



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

“Isolation and optimization of prodigiosin pigment and serratia peptidase from *Serratia Marcescens*: An alternative to harmful dyes.”

A dissertation submitted to St Xavier's College- Autonomous

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

By

Savio J Miranda

MSc Biotechnology 2019-2020

Under the Guidance of

Mrs. Nilima Pawar

Sequence Biotech Pvt.Ltd.

Gat-208, Wadivarhe. Nashik-422403

POST GRADUATE DEPARTMENT OF BIOTECHNOLOGY

St Xavier's College (Autonomous)

5, Mahapalika Marg, Mumbai -400001



CERTIFICATE

This is to certify that Savio J Miranda, student of MSc (Biotechnology) - Semester IV, at the Post Graduate Department of Biotechnology, St. Xavier's College (Autonomous) has submitted the dissertation work titled **"Isolation and Optimization of Prodigiosin Pigment and Serratia Peptidase from Serratia Marcescens: AN ALTERNATIVE TO HARMFUL DYES"** for the partial fulfilment of the Master's degree in Science in Biotechnology, during the academic year 2019-2020.

Date: 14/6/2020

Place: Mumbai

Dr. Karuna Gokarn

Head of the Department, PGD

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



CERTIFICATE OF COMPLETION

This is to certify that Savio J Miranda, student of MSc (Biotechnology), St Xavier's College (Autonomous) has completed four months training/ Research Project at the Sequence Biotech Industries lab during the academic year 2019-2020

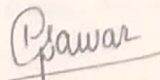
He has completed the dissertation work entitled "Isolation and Optimization of Prodigiosin Pigment and Serratia Peptidase from Serratia Marcescens: AN ALTERNATIVE TO HARMFUL DYES" for the partial fulfilment of MSc. (Biotechnology) degree. He has been familiarized with the following techniques during this project:

- Bioinstrumentation : Laboratory Fermenter (5 Lit Capacity), Chiller, & Ultrafiltration
- Agricultural Products: Biopesticide & Bio fertilizer Production & understood the products from the formulae level to development and application.
- Fermentation : Enzyme Production (Upstream & Downstream process)
- Process Design & Plant setup for fermentation

This carefully written report represents the experiments and literature related to the same carried out by him during the period from 1st December 2019 to 31st March 2020.

I found Savio J Miranda to be a sincere and hardworking student. His overall conduct was good

Supervisor/PI: Ms Nilima S Pawar

Signature: 

Date: 12th June 2020

Seal of the institute:

