

**12<sup>th</sup>-18<sup>th</sup> September, 2022**

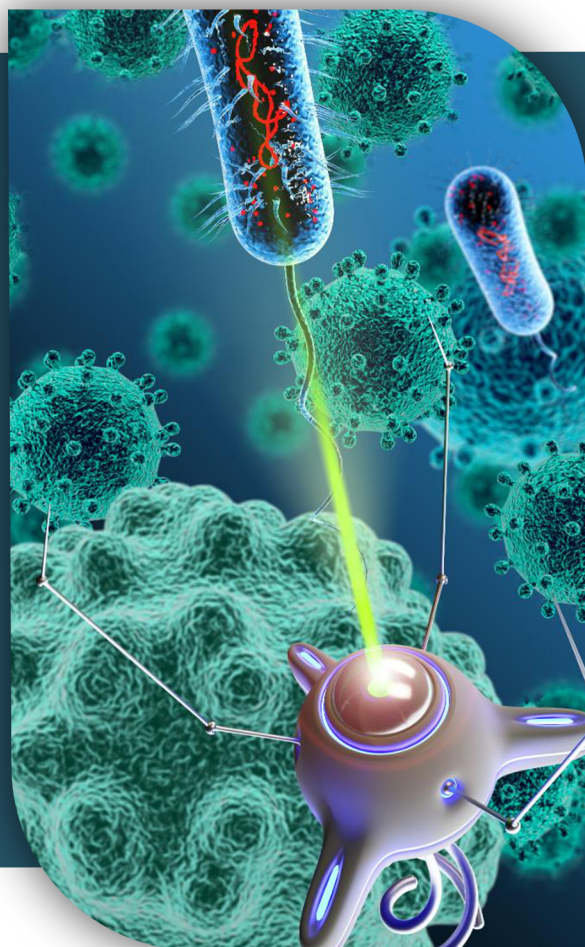
## A hands on Training Program on **Development and Characterization of Nanoformulations**

Under the scheme of  
**Synergistic Training Program Utilizing the  
Scientific and Technological Infrastructure (STUTI)**

Organized by  
**Indian Institute of Technology, Gandhinagar (PMU)**

**An initiative by Department of Science and Technology, India**

Hosted by  
**Maliba Pharmacy College  
Uka Tarsadia University, Bardoli, Surat, Gujarat**



### About The Program

The aim of the training program is to provide a general overview on the practical aspects of development of nanoformulations equipped with useful knowledge on characterization using sophisticated instrumental techniques, emphasized through hands-on lab sessions. The sessions are interactive with the importance on principle, working, data interpretation and analysis, with a mélange of lectures, demonstrations and practical sessions, conducted by experts in the field.

**The practical exposure to instrumentation includes:**

1. High speed homogenizer
2. Zeta Sizer
3. Rheometer
4. Texture Analyser
5. Freeze Dryer
6. Diffusion / Dissolution Apparatus
7. Rat Ventilator / Zebra Fish Models

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## ABOUT THE UNIVERSITY

Uka Tarsadia University (UTU), a state private university was established in 2011 by Bardoli Pradesh Kelavani Mandal, with an objective of meeting the growing demands for quality education. The university received NAAC accreditation 'B+' grade with CGPA of 2.74. The University offers a comprehensive array of academic programs across the disciplines of Management, Commerce, Engineering and Technology, Architecture, Design, Applied Science (Chemistry, Physics, Mathematics, Microbiology, Biotechnology), Computer Science, Pharmacy, Nursing, Physiotherapy and others that lead students to self-enrichment and productive careers in their respective professions, government, business and industry. Located near the town of Bardoli, Gujarat, on a 100+ acre land, the university provides educational opportunities to over 10,000 students.

## ABOUT THE INSTITUTE

Maliba Pharmacy College, a constituent Institute of UTU, is located in the picturesque campus of Gopal Vidyanagar on Bardoli - Mahuva road. The college is approved by All India Council for Technical Education (AICTE), the Pharmacy Council of India (PCI) and Directorate of Technical Education, Govt. of Gujarat. It has been consistently ranked amongst top 100 pharmacy colleges of India as per NIRF. The college has also secured 3<sup>rd</sup> position in GSIRF in 2020 and 2021. The college has won award for excellence in research from Education Department- Government of Gujarat and Outstanding Institute from South Gujarat Chamber of Commerce & Industries (SGCCI). The college has state-of-the-art infrastructure and instrumental facilities and provides a serene atmosphere for academic excellence. The college houses a voluminous library; classrooms with multimedia facilities, well equipped DST-FIST and GUJCOST laboratories, CPCSEA approved animal house, modern Computer and Language labs. The college has its own sophisticated instruments laboratory for the characterization and analysis of pharmaceuticals. The college offers B. Pharm., M. Pharm, Pharm. D, Post baccalaureate PharmD and Ph.D. degree.

## WORKSHOP DETAILS

### Eligibility:

Minimum qualification should be Post Graduate (Science/ Pharmacy), Faculty Members/ Scientists/ Post-Doc Fellows/ Ph.D. Fellows/ Industry Personnel who are actively involved in R&D

**Duration:** 7 days    **No. of participants:** 30

## REGISTRATION

Interested participants must register and only selected candidates would be invited for the workshop. For selected candidates Registration fees, local travel (3<sup>rd</sup> AC train support only), Boarding and lodging will be covered by STUTI grant.

**Registration Deadline: Aug 20, 2022**

**For registration follow the link or Scan QR code**

<https://forms.gle/EkvAaf3emJwKLgRM9>



# CONTENTS OF THE WORKSHOP



## Day 1

- Inauguration
- Introduction of the Participants and the Host
- Lecture session 1: Basic introduction to the preparation techniques of nanoparticles
- Lab visit
- Lab session: Preparation of nanoparticles by different techniques

## Day 2

- Lecture session 2: Particle size measurement techniques
- Lecture session 3: Principle, instrumentation and working of Malvern Zetasizer
- Lab session: Practical training on Zetasizer

## Day 3

- Lecture session 4: Rheology in pharmaceutical formulations
- Lecture session 5: Principle, instrumentation and working of Brookfield Rheometer
- Lab session: Practical training on Brookfield Rheometer

## Day 4

- Lecture session 6: Mucoadhesive drug delivery systems
- Lecture session 7: Principle, instrumentation and working of Brookfield Texture Analyzer
- Lab session: Practical training on Brookfield Texture Analyzer

## Day 5

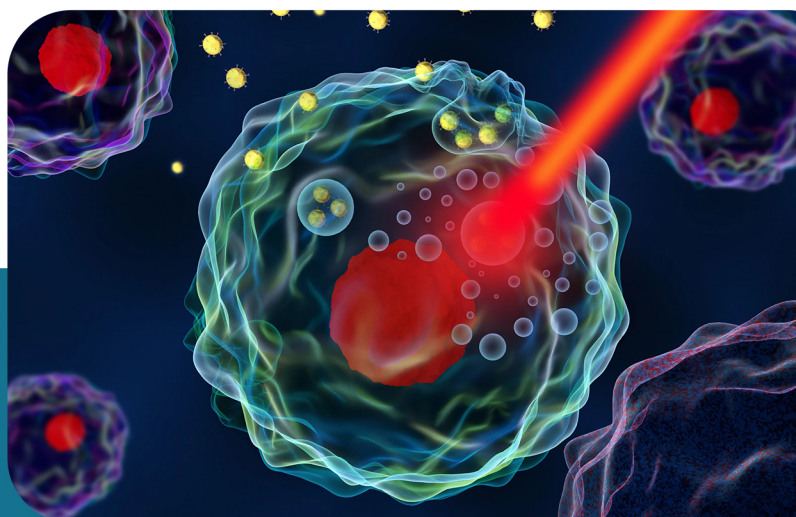
- Lecture session 8: Lyophilization and its importance
- Lecture session 9: Principle, instrumentation and working of Freeze Dryer
- Lab session: Practical training on Freeze Dryer and Franz Diffusion cell

## Day 6

- Lecture session 10: Current perspectives in dissolution testing of conventional and novel dosage forms
- Lecture session 11: Introduction and demonstration of type IV dissolution apparatus
- Industrial visit

## Day 7

- Lecture session 12: Hands-on training on rat ventilator and zebra fish models
- Students sample analysis
- Q & A session, closing remarks and feedback



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