

***In Silico* Characterization of selected Microsatellite Loci and Testing  
of Primers for PCR Amplification in Zebrafish.**

A dissertation submitted to St Xavier's College - Autonomous

For the partial fulfillment of the degree of Master of Science in Biotechnology

By

**Ms. Luvita Thommana**

MSc. (Biotechnology)



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2019-2020

Under the guidance of

**Dr. M. A. Pathan**

**ICAR- Central Institute of Fisheries Education (CIFE)**

**POST GRADUATE DEPARTMENT OF BIOTECHNOLOGY**

St Xavier's College (Autonomous)

5, Mahapalika Marg, Mumbai -400001



**CERTIFICATE**

This is to certify that **Ms. Luvita Thommana**, student of MSc (Biotechnology) - SemesterIV, at the Post Graduate Department of Biotechnology, St. Xavier's College (Autonomous) has submitted the dissertation work titled "***In Silico* Characterization of Selected Microsatellite Loci and Testing of Primers for PCR Amplification in Zebrafish**" for the partial fulfillment of the Master's degree in Science in Biotechnology, during the academic year 2019-2020.

**Date: 28/07/2020**

**Place: Mumbai**

A handwritten signature in blue ink, appearing to read 'Dr. Karuna Gokarn', is written over a horizontal line.

**Dr. Karuna Gokarn**

**Head of the Department, PGDBT**

POST GRADUATE DEPARTMENT  
OF BIOTECHNOLOGY  
ST. XAVIER'S COLLEGE,  
MUMBAI-400 001



भारतीय कृषि अनुसंधान परिषद  
केन्द्रीय मात्स्यिकी शिक्षा संस्थान

(वि. अ. आ. अधिनियम धारा-3 के अंतर्गत विश्वविद्यालय)

**ICAR-CENTRAL INSTITUTE OF FISHERIES EDUCATION**  
(University under Sec.3 of UGC Act)



**CERTIFICATE OF COMPLETION**

This is to certify that **Ms. Luvita Thommana**, student of MSc (Biotechnology), St. Xavier's College (Autonomous) has completed four months training / Research Project at the **ICAR- Central Institute of Fisheries Education (CIFE)**, during the academic year 2019-2020.

She has completed the dissertation work entitled "*In Silico* Characterization of Selected Microsatellite Loci and Testing of Primers for PCR Amplification in Zebrafish" for the partial fulfillment of MSc. (Biotechnology) degree. She has been familiarized with the following techniques during this project:

- Primer designing
- PCR
- Electrophoresis
- Ensemble

This carefully written report represents the experiments and literature related to the same carried out by her during the period from 1<sup>st</sup> December 2019 to 31<sup>st</sup> March 2020.

I found, Ms. Luvita Thommana to be a sincere and hardworking student. Her overall conduct was good.

PI/ supervisor: **Dr. M. A. Pathan**

Signature:

Date: 28/7/2020

Seal of the institute:

