

## Training objective:

The purpose of the hands on training is to provide participants with a complete information on basics of cell culture techniques including the development of primary culture, maintenance and sub-culture. The focus of the training would also be on the applications of cell culture in diagnostic pathology including *in vitro* testing, virus isolation and identification.

## Intake capacity

A maximum of 5 participants (in one batch) will be selected after screening the applications.

## Time period

Three batches in a year-August 2018, December 2018 and March 2019.

**Duration:** 5 days

## Course Fee

Rs.5000/- (Rupees five thousand only) for researchers / technicians who are employed and Rs3000/- for students payable at the time of registration or as DD drawn in favour of "ICAR Unit, CIFE" payable at Mumbai.

## Travel/boarding and lodging

TA, DA will not be paid. Facilities for paid boarding and lodging may be provided in the campus, as per the availability, of which the participants have to bear the charges (stay in hostel dormitory @Rs . 50/day as per the availability and food @ 110 Rs/day).

### How to apply

The applications in the attached Format may be emailed to [gayatritripathi@cife.edu.in](mailto:gayatritripathi@cife.edu.in)  
[husnebanu@cife.edu.in](mailto:husnebanu@cife.edu.in)



### PROGRAMME DIRECTOR

**Dr. Gopal Krishna**

*Director / Vice-Chancellor  
ICAR-CIFE, Mumbai*

### COURSE DIRECTOR

**Dr. K.V. Rajendran**

*Head, AEHM Division  
ICAR-CIFE, Mumbai*

### COURSE COORDINATORS

**Dr. Gayatri Tripathi**

*Principal Scientist*

**Ms. Husne Banu**

*Scientist*

## Short Term Training Program on Cell Culture Techniques 6 Aug-10 Aug 2018

### Venue

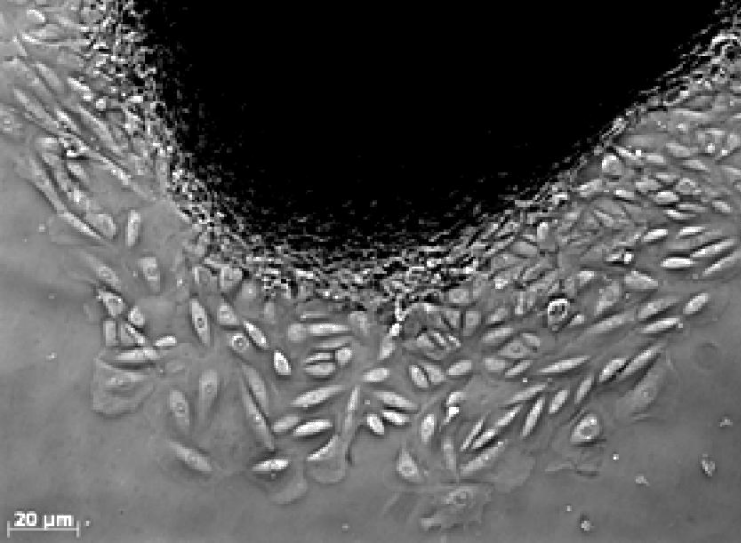
Aquatic Environment and Health Management Division



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## Short Term Training Program on "Cell Culture Techniques"



epithelial tissues and many different types of tumour cells. The grown cells are used in *in vitro* assays to determine the analysis of gene function, toxicology, teratogenicity, pharmaco and toxicogenomics studies against the chemical contaminants, drugs, toxins and pathogens available in the aquatic environment. The intricate host-pathogen interactions after the invasion of pathogen and disease progression could be better studied using cell culture methods. Several *in vitro* assays have been developed for fish toxicological, pathological, and immunological studies. The *in vitro* assays reduce the variability of the *in vivo* responses, which are due to the unavoidable effects of stress and of environmental influences. Cell cultures are also useful models for isolation, identification and replication of viruses. Cell lines are being used for studying genetics of viruses, the establishment of persistence infection, effect of antiviral drugs and production of viral vaccines.

The cells are model systems for complex biological systems. They are the building blocks of living organisms and hold the information that is highly representative of the whole organism. Cell culture is a technique by which the behaviour of cells can be studied independently of the whole organism. Different types of cells grown in culture include connective tissue elements such as fibroblasts, lymphoblasts, skeletal tissue, cardiac,

### Training content: (Theory and hands-on sessions)

- Cell culture laboratory procedures, guidelines and applications
- Cell culture media formulations and preparations
- Cell culture techniques: primary culture, cell passaging and counting, cryopreservation and revival of frozen cells
- Principles of fluorescence microscopy, immunostaining techniques using fluorescent microscopy
- Principles of cytotoxicity, estimation, cell viability and proliferation assays and comet assay
- Cell culture contaminants identification and control

### Eligibility

Researchers, graduates and post-graduate students, Technicians employed in Govt/private laboratories/hatcheries/farms, entrepreneurs etc.

## ICAR-CENTRAL INSTITUTE OF FISHERIES EDUCATION

ICAR-Central Institute of Fisheries Education (CIFE), in over 50 years of existence, has emerged as a Centre of Excellence in Higher Education in Fisheries and allied disciplines. The Institute was established on 6th June 1961, under the Ministry of Agriculture, Govt. of India with assistance from FAO/UNDP. It came under the administrative control of Indian Council of Agricultural Research (ICAR) in 1979. Considering the wide mandate involving education, research and extension and

recognizing the pivotal role played by CIFE in human resources development in fisheries, the institute was conferred the status of Deemed-to-be-University in 1989. The institute with its core strength in quality teaching, research and training has become a brand name in fisheries higher education. ICAR-CIFE is now placed in a new campus with state-of-the-art facilities and located about 8 km from the domestic and international airports and 20 km from Dadar railway station, a major rail terminus in Mumbai.

