

## Introduction

This 3-day workshop is designed to give participants a combination of lectures and hands-on laboratory experiences on advanced cloning methods. The lectures and *in silico* lab will provide an overview of the multiple DNA fragments assembly techniques, design, optimization and applications. It also covers zero background and multiple inserts cloning. The hands-on wet lab includes zero background cloning and multiple inserts assembly and cloning as well as verification of transformants.

This workshop is suitable for researchers and students at all levels of expertise, although basic knowledge in molecular biology and biotechnology is helpful. It is expected that from this workshop participants will gain experience in *in vitro* and *in silico* advanced cloning techniques. Through the integrated learning methods, utilizing hands-on training to reinforce lecture materials, participants will be able to apply information learned in the workshop into applications in their own research.

## Objectives

- To expose participants to the concepts and strategies in multiple DNA fragments assembly and advanced cloning techniques through a series of lectures
- To provide hands-on training on zero background and seamless cloning involving large and multiple DNA inserts
- To give practical training on *in silico* molecular cloning and assembly

## Participants

Participation is open to all interested parties from public and private sectors. Registration is on a first come first served basis and is limited to 25 participants.

## Registration Fees

Participant	Fee
Student	RM 1,250.00
Government Agency	RM 1,400.00
Non-Government Agency	RM 1,600.00

\*inclusive 6% GST

## Enquiries

For any enquiries and further information kindly contact

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## Committee Members

### Advisor

*Prof. Dr. Zulkifli Idrus*

### Chairperson

*Prof. Datin Dr. Siti Nor Akmar Abdullah*

### Head of Technical

*Dr. Saeid Kadkhodaei*

### Secretary

*Mr. Mohd Kamarulzaman Ismail*

### Committee members:

- *Assoc. Prof. Dr. Ganesan Vadamalai*
- *Dr. Kong Lih Ling*
- *Dr. Sathis Sri Thanarajoo*
- *Dr. Azzreena Mohd Azzeme*
- *Mr. Mahdi Moradpour*
- *Mr. Engku Ahmad Khairi Engku Ariff*
- *Mrs. Azimah Su'ut*
- *Mrs. Hairen Maswati Hashim*
- *Mr. Muhammad Taqiuddin Shith Mohd Shith Putera*
- *Mrs. Rozila Abdul Rahman*
- *Dr. Kwan Yee Min*
- *Ms. Farah Hanan Abu Hanifah*
- *Mr. Sulaiman Rufai Babura*
- *Ms. Nurul Najwa Che Roslan*
- *Mr. Albert Ng Choon Lee*
- *Ms. Ng Thuang Ching*



# WORKSHOP ON ADVANCED CLONING AND MULTIPLE DNA FRAGMENTS ASSEMBLY TECHNIQUES

25<sup>th</sup> to 27<sup>th</sup> May, 2016

Central Laboratory

Institute of Tropical Agriculture, UPM

*Organised by*

Laboratory of Plantation Crops

Institute of Tropical Agriculture and

Department of Agriculture Technology

Faculty of Agriculture, UPM

*In Collaboration With*



## Programme

### Day 1 (25 May)

Time	Programme
0830-0900	Registration
0900-0930	Briefing on Workshop
0930-1000	Lecture 1: <i>General Molecular Biology Techniques</i>
1000-1030	Lecture 2: <i>Gene Cloning</i>
1030-1100	Morning Tea
1100-1300	Lab Practical 1: <i>Zero Background Cloning</i>
1300-1430	Lunch break
1430-1530	Lecture 3: <i>Zero Background and Multiple Insert Cloning Platform Technology</i>
1530-1700	Lab Practical 2: <i>Multiple Fragments Preparation</i>

### Day 2 (26 May)

Time	Programme
0900-1000	Lab Practical 3: <i>Zero Background Inserts Verification</i>
1000-1030	Morning Tea
1030-1230	Lab Practical 4: <i>Multiple Inserts Assembly and Cloning</i>
1230-1400	Lunch Break
1400-1500	Lab Practical 5: <i>Transformation</i>
1500-1600	Lecture 4: <i>Advances in Multiple DNA Fragments Assembly Techniques and Applications</i>
1600-1700	Result Review 1
1700-1730	Tea

### Day 3 (27 May)

Time	Programme
0900-1000	Lab Practical 6: <i>Seamless Cloning Verification</i>
1000-1030	Morning Tea
1030-1300	Bioinformatics Lab: <i>In Silico Molecular Cloning</i>
1300-1400	Lunch Break
1500-1600	Result Review 2
1600-1630	Closing Ceremony and Certificate Presentation

## Registration Form

Full Name:  Prof.  Assoc. Prof.  Mr.  Ms

### Organization:

Student  Gov. Agency  Non-Gov. Agency

### Address:

Telephone (office and mobile):

Fax:

E-mail:

Meal Choice:  Non-vegetarian  Vegetarian

Mode of payment\*:  Bank Draft  Cheque

Bank Transfer

\*All bank drafts/ cheques/ bank transfer must be made payable to:

Account Name : BENDAHARI UPM

Bank Name : CIMB BANK BHD

Account Number : 12150005004050

Completed Registration Form must be faxed or emailed to the secretariat before the deadline for registration.

**Deadline for registration: 20 May 2016**

**Deadline for payment: 25 May 2016**

### Secretariat

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