the journal Process Biochemistry.

- Staff from more than 450 companies have attended our life-long learning programmes.
- IBD has assisted more than 65 herbal companies in their process and product development.

COURSE FEE

Fee is inclusive of lunch, refreshments and course materials. Accommodation is not included)

MALAYSIAN PARTICIPANTS
RM 2385 per participant

INTERNATIONAL PARTICIPANTS
USD 1,450 per participant

Method of Payment

Please kindly complete and return the reply form 3 weeks before the commencement date together with :

BENDAHARI UTM (CIMB Bank Berhad)
Akaun No : **8006053536**

Cancellation & Substitutions

A full refund will be promptly made for all written cancellations 2 weeks before the meeting. 50% refund will be made for written cancellations received 7 days before the meeting. A substitute may be made at any time.

Note

a) The organiser has the right to make any amendments that they deem to be in the best interest of the course and to cancel the course if insufficient registrations are received a week before course commencement date.

b) CERTIFICATE OF ATTENDANCE will be awarded at the end of the course.

REGISTRATION FORM

Bioprocess Engineering and Biofactories

6 - 10 May 2018

IBD UTM Johor Bahru, Johor

YES ! I would like to register the following participants

Name 1 _____

Job Title _____

Email _____

Name 2 _____

Job Title _____

Email _____

COMPANY INFORMATION

Company _____

Address _____

Town _____

State _____

Tel _____

Email _____

AUTHORISED Signatory (*This registration is invalid without signature from an authorised officer)

Name _____

Job Title _____

Tel _____

Email _____

ACCOMODATION |

The Institute does not provide accommodation for the program but will assist in making reservation according to the hotel/residence of your choice. We recommend the following:-

No	Hotel / Residence	Rate (UTM)	Distance	Contact Number
1	Scholars Inn	Standard – RM 120 Deluxe – RM 140 Scholar – RM 160	3 km	07-553 5197
2	Pulai Springs Resort	Studio Suite – RM 270	7 km	07-521 2121
3	Good Hope Hotel	Standard – RM 155 Superior– RM 160	6 km	07-5572828

ACCOMODATION BOOKING FORM |

1)

NAME

:

2)

FULL ADDRESS

:

3)

CONTACT NUMBER

:

4)

ACCOMODATION

:

Please tick

(1)_____ (2)_____ (3)_____

5)

CHECK IN DATE

:

CHECK OUT DATE

:

6)

NO OF ROOMS

:

