



St Xavier's College (Autonomous)

5, Mahapalika Marg, Mumbai-400001

**GEOMETRIC CONFINEMENT CONTROLS THE PATTERNING OF STEM
CELLS**

A dissertation submitted to St Xavier's College-
Autonomous

For the partial fulfilment of the degree of Master of
Science in Biotechnology By

By

Ms. Pratiksha Sandeep Kavade

M.Sc. (Biotechnology)

2019-2020

Under guidance of

Prof. Abhijit Majumder.

Indian Institute of Technology, Bombay

POST GRADUATE DEPARTMENT OF BIOTECHNOLOGY

St. Xavier's College (Autonomous)

5, Mahapalika Marg, Mumbai- 400001



CERTIFICATE

This is to certify that **Ms. Pratiksha Sandeep Kavade**, student of MSc (Biotechnology) – Semester IV, at the Post Graduate Department of Biotechnology, St. Xavier's College (Autonomous) has submitted the dissertation work titled "**Geometric Confinement Controls the Patterning of Stem Cells**" for the partial fulfilment of the master's degree in Science in Biotechnology, during the academic year 2019-2020.

Date:

Place:

A handwritten signature in blue ink, appearing to read "K. Gokarn", is written over a faint, illegible stamp.

Dr. Karuna Gokarn

Head of the Department, PGDBT

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



Indian Institute of Technology Bombay

Abhijit Majumder, PhD
Associate Professor

CERTIFICATE OF COMPLETION


This is to certify that **Pratiksha Sandeep Kavade**, student of MSc (Biotechnology), St. Xavier's College (Autonomous) has completed four months training/ Research Project at the **M-lab, Department of Chemical Engineering, Indian Institute of Technology, Bombay** during the academic year 2019-2020.

She has completed the dissertation work entitled "**Geometric Confinement Controls the Patterning of Stem Cells**" for the partial fulfilment of MSc. (Biotechnology) degree. She has been familiarized with the following techniques during this project:

- a) Mammalian cell culture – Preservation and maintenance
- b) Polyacrylamide gel substrate preparation
- c) PDMS cylindrical stamp fabrication
- d) Microcontact printing

This carefully written report represents the experiments and literature related to the same carried out by her/him during the period from 1st December 2019 to 31st March 2020. I found, Pratiksha S. Kavade to be a sincere and hardworking student. Her overall conduct was good.

Principal Investigator: Prof. Abhijit Majumder

Signature: 

Date: 11th June 2020

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