

## **Final Report on IAFS-III International Training**

International Training on “Genome-wide Molecular Markers and their Applications in Fish Breeding” (9<sup>th</sup> to 18<sup>th</sup> December 2019) organized under the Indo-Africa Forum Summit – III and funded by the Ministry of External Affairs was inaugurated at CIFE, Mumbai on 9<sup>th</sup> December 2019. The trainees of this program hailed from 6 African countries Comoros, Kenya, Madagascar, Mauritius, Sudan and Tanzania and included 6 women and 2 men working as fisheries professionals in their countries. The Course Director of the program was Dr. Gopal Krishna, Director ICAR-CIFE, and the training Coordinator was Dr. Aparna Chaudhari, Head, FGB Division. The Co-Coordinators were Dr. S. Jahageerdar, Dr. Gireesh Babu P., Dr. A. Pavan Kumar and Dr. Mujahidkhan Pathan. The training included 20 hours of theory lectures and 60 hours of practical hands-on sessions. As required by the educational profile of the trainees, they were exposed to basic molecular biology techniques and methods of selective breeding by classical and marker assisted approaches. During practical sessions the participants learned how to develop genome-wide microsatellite markers by preparing a repeat enriched DNA library using hybridization technique. Hands-on learning included genomic DNA isolation, agarose gel electrophoresis, restriction digestion, enriched library preparation, cloning, PCR amplification, DNA sequence analysis and primer designing. Lectures were held on whole genome and transcriptome sequencing, data analysis and development of markers for genomic selection. The Training Manual was distributed on the inaugural day by the Chief Guest Dr. S. D. Tripathi (Former Director of ICAR-CIFE). On completion of the training, certificates were distributed by the Chief Guest Dr. A. E. Eknath (Former D.G. NACA and former Director ICAR-CIFA) and the Guest of Honour Dr. K. D. Mahapatra (Principal Scientist, Fish Genetics and Biotechnology Division, ICAR-CIFA). In their feedback the trainees expressed complete satisfaction with the training program, both in terms of knowledge acquired and overall arrangements. Some participants were of the view that the duration should have been longer. All trainees were certain that this experience would enable them to initiate new research in their countries and were eager to obtain higher education in this area. They thanked ICAR-CIFE and the Government of India for making this possible.



