



Module PMRF-ISSS049/2023

Recombinant DNA Technology

Name of the PMRF student

Sumandeep Kaur

Required background of the students taught

Taught Enzymology, Scientific Writing, Basics of Biology to Bachelor's and Master's level Students at Ramaiah University of Applied Sciences



Details of the content of the module

1. Introduction to recombinant DNA technology (Lectures on its relevance to society)
2. Basic techniques (I) of rDNA technology: Cloning and expression of proteins in mammalian, Plant and Bacterial systems (Lectures), Vector systems used for expression: Transient and Stable, transgenics
3. Basic techniques (II) of rDNA technology: Electrophoresis, RT-PCR, qPCR, Western Blotting (Lectures and Discussions)
4. Advanced techniques: CRISPR-Cas9, TALENS, Zinc Fingers mediated Genetic manipulations. Knock-In, Knock-Out, Site Directed Mutagenesis (Lectures)
5. Applications of Genetic Modifications in Medicine, Agriculture (Lectures and Discussions)
6. Ethical concerns regarding Genetic manipulations: where to stop (Discussions)

Schedule of the module

The course will be conducted twice a week, starting 3 October 2023 to 12 December 2023.

Each session will be 1.5 hour (Tuesday, Friday) 2:30 to 4:00 PM. Total 16 Lectures and 3 Problem solving sessions will be conducted. 2 Sessions for difficult points will also be held.

Meeting link : Will be shared later

[Link](#)

Contact email ID: issforum@gmail.com

Registration link:

https://docs.google.com/forms/d/e/1FAIpQLSe4fPrCQikQHOW7shqrkconG_Tax_JiCAQA1hd4L1FZfBVzAg/viewform?usp=sharing