



St. Xavier's College (Autonomous)
5, Mahapalika marg, Mumbai- 400001

**Investigating the role of mTOR in cell size regulation in
gsp/myoVb zebrafish mutant.**

A dissertation submitted to
St Xavier's College-(Autonomous)
For the partial fulfilment of the degree of Master of Science Biotechnology By

Neha Kumari

M.Sc. Biotechnology

(2019-2020)

Under the guidance of

Dr. Mahendra Sonawane

Tata Institute of Fundamental Research
Homi Bhabha Road, Navy Nagar, Colaba
Mumbai 400005

POST GRADUATE DEPARTMENT OF BIOTECHNOLOGY

St. Xavier's College, Mumbai (Autonomous)

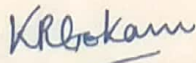
5, Mahalika marg, Mumbai - 400001

CERTIFICATE

This is to certify that Neha Kumari, student of MSc (Biotechnology) - Semester IV, at the Post Graduate Department of Biotechnology, St. Xavier's College (Autonomous) has submitted the dissertation work titled "Investigating the role of mTOR signaling in cell size regulation in *gsp/myoVb* zebrafish mutant" for the partial fulfilment of the Master's degree in Science in Biotechnology, during the academic year 2019-2020.

Date:

Place:



Dr. Karuna Gokarn

Head of the Department, PGDBT

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



TATA INSTITUTE OF FUNDAMENTAL RESEARCH

National Centre of the Government of India for Nuclear Science & Mathematics
(Deemed University)

1, Homi Bhabha Road, Colaba, Mumbai 400 005, INDIA

Telephone: 091-022-2278320/2332

Fax: 091-022-22804610/11

Email: dbstifr.office@gmail.com

Telegram: ZETESIS

Website: www.tifr.res.in

Department of Biological Sciences

June 19, 2020

CERTIFICATE OF COMPLETION

This is to certify that Neha Kumari, student of MSc (Biotechnology), St Xavier's College (Autonomous) has completed four months training/ Research Project at the Mahendra Sonawane Lab, Tata Institute of Fundamental Research during the academic year 2019-2020.

She has completed the dissertation work entitled "Investigating the role of mTOR in cell size regulation in *gsp/myoVb* zebrafish mutant" for the partial fulfilment of MSc. (Biotechnology) degree. She has been familiarized with the following techniques during this project:

- a) Fish handling
- b) One cell embryo microinjection
- c) Immunostaining
- d) Molecular biology techniques (like PCR, gel preparations, gel doc, gene cloning experiments)
- e) Microscopy (Zeiss Stereo Discovery with Axiocam And Zeiss Fluorescence Microscope with Apotome)

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

I found Neha Kumari to be a sincere and hardworking student. Her overall conduct was good.

19.06.2020

Dr. Mahendra Sonawane