

ORGANISING COMMITTEE

PATRON AND MANAGER

**His Beatitude Moran Mor Baselios
Cardinal Cleemis Catholicos**
Major Archbishop of Trivandrum

Dr. Victoria P. K.

Principal, Chairman, Mar Ivanios College,
Trivandrum

Dr. Meera George

Assistant Professor & Head, Department of
Zoology, Mar Ivanios College, Trivandrum

Dr. Manju K.G.

Associate Professor, Department of Zoology,
Mar Ivanios College, Trivandrum

Dr. Suboj Babykutty

Assistant Professor, Department of Zoology,
Mar Ivanios College, Trivandrum

Dr. Susan Kurian

Assistant Professor, Department of Zoology,
Mar Ivanios College, Trivandrum

Dr. Lija L. Raju

Assistant Professor, Department of Zoology,
Mar Ivanios College, Trivandrum

Dr. Anupriya Samuel

Assistant Professor, Department of Zoology,
Mar Ivanios College, Trivandrum

Dr. Sneha Chandran B.K.

Assistant Professor, Department of Zoology,
Mar Ivanios College, Trivandrum

Fr. Thomas Varghese

Assistant Professor, Department of Zoology,
Mar Ivanios College, Trivandrum

Ms. Reshmi S.

Assistant Professor, Department of Zoology,
Mar Ivanios College, Trivandrum

REGISTRATION FEES

STUDENTS & RESEARCH SCHOLARS	10,000
FACULTY MEMBERS	15,000

LAST DATE OF REGISTRATION : 30/11/2023
WORKSHOP DATE : 4 - 8 DECEMBER 2023
SELECTION WILL BE LIMITED TO THE FIRST 12 APPLICATIONS.

MODE OF PAYMENT

Registration fee can be remitted through online mode
(Net Banking, NEFT, RTGS).

A/c No : 5837101000783
For International Fund Transfer
Branch Name : Nalanchira
SWIFT Code : CNRBINBBTDC
Branch Code : 5837
IFSC Code : IFSC CNRB0005837



1010748000783@cnrb

ACCOMMODATION DETAILS

ACCOMMODATION FACILITIES WILL BE PROVIDED TO THE PARTICIPANTS ON
DEMAND BASIS AND PARTICIPANTS HAVE TO MAKE PAYMENT SEPARATELY FOR THE
ACCOMMODATION PROVIDED. THE REGISTRATION FEE COLLECTED DOESN'T
INCLUDE THE FEE FOR ACCOMMODATION.

REGISTRATION FORM

<https://forms.gle/8fQNoWTWtKKVt35M6>

CONTACT US

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🌐 : <https://ctimlab.in/>



Google Maps-Mar Ivanios College,
Bethany Hills, Thiruvananthapuram, Kerala

NATIONAL WORKSHOP ON ANIMAL CELL CULTURE AND MOLECULAR BIOLOGY TECHNIQUES

4 - 8 DECEMBER 2023

PG AND RESEARCH DEPARTMENT OF ZOOLOGY



MAR IVANIOS COLLEGE

(AUTONOMOUS)

Excellence in Higher Education Since 1949

NIRF 2023-45th Rank

Reaccredited with A+ Grade by NAAC

Nalanchira P O, Thiruvananthapuram

Kerala, India

In association with



**The Kerala State Higher Education Council
Thiruvananthapuram, Kerala**

MAR IVANIOS COLLEGE

Mar Ivanios College owes its existence to the far sighted vision of the servant of God Archbishop Mar Ivanios of Trivandrum. Started in June 1949 as a college affiliated to the erstwhile University of Travancore, it stands affiliated to the University of Kerala since 1957. The University Grants Commission (UGC) granted the college with Autonomy status in June 2014. Mar Ivanios College is the first Institution in the University of Kerala, which received accreditation from NAAC. The college has been re-assessed and re- accredited with A+ grade by NAAC in the fourth cycle. In the NIRF Rankings (for Arts & Science Colleges) 2017, 2018, 2019 and 2022 the college was placed 36th, 29th, 48th and 45th respectively, by the National Institutional Ranking Framework (NIRF).

DEPARTMENT OF ZOOLOGY

The Department of Zoology is one of the oldest departments in the college which can boast of a legacy of academic scholars and students who have taken studies to an elevated level of research. The department has been running both the under graduate and post graduate courses successfully and it has become one of the most sought after departments in the college. Students from across the state come seeking something different from the college since the syllabus and curriculum offers areas different from similar institutions.

SCOPE OF THE WORKSHOP

Animal cell culture and molecular biology tools are core laboratory techniques in many life science laboratories across the world. Animal cell culture is an essential and handy technique that has been sparingly taught at the graduate and postgraduate level. In the pharmaceutical industry, cell culture is used to produce a significant proportion of biopharmaceuticals as well as monoclonal antibodies for diagnostic use. In addition, the use of animal cells is expanding in a wide range of other applications such as drug screening, tissue engineering, gene therapy, toxicology and traditional applications such as virology. To study basic cell biology and biochemistry, cell culture is used as a primary system. Such techniques are used in cell and molecular biology research and studies. By providing state-of-art animal cell culture and molecular biology training at Mar Ivanios College, we are intended to expose participants to the applications of animal cell culture and basic molecular biology tools in scientific fields. Participants will be provided with hands-on training in animal cell culture techniques and later it will be supported with theory sessions. This training course will be beneficial to academicians and researchers, who wish to take up projects based on mammalian cell culture.

HIGHLIGHT OF THE WORKSHOP

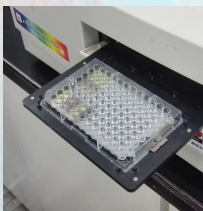


ANIMAL CELL CULTURE

Cell culture is the process by which human, animal, or insect cells are grown in a favourable artificial environment. The cells may be derived from multicellular eukaryotes, already established cell lines or established cell strains.

What will you learn?

- An overview of cell culture laboratory and equipment
- Basic Microscopy and pipette handling
- Aseptic techniques and good cell culture practice (GCCP)
- Identification of cell culture contaminants and control
- Culture media and growth requirements for animal cells
- Propagation and maintenance of cells *in vitro*
- Subculturing and cell counting
- Resuscitation/thawing and cryopreservation of cells

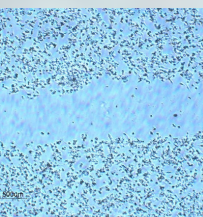


CELL VIABILITY ASSAY

Measurement of cell viability and proliferation forms the basis for numerous *in vitro* assays of a cell population's response to external factors.

What will you learn?

- Acquaintance on MTT protocol and procedure
- Drug dilution methods and calculation

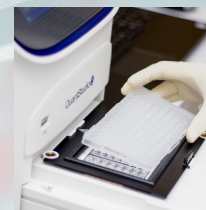


MIGRATION ASSAY

The wound-healing assay (scratch wound assay) is an established technique that can be used to investigate collective migration and wound healing *in vitro*.

What will you learn?

- Acquaintance on scratch wound assay protocol and procedure
- Image capturing with microscope and plate preparation



qRT PCR

Quantitative polymerase chain reaction (qPCR) is a method by which the amount of PCR product can be determined, in real-time, and is very useful for investigating gene expression.

What will you learn?

- RNA isolation and Quantification
- cDNA synthesis
- Primer Designing
- qPCR- Preparation of reaction mixture
- Acquaintance with qPCR software



WESTERN BLOT

Western blotting is a laboratory technique used to detect a specific protein in a blood or tissue sample.

What will you learn?

- Protein isolation
- Protein quantification using MS Excel
- Basic calculations
- Gel Electrophoresis
- Electrophoresis
- Imaging basics
- Troubleshooting ideas