



KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH

(Deemed – to – be – University)

JAWAHARLAL NEHRU MEDICAL COLLEGE, BELAGAVI

Accredited 'A+ Grade' by NAAC

Placed in Category 'A+' by MHRD (GoI)

DEPARTMENT OF PHARMACOLOGY

Website: <http://www.jnmc.edu>

Email: dome@jnmc.edu
domejnmc@sancharnet.in

Dept.: 0831- 2473777

Fax No.: 91-0831-2470759

Ext No: 4095



Value Added Course: Basic Principles of Cell Culture Techniques

Organized by:

Department of Pharmacology

&

Dr Prabhakar Kore's Basic Science Research Centre

Sr.No	Details	
1	Name of the Value-Added Course	"Basic Principles of Cell culture techniques"
2	Need of the course	This training program is structured for the Postgraduate students and PhD students of Medical, Dental and Allied Sciences and Biotechnology to provide hands on training on cell culture techniques This program is idealized to make the participants strong in theoretical and practical approaches in the cell culture techniques and its application to enhance their research career
3	Objectives of the course	By the end of this course, one should be able 1. To learn the principles, concepts and applications of cell culture techniques to handle the cells Invitro 2. It will help PGs and PhD students to conduct research in the field of Cell culture
4	Target Group	Postgraduate and PhD students of Medical, Dental, Allied Sciences and Biotechnology
5	Duration	16 Hours
6	Conducted	Daily for 3 days
7	Frequency	Once a year
8	Teaching Methods	Interactive Lectures, Hands - on training on cell culture techniques
9	Assessment and Certification	Yes
10	Feedback collection	Yes

Dr Deepa R Mane
In Charge of
Cell Culture Laboratory
Dr. Prabhakar Kore BSRC
Professor, Dept of Oral Pathology
KLE VK Institute of Dental Sciences
Belagavi

Dr Rekha Nayaka M.R
Course Co-Ordinator
Value added course –
Cell culture techniques
Professor, Dept of Pharmacology
J.N.Medical College
Belagavi

Dr Nayana K Hashilkar
Professor and Head,
Dept of Pharmacology
J.N.Medical college
Belagavi



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Value Added Course : Basic Principles Of Cell Culture Techniques

Cell culture is one of the major tools used in cellular and molecular biology, providing excellent model systems for studying the normal physiology and biochemistry of cells (e.g., metabolic studies, aging), the effects of drugs and toxic compounds on the cells, and mutagenesis and carcinogenesis. It is also used in drug screening and development, and large-scale manufacturing of biological compounds like vaccines, therapeutic proteins etc.

This value-added course will help the trainee to understand the basic requirements for culturing human and animal cells in vitro. Cell culture is a fastidious technology which requires meticulous handling of the cells, reagents and maintain aseptic conditions. The course co-ordinators of department of Pharmacology and BSRC will facilitate the trainees to strengthen their knowledge in animal cell culture through interactive lecture sessions and through practical approach to cell culture in the laboratory.

INTENDED LEARNING OBJECTIVES

1. Basic Principles, practices and application of cell culture
2. Subculturing of cell lines
3. Cell Viability Assay
4. Cryopreservation of cell lines
5. Cytotoxicity ASSAY (MTT Assay)



WHO SHOULD ATTEND?

The course is designed to address the interest of PGs and PhD students of Medical, Dental and Allied Course, scientists and research scholars from different fields of biological sciences including molecular biology, biochemistry, genetics, and biotechnology

COURSE CONTENT - The module comprises interactive lectures and hand on training in cell culture laboratory

Theory

- Introduction to Cell cultures
- Basic techniques of Cell culture
- Application of cell culture techniques



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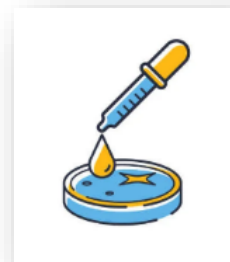
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Hands on Training on

- Handling of equipment for the maintenance of cell culture
- Subculturing of adherent and non-adherent cell lines
- Cell Viability assay
- Cryopreservation of cells
- Cell revival
- MTT Assay



Duration of the course: 3 Days (16 Hours)

Resource persons: Faculty of BSRC and Faculty of Dept. of Pharmacology

Teaching methods: Interactive Lectures, Hands on training.

Frequency of the course: Once in a year

Certification : Certificate will be given to all the participants

Feedback : Will be collected.

Registration Details :

Registration fee of **Rs. 1000/-** for training program. Certificate will be issued to all the participants.

For Registration, Please contact:

Dr Rekha Nayaka M.R

Course Coordinator of
Cell culture techniques
Professor, Department of Pharmacology
JNMC, Belagavi
9900017699

Dr Annam Bhargava Soma Sekhar

Junior Resident
Department of Pharmacology
JNMC, Belagavi
9492962651

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Value added Course - Basic Principles Of Cell Culture Techniques**Program Schedule****DAY 1 : 10-01-2023**

Theory: 9.30 am to 10:30 am Venue – Department of Pharmacology	Theory: 11:00 am to 1:00 pm Venue – Department of Pharmacology
Lecture 1: Dr Rekha Nayaka M.R <ul style="list-style-type: none"> • Introduction to course module • Introduction to basics of cell culture technology • Pre test 	Lecture 2: Dr Deepa R Mane <ul style="list-style-type: none"> • Basic Principles and ethical consideration of cell culture • Cell Culture Assays and their application
Practical: 2: 00 pm to 3:00 pm Venue – Basic Science Research Centre	Practical: 3: 00 pm to 4: 00 pm Venue - Basic Science Research Centre
Batch A: Five Students <ul style="list-style-type: none"> • Cryopreservation of Cells • Revival of cells 	Batch B: Five Students <ul style="list-style-type: none"> • Subculturing of cells and Trypan blue Assay • Seeding of cells for MTT Assay

DAY 2 : 11-01-2023

Theory: 9.30 am to 10:30 am Venue - Department of Pharmacology	Theory: 11:00 am to 12:00 pm Venue - Department of Pharmacology
Lecture 3: Dr Deepa R Mane <ul style="list-style-type: none"> • Development and characterization of primary cell lines 	Lecture 4: Dr Ramesh Paranjape <ul style="list-style-type: none"> • Application of Cell culture Technology
Practical: 2: 00 pm to 3:00 pm Venue - Basic Science Research Centre	Practical: 3: 00 pm to 4: 00 pm Venue - Basic Science Research Centre
Batch A: Five Students <ul style="list-style-type: none"> • Subculturing of cells and Trypan blue Assay • Seeding of cells for MTT Assay 	Batch B: Five Students <ul style="list-style-type: none"> • Cryopreservation of Cells • Revival of cells

DAY 3 : 12-01-2023

Practical: 9.30 am to 1:30 pm Venue - Basic Science Research Centre	Practical: 9:30 am to 1:30 pm Venue - Basic Science Research Centre
Batch A: Five Students <ul style="list-style-type: none"> • Observation of cells • Addition of MTT dye and incubation for 4 hours 	Batch B: Five Students <ul style="list-style-type: none"> • Observation of cells • Addition of MTT dye and incubation for 4 hours
Practical: 2: 00 pm to 4:00 pm Venue - Basic Science Research Centre	Practical: 3: 00 pm to 5: 00 pm Venue – Basic Science Research Centre
Batch A: Five Students <ul style="list-style-type: none"> • MTT Assay reading and interpretation • Post test and Feedback 	Batch B: Five Students <ul style="list-style-type: none"> • MTT Assay reading and interpretation • Post test and Feedback

5:00 pm to 5: 30 pm: Valedictory Function

