



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:

Dr. Manu Lopus

School of Biological Sciences

UM-DAE Centre for Excellence in Basic Sciences,

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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

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



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UM-DAE Centre for Excellence in Basic Sciences
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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.

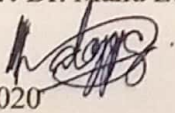
She has completed the dissertation work entitled "**Evaluation of the anti-proliferative mechanism of gold bhasma on MDA-MB-231 cell line**" for the partial fulfilment of MSc. (Biotechnology) degree. She has been familiarized with the following techniques during this project:

- Mammalian cell line culture and cell viability assay
- Detection of intracellular ROS
- Detection of cell death using Annexin V/PI assay
- 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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