# 1<sup>st</sup> Hands on Workshop and Training o Real Time PCR and its application

Date: September 3-5, 2021

### DESCRIPTION

Real-time polymerase chain reaction (RT-PCR) is commonly used to measure gene expression. It is more sensitive than microarrays in detecting small changes in expression but requires more input RNA and is less adaptable to high-throughput studies. It is best suited for studies of small subsets of genes. It's one major shortcoming is that the sequence of the specific target gene of interest must be known, hence real-time PCR can only be used for studying known genes. Molecular techniques have been widely used in clinical diagnosis, e.g., diagnosing disease, predicting disease course, and identifying infectious agents. More recently, RT-PCR has been instrumental in the diagnosis of the COVID19 patients. This training will introduce to the participants, Scientific background, RNA isolation, cDNA preparation, setting reactions and data analysis

### AUDIENCE

This training is designed for students and Research scholars interested in PCR and real-time PCR techniques

### OBJECTIVES

At the conclusion of this course, the participant will be able to:

- Explain the basic steps involved in PCR
- Identify the components of PCR, reverse transcription PCR, and PCR product analysis
- Recognize the characteristics of real-time PCR
- Identify the techniques used to detect products in real-time PCR
- Differentiate the nucleic acid quantification processes used in realtime PCR
- Explain the roles of PCR controls

Organised by: Central Instrumentation facility Jiwaji University, Gwalior

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## **Central Instrument Facility** Jiwaji University, Gwalior

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Application Form
1. Name (in block letters):
2. Subject:
3. Institution/Department:
4. Educational qualification:   5. Mobile:
6. Email:

Signature

Signature of Head/Coordinator (Seal)

Note: Application submitted at CIF or mailed to <u>coordinatorcif@gmail.com</u> Registration Fee: Rs100; Contact No:+919425756284