# Morphological studies of bacteria and identification of Vibrio spp. found in tidepools of Anjuna, Goa

A Dissertation for

Course code and Course Title: MSD 480 Dissertation

Credits: 8

Submitted in partial fulfilment of Master's Degree

M.Sc. in Marine Sciences

by

### SAIESH SANTOSH BHANDARI

21P040002

Under the Supervision of

## DR. CHANDRASHEKHER U. RIVONKER

School of Earth, Ocean and Atmospheric Sciences

Marine Sciences



Goa University

**MAY 2023** 



Seal of the School

Examined by:

DECLARATION BY STUDENT

I hereby declare that the data presented in this Dissertation / Internship report entitled

"Morphological studies of bacteria and identification of Vibrio spp. found in

tidepools of Anjuna, Goa" is based on the results of investigations carried out by me

in the Marine Sciences at the School of Earth, Ocean and Atmospheric Sciences, Goa

University under the Supervision/Mentor-ship of Dr. Chandrashekher U. Rivonker

and the same has not been submitted elsewhere for the award of a degree or diploma

by me. Further, I understand that Goa University or its authorities will be not be

responsible for the correctness of observations / experimental or other findings given

the dissertation.

I hereby authorize the University authorities to upload this dissertation on the

dissertation repository or anywhere else as the UGC regulations demand and make it

available to any one as needed.

Seat No.: 21P040002

M.Sc. Marine Sciences

School of Earth, Ocean and Atmospheric Sciences

Date: 2 05 2023

Place: Goa University

## **COMPLETION CERTIFICATE**

This is to certify that the dissertation / internship report "Morphological studies of bacteria and identification of Vibrio spp. found in tidepools of Anjuna, Goa" is a bonafide work carried out by Mr. Saiesh Santosh Bhandari under my supervision/mentorship in partial fulfilment of the requirements for the award of the degree of Master of Sciences in the Discipline Marine Sciences at the School of Earth, Ocean and Atmospheric Sciences, Goa University.

Date: April, 2023

Dr. C. U. Rivonker

Senior professor and Dean

Marine Sciences

School of Earth, Ocean and Atmospheric Sciences

Date:

Place: Goa University

Dr. Chandrashekher U. Rivonk

Dr. Chandrashekher U. Rivonker Senior professor and Dean Marine Sciences

UNIVERSITY S

School Stamp

#### **ACKNOWLEDGEMENTS**

I would like to express my sincere gratitude to my dissertation guide Dr. Chandrashekher U. Rivonker, Senior Professor and Dean, School of Earth, Ocean and Atmospheric Sciences, Goa University, for his invaluable guidance and unwavering support throughout my dissertation. His insightful feedback and constructive advice have been invaluable in shaping my work.

My sincere thanks to the School of Earth, Ocean and Atmospheric Sciences, Goa University, for providing the facilities required for successful completion of my work.

The teaching staff at SEOAS have been a constant source of inspiration and knowledge, especially from the Marine Science department, and I am grateful for their guidance and mentorship throughout my program.

I would also like to extend my appreciation to the non-teaching staff, including the lab assistants and office staff, for their tireless efforts. Their assistance and cooperation have been crucial in the smooth progress of my work.

I would like to express special thanks to Dr. Maheshwar R. Nasnodkar, Dr. Sangeeta Naik, and Dr. Sheryl O. Fernandes for clarifying my doubts whenever I asked for help.

I would like to thank my friends Mr. Ankur Saini, Mr. Daksh Raikar, Ms. Mitali Chodankar, Mr. Aditya Kapuriya, Mr. Chandrashekar Gaonkar, Mr. Brijesh Gaonkar for helping me throughout my fieldwork. Without your help and support, this achievement would not have been possible.

Lastly, I would also like to thank my family and friends for their encouragement and support throughout my academic journey. Their unwavering support and belief in me have kept me motivated, even in the toughest of times.