St Xavier's College (Autonomous)

5, Mahapalika Marg, Mumbai-400001

EVALUATION OF THE ANTI-PROLIFERATIVE MECHANISM OF GOLD BHASMA ON MDA-MB-231 CELL LINE

A dissertation submitted to St. Xavier's College (Autonomous)

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

By

Bayaan Mushtaq Sarang

M.Sc. Biotechnology

2019-2020

Under the guidance of:

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POST GRADUATE DEPARTMENT OF BIOTECHNOLOGY

St. Xavier's College (Autonomous)

5, Mahapalika Marg, Mumbai -400001

CERTIFICATE

This is to certify that **Ms. Bayaan Sarang**, student of MSc (Biotechnology)- Semester IV, at the Post Graduate Department of Biotechnology, St. Xavier's College (Autonomous) has submitted the dissertation work titled **"Evaluation of the anti-proliferative mechanism of gold bhasma on MDA-MB-231 cell line"** for the partial fulfilment of the Master's degree in Science in Biotechnology, during the academic year 2019-2020.

Date: 14.06.20

Place: Mumbai

Dr. Karuna Gokarn

Head of the Department, PGDBT

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CERTIFICATE OF COMPLETION

This is to certify that **Ms. Bayaan Sarang**, student of MSc (Biotechnology), St. Xavier's College (Autonomous), has completed her training/ Research Project at **the Experimental Cancer Therapeutics and Chemical Biology lab, UM-DAE Centre for Excellence in Basic Sciences** during the academic year 2019-2020.

She has completed the dissertation work entitled **"Evaluation of the anti-proliferative mechanism of gold bhasma on MDA-MB-231 cell line"** for the partial fulfilment of MSc. (Biotechnology) degree. She has been familiarized with the following techniques during this project:

a) Mammalian cell line culture and cell viability assay
b) Detection of intracellular ROS
c) Detection of cell death using Annexin V/PI assay
d) Purification of tubulin

This 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 Bayaan Sarang to be a sincere and hardworking student. Her overall conduct was good.

PI/Supervisor: Dr. Manu Lopus
Signature:
Date: 14.06.2020

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