

C. G. BHAKTA INSTITUTE OF BIOTECHNOLOGY, UKA TARSADIA UNIVERSITY

Report on Academic Visit to Central Institute of Fisheries Education, Andheri (W), Mumbai, India

On 19th March, 2018

No. of Student participants: 48 (Integrated M.Sc. Biotechnology Sem-8 and Integrated M.Sc. Microbiology Sem-8)

Faculty co-ordinators: 03 (Ms. Avani Pandya, Dr N Ch. Shrivathsa and Ms. Jemisha Mistry)

The basic idea behind the visit is to make students aware regarding recent trends of research in Aquaculture Biotechnology.

Students have visited total 5 different divisions including Fish genetics and biotechnology department, Fish rearing Unit (Division of Aquaculture), Fish nutrition and testing division, Proximate analysis lab, Aquatic animal and health management division at CIFE new campus.

Different sessions of visit were guided by Dr Aparna Chaudhary (Principal Scientist and head, Animal Biotechnology), and Dr Pavan Kumar (Scientist, Animal Biotechnology).

Students under the guidance of respective lab in charges, observed following instruments and their applications in research projects:

- 1). Gel Doc
- 2). Cooling centrifuge
- 3). RT-PCR
- 4). Kjeldhal unit
- 5). Soxhlet Apparatus

- **Fish genetics and Biotechnology department** deals with genetic improvement for economic traits in fish/shellfish, RNAi approach for vaccine development, Captive maturation of *P. monodon*, Gene characterization and expression studies, biosensors as pollution indicators and molecular taxonomy and molecular markers.
- The main research areas of this department include Genetic improvement of Fish, Molecular genetics and functional genomics.
- The concept of fish DNA barcoding was delivered by Dr. Pavan Kumar in which he had also emphasised various applications of biotechnology in field of Aquaculture.
- In **fish rearing unit and aquaculture division** they have studied pond culture of different fish varieties such as gold fish, tilapia and common carp.

- The aquaculture division also have the hydroponic facilities. Where they demonstrated that how fish culture can be integrated with other farming techniques.
- In **pathology section** students studied about common causative agents of fish diseases, what are the current trends in designing drug for such fatal pathogens like WSSV of Shrimps.
- This section also deals with use of medicinal plant extracts for development of antimicrobial agents.
- **Fish nutrition and testing department** conducts sample analysis of internal as well as external feed samples. They also design fish feed which has high nutrition efficiency and immunity boosters.

Over all experience of this visit was very fruitful for students and is expected to benefit students for academic and as well as dissertation work.

Group photo at CIFE



Students at Fish rearing unit, Aquaculture Division



Dr. Pavan Kumar delivering concept of DNA barcoding



Students at Proximate analysis lab

