

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:

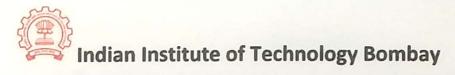
Place:

Dr. Karuna Gokarn

KRYokam

Head of the Department, PGDBT

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



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 1<sup>st</sup> December 2019 to 31<sup>st</sup> 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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