



**St. Xavier's College (Autonomous)**

**5, Mahapalika Marg, Mumbai-400001**

**IDENTIFICATION OF MECHANISMS BY WHICH LCN2 IS INVOLVED IN  
TUMOR INVASION**

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

By

Ms. Ruta Sunil Divekar

MSc. (Biotechnology)

2019-2020

Under the guidance of

Dr. Sorab N. Dalal

Advanced Centre for Treatment, Research and Education in Cancer

Tata Memorial Centre, Kharghar, Navi Mumbai-410210

POST GRADUATE DEPARTMENT OF BIOTECHNOLOGY

St. Xavier's College (Autonomous)

5, Mahapalika Marg, Mumbai-400001



CERTIFICATE

This is to certify that **Ms. Ruta Sunil Divekar**, a student of MSc. (Biotechnology) - Semester IV, at the Post Graduate Department of Biotechnology, St. Xavier's College (Autonomous) has submitted the dissertation work titled "**Identification of mechanisms by which LCN2 is involved in tumor invasion**" for the partial fulfilment of the Master's degree in Science in Biotechnology, during the academic year 2019-2020.

Date:

Place:

*KR Gokarn*

Dr. Karuna Gokarn

Head of Department, PGDBT

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## CERTIFICATE OF COMPLETION

This is to certify that **Ms. Ruta Sunil Divekar**, student of MSc. (Biotechnology), St. Xavier's College (Autonomous) has completed four months training/Research Project at the **Sorab Lab, Advanced Centre for Treatment, Research and Education in Cancer (ACTREC)** during the academic year 2019-2020.

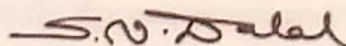
She has completed the dissertation work entitled "**Identification of mechanisms by which LCN2 is involved in tumor invasion**" for the partial fulfilment of the MSc. (Biotechnology) degree. She has been familiarized with the following techniques during this project:

- (i) Western Blotting
- (ii) SDS-PAGE
- (iii) Transformation
- (iv) Affinity Chromatography
- (v) Fast Protein Liquid Chromatography

This carefully written report represents the experiments and literature related to the same carried out by her during the period from 2<sup>nd</sup> December 2019 to 31<sup>st</sup> March 2020.

We/I found **Ms. Ruta Sunil Divekar** to be sincere and a hard-working student. Her overall conduct was good.

PI/Supervisor: **Dr. Sorab N. Dalal**

Signature: 

Date: 18<sup>th</sup> June, 2020



Seal of the Institute