



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

Assessment of cellular fibronectin protein levels in breast cancer

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

By

Neha Chandrakumar

MSc (Biotechnology) 2019-2020

Under the guidance of

Dr. Ujjwala M. Warawdekar Scientific Officer 'F'

Advanced Centre for Treatment, Research and Education in Cancer (ACTREC)

Tata Memorial Centre (TMC)

Post Graduate Department Of
Biotechnology
St Xavier's College (Autonomous)
5, Mahapalika Marg, Mumbai -400001



CERTIFICATE

This is to certify that Neha Chandrakumar, student of MSc (Biotechnology) - Semester IV, at the Post Graduate Department of Biotechnology, St. Xavier's College (Autonomous) has submitted the dissertation work titled "Assessment of cellular fibronectin protein levels in breast cancer" for the partial fulfilment of the Master's degree in Science in Biotechnology, during the academic year 2019-2020.

KR Gokarn

Dr. Karuna Gokarn

Head of the Department, PGDBT

POST GRADUATE DEPARTMENT
OF BIOTECHNOLOGY
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CERTIFICATE



टाटा स्मारक केंद्र
TATA MEMORIAL CENTRE

26637

कैंसर उपचार, अनुसंधान एवं शिक्षा का प्रगत केन्द्र
ADVANCED CENTRE FOR TREATMENT RESEARCH
& EDUCATION IN CANCER

- CANCER RESEARCH INSTITUTE
- CLINICAL RESEARCH CENTRE
- CENTRE FOR CANCER EPIDEMIOLOGY

प. ऊ. वि. भारत सरकार का एक सहायता अनुदान प्राप्त संस्थान
A GRANT-IN-AID INSTITUTION OF THE DEPARTMENT OF ATOMIC ENERGY, GOVT OF INDIA

CERTIFICATE OF COMPLETION

This is to certify that Ms. Neha Chandrakumar student of MSc (Biotechnology), St. Xavier's College (Autonomous) has completed four months training/ Research Project at the CRI Lab I, ACTREC, Tata Memorial Centre during the academic year 2019-2020.

She has completed the dissertation work entitled, "Assessment of cellular Fibronectin protein levels in breast cancer" for the partial fulfilment of MSc. (Biotechnology) degree. She has been familiarized with the following techniques during this project:

1. Preparation of Cell lysates
2. Estimation of total proteins
3. Poly Acrylamide Gel Electrophoresis
4. Western Blotting
5. Development of Blot and acquisition of Data using the Chemi Doc Imaging System

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 20th March 2020.

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

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Signature

Ujjwala M. Warawdekar

Date

17/06/2020

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जल्द इलाज होने पर कैंसर ठीक हो सकता है।

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Cancer is curable, if detected early