



भा.क.अ.प - केन्द्रीय रोपण फसल अनुसंधान संस्थान

प्रादेशिक केंद्र, विट्टल-574 243, कर्नाटक

ICAR CENTRAL PLANTATION CROPS RESEARCH INSTITUTE

REGIONAL STATION, VITTAL 574243, KARNATAKA



Email: coenvt@gmail.com

HEAD 08255 265289,

Fax 08255239666

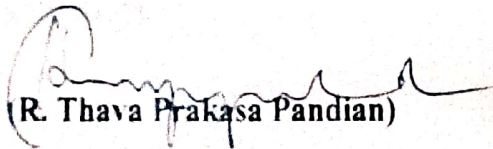
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F.No. 6(16)PW/PME

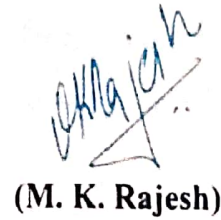
Dated: 25.07.2024

### CERTIFICATE

This is to certify that the project dissertation titled “**Characterization of leaf spot disease using morphological and molecular tools in arecanut**” is a bonafide work by **Mr. ABHIRAMA N G. (P05AZ22S132074)** towards the partial fulfillment of M. Sc. degree in Microbiology, Academic Year 2023-2024, **Mangalore University, Mangalagangothri**. This work is original and has not been submitted to any other university for any other degree or diploma.

  
(R. Thava Prakasa Pandian)

Guide

  
(M. K. Rajesh)

Head

Place: Vittal


एम. के. राजेश M. K. Rajesh  
प्रधान HEAD

भा.क.अ.प - केन्द्रीय रोपण फसल अनुसंधान संस्थान  
ICAR - Central Plantation Crops Research Institute  
प्रादेशिक केंद्र, विट्टल-574243, कर्नाटक  
Regional Station Vittal 574243, Karnataka


Date: 29.07.2024

## CERTIFICATE

This is to certify that **Ms. Deepika**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled "Creation of database of test and environmental bacterial taxa for supervised machine learning model to predict existing microbial diversity in a sample." under the guidance of Dr. Bhagwan Rekadwad, Associate Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

  
29/07/2024  
Dr. Bhagwan Rekadwad  
Associate Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Associate Professor  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

  
29.07.2024  
Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru - 575018



# YENEPOYA RESEARCH CENTRE



Certificate of Compliance  
ISO 17025:2017  
Certificate No: 21209  
07 FEB 2024 - 11 FEB 2025  
Certificate of Compliance  
GLP (Good Laboratory Practices)  
07 FEB 2024 - 11 FEB 2025

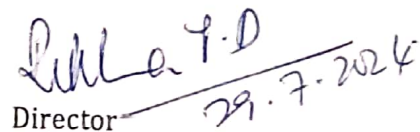
Date: 29.06.2024

## CERTIFICATE

This is to certify that Mr. Deeksha K S, pursuing MSc microbiology, Department of Biosciences, Mangalore University has successfully completed the internship on a project entitled " Preparation, Characterization and Antimicrobial Application of Gum Arabic -Ruthenium sulfide -Silver nanoparticles." under the supervision of Dr. J. Venkatesan, Assistant Professor, Division of Smart Materials and Devices at Yenepoya Research Centre, Yenepoya (Deemed to be University) from 19<sup>th</sup> March 2024 to 30<sup>th</sup> June 2024.

  
29/07/24

Dr. J. Venkatesan  
Assistant Professor  
Division of Smart Materials and Devices  
Yenepoya Research Centre

  
29.7.2024

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru - 575018





# YENEPOYA RESEARCH CENTRE

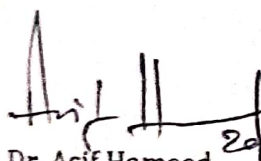


Certificate of Compliance  
ISO 17025:2017  
Certificate No: 21209  
07 FEB 2024 - 11 FEB 2026  
Certificate of Compliance  
GLP (Good Laboratory Practices)  
07 FEB 2024 - 11 FEB 2026

Date: 29.07.2024

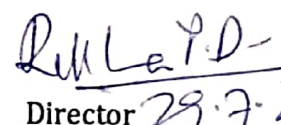
## CERTIFICATE

This is to certify that **Ms. Keerthi Shetty**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled **"Sensing of Multiple drug resistance *Pseudomonas aeruginosa* from raw vegetables and fruits using reporter phage."** under the guidance of Dr. Asif Hameed, Assistant Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

  
29.07.2024

Dr. Asif Hameed  
Assistant Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru-575018

  
29.7.2024

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Professor  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)





# YENEPOYA RESEARCH CENTRE

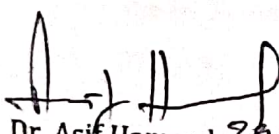


Certificate of Compliance  
ISO 17025:2017  
Certificate No. 21209  
07 FEB 2024 - 11 FEB 2026  
Certificate of Compliance  
GLP (Good Laboratory Practices)  
07 FEB 2024 - 11 FEB 2026

Date: 29.07.2024

## CERTIFICATE

This is to certify that **Ms. SHRUTHI**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled "**Application of phage RuSa 1 as a sensor for the detection of Methicillin-resistant *Staphylococcus aureus* in raw milk and milk products.**" under the guidance of Dr. Asif Hameed, Assistant Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

  
Dr. Asif Hameed 29.07.2024

Assistant Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Assistant Professor  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

  
Director 29.7.2024

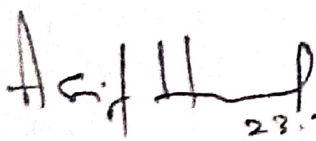
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru-575018


Date: 23.07.2024

## CERTIFICATE

This is to certify that Ms. N S SWATHI, 2nd MSc Microbiology, Department of Biosciences, Mangalore University has successfully completed her Internship on the project titled "**Identification and characterization of phytomedicines with antifungal activity against *Candida glabrata*.**" under the guidance of Dr. Asif Hameed, Assistant Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

  
23.7.2024

Dr. Asif Hameed  
Assistant Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

  
23.7.2024

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

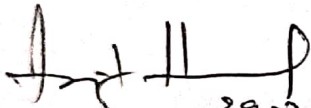
Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)



Date: 29.07.2024

## CERTIFICATE

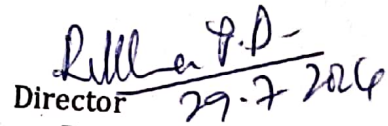
This is to certify that **Ms. Neha D**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled "**Isolation and characterization of Jumbo phages against *Salmonella* causing food poisoning.**" under the guidance of Dr. Asif Hameed, Assistant Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.



29.07.2024

Dr. Asif Hameed  
Assistant Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Assistant Professor  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)



Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru - 575018

## CERTIFICATE

This is to certify that **Ms. Shresta Kamath** (Reg No: P05AZ22S132056) has completed a project work titled " Isolation and characterization of waste degrading bacteria from soil " during the month of September - October, 2023 under the guidance of Dr. Divyashree M in the Department of Environmental Health and Toxicology at Nitte University Centre for Science Education and Research (Nitte Deemed to be University).

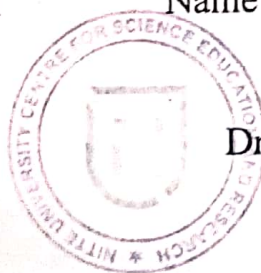
Name and signature of Head of Institution

Prof. Dr. Anirban Chakraborty

**DIRECTOR**  
NITTE UNIVERSITY  
CENTRE FOR SCIENCE EDUCATION & RESEARCH  
NITTE(DU) Paneer Campus, Deralakatte-Beer Road,  
Mangalore-575018, INDIA

Name and signature of the  
Guide

Dr. Divyashree M







Date: 29.07.2024

## CERTIFICATE

This is to certify that **Ms. Lavanya N**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled **"Isolation & characterization of Pigment Produced by Bacteria, and Evaluation of its Potential Applications"** under the guidance of Dr. Rekha P.D., Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

*Rekha P.D.*  
29.7.2024  
Dr. Rekha P.D.  
Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Professor  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)


*Rekha P.D.*  
29.7.2024  
Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)


Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru-575018

Date: 29.07.2024

## CERTIFICATE

This is to certify that **Ms. Shwetha**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled "**Antagonistic effect of Turmeric extract against *Enterococcus* species isolated from colon cancer patients.**" under the guidance of Dr. Rajesh P. Shastry, Associate Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

  
29.07.2024  
Dr. Rajesh P. Shastry  
Associate Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

  
29.7.2024  
Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Associate Professor  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)


Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangalore - 575018



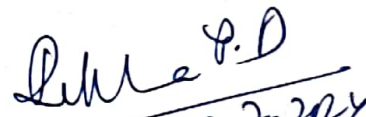
Date: 29.07.2024

## CERTIFICATE

This is to certify that **Ms. Smitha S Patil**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled "**Agr- Gene Expression in Uropathogenic *Staphylococcus aureus* and its Association with Virulence Profile: An *In Vitro* Study**" under the guidance of Dr. Rekha P.D., Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

  
Dr. Rekha P.D.  
Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru-575018

  
Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru-575018

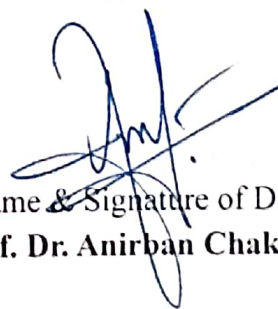
## CERTIFICATE

This is to certify that the dissertation titled "Isolation and Identification of endophytic bacteria from *Lantana species* from different regions of coastal Karnataka" is a bonafide research work carried out by **Mr. Satyanarayanarao Udapi** under the guidance of **Dr. Ramya Harsha** at Nitte University Centre for Science Education and Research, Nitte (Deemed to be University), Mangalore.

This certificate is issued upon request by the student for submission to the Department of Biosciences, Mangalore University.



Name & Signature of Guide  
**Dr. Ramya Harsha**



Name & Signature of Director  
**Prof. Dr. Anirban Chakraborty**







# YENEPOYA RESEARCH CENTRE




Certificate of Compliance  
ISO 17025:2017  
Certificate No. 11103  
07 FEB 2024 - 11 FEB 2026  
Certificate of Compliance  
GLP (Good Laboratory Practices)  
07 FEB 2024 - 11 FEB 2026


29.07.2024

## CERTIFICATE

This is to certify that Ms. SHWETHA, 2nd M.Sc Microbiology, Department of Biosciences, Mangalore University has successfully completed a Internship for the project titled "Proteogenomic Analysis of *Staphylococcus aureus* - A widespread pathogen with critical public health impact" in the Division of Systems Biology and Molecular Medicine under the guidance of Dr. T.S. Keshava Prasad, Professor, Yenepoya Research Centre, Yenepoya (Deemed to be University) from April 2024 to June 2024.

  
29/07/2024

Dr. T.S. Keshava Prasad  
Professor  
Division of Systems Biology and Molecular Medicine  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

  
29.7.2024

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Mangalore, Mangalore 575018

University Road, Deralakatte, Mangaluru - 575018  
Ph: +91 8242204668/69/70, Ext. 2035; Email: research@yenepoya.edu.in, director@yenepoya.edu.in



# YENEPOYA RESEARCH CENTRE



Certificate of Compliance  
ISO 17025:2017  
Certificate No. 21209  
07 FEB 2024 - 11 FEB 2026  
Certificate of Compliance  
GLP (Good Laboratory Practices)  
07 FEB 2024 - 11 FEB 2026

Date: 22.07.2024

## CERTIFICATE

This is to certify that Ms. SHREYARAI K, 2nd M.Sc Microbiology, Department of Biosciences, Mangalore University has successfully completed a Internship for the project titled "Proteogenomic analysis of *Klebsiella pneumoniae* - an opportunistic pathogen causing sepsis " in the Division of Systems Biology and Molecular Medicine under the guidance of Dr. T.S. Keshava Prasad, Professor, Yenepoya Research Centre, Yenepoya (Deemed to be University) from April 2024 to June 2024.

Dr. T.S. Keshava Prasad  
Professor  
Division of Systems Biology and Molecular Medicine  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangalore, India



Date: 29.07.2024

## CERTIFICATE

This is to certify that **Ms. Ashmitha**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled **"Exploring the Adaptation of Uropathogenic *Escherichia coli* Strains to Urinary Tract and their Antibiotic Resistance Profile"** under the guidance of Dr. Rekha P.D., Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

*Rekha P.D.*

Dr. Rekha P.D. 29.7.2024  
Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru-575018

*Rekha P.D.*

Director 29.7.2024  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)


Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangaluru-575018




Date: 23.07.2024

## CERTIFICATE

This is to certify that **Mr. Akshaya Ganiga**, MSc Microbiology, Mangalore University has successfully completed his internship on the project titled "**Validation of isolated antibiotic resistant bacterial taxa for presence of genes coding biomolecules responsible for Neurodegeneration.**" under the guidance of Dr. Bhagwan Rekadwad, Associate Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from March 2024 to June 2024.

  
24/7/2024

Dr. Bhagwan Rekadwad  
Associate Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

  
26.7.2024

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Mangalore, Karnataka - 575018

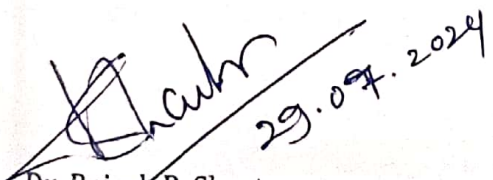




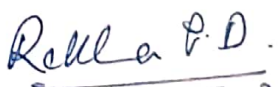
Date: 29.07.2024

## CERTIFICATE

This is to certify that **Ms. Vishrutha**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled **"Effect of AHL analogue as antiquorum sensing against opportunistic pathogens *Chromobacterium violaceum* and *Pseudomonas aeruginosa*."** under the guidance of Dr. Rajesh P. Shastry, Associate Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

  
Dr. Rajesh P. Shastry  
Associate Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Associate Professor  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

  
Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

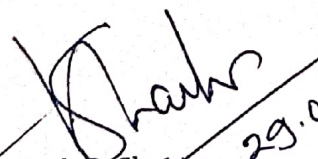
Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Deralakatte, Mangalore - 575018

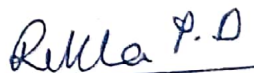


Date: 29.07.2024

## CERTIFICATE

This is to certify that **Ms. Sushmitha K**, MSc Microbiology, Department of Biosciences, Mangalore University, has successfully completed her internship on the project titled "**Growth modulation effects of Flax seed extract on opportunistic pathogens *Streptococcus gallolyticus* and *Streptococcus mutans*.**" under the guidance of Dr. Rajesh P. Shastry, Associate Professor, Division of Microbiology and Biotechnology, Yenepoya Research Centre, Yenepoya (Deemed to be University), Mangalore from April 2024 to June 2024.

  
29.07.2024  
Dr. Rajesh P. Shastry  
Associate Professor  
Division of Microbiology and Biotechnology  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

  
29.7.2024  
Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Associate Professor  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

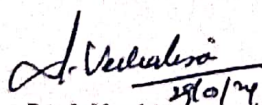
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
Mangalore, Karnataka 575018



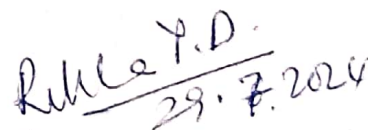
Date: 29.06.2024

## CERTIFICATE

This is to certify that Ms. Helryn Riya Rebello, pursuing MSc microbiology, Department of Biosciences, Mangalore University has successfully completed the internship on a project entitled " Gum Arabic Mediated Liquid Exfoliation of Ruthenium Sulfide Nanosheets and their Incorporation of Gentamicin: Preparation, Characterization and Antimicrobial Applications." under the supervision of Dr. J. Venkatesan, Assistant Professor, Division of Smart Materials and Devices at Yenepoya Research Centre, Yenepoya (Deemed to be University) from 19<sup>th</sup> March 2024 to 30<sup>th</sup> June 2024.



Dr. J. Venkatesan  
Assistant Professor  
Division of Smart Materials and Devices  
Yenepoya Research Centre



Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)

Director  
Yenepoya Research Centre  
Yenepoya (Deemed to be University)  
University Road, Mangalore - 575018



# MANGALORE UNIVERSITY

Department of Biosciences

Mangalagangothri-574199

Karnataka, India.

## Certificate

This is to certify that the project work entitled **"Phytochemical Analysis and Antibacterial Properties of Pomegranate Peel Extracts"** is a bonafide work of **Ms. AYSHA SHANIYA (Reg. No.P05AZ22S132052)** towards the partial fulfillment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of **Ms. Athira Pattolath**, guest faculty, Department of Biosciences, Mangalore University, Mangalore.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2024

Examiners:

1.

2.

Chairperson  
**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





## MANGALOREUNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka, India.

### Certificate

This is to certify that the project work entitled “Antibacterial properties and phytochemical analysis of *Citrus limon* peel extract” is a bonafide work of Ms. SHAFINA FATHIMA (Reg.No. P05AZ22S132073) towards the partial fulfillment of M.Sc. degree in Microbiology, Mangalore University carried out during the academic year 2023-24 under the guidance of Ms. Athira Pattolath, Guest faculty, Department of Biosciences, Mangalore University. This work is original and has been not submitted in part of full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2024

Examiners:

Chairperson

**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)



# MANGALORE UNIVERSITY

Department of Biosciences  
Mangalagangothri-574199  
Karnataka, India.

## Certificate

This is to certify that the project work entitled **Characterization of Endophytic bacteria and fungi from *Hibiscus rosa sinensis*: Biochemical and Antimicrobial Activity** is a bonafide work of **Mr. ASWITH RAI (Reg. No. PO5AZ22S132082)** towards the partial fulfillment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2023-2024, under the guidance of **Dr. SUSHMA K S**, guest faculty, Department of Biosciences, Mangalore University.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31/07/2024

Chairperson

**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





# MANGALORE UNIVERSITY

Department of Biosciences

Mangalagangothri-574199

Karnataka, India.

## Certificate

This is to certify that the project work entitled “Isolation and characterization of pathogenic bacteria from street foods and their susceptibility test” is a bonafide work of Ms. Varsha.P (Reg. No.P05AZ22132059) towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2022-23, under the guidance of Dr. ZEPHYR C Kottayil, faculty, Microbiology Course, Department of Biosciences, Mangalore University. This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2024

Chairperson  
CHAIRPERSON

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





## MANGALORE UNIVERSITY

Department of Biosciences

Mangalagangothri-574199

Karnataka, India

### CERTIFICATE

This is to certify that the project work entitled "Isolation and Identification of Marine Bacteria from Kodi Beach using MALDI-TOF and its Bioactive potential" is a bonafide work of **Ms. Pooja (Reg. No. P05AZ22S132044)** towards the partial fulfilment of M.Sc., degree in Microbiology, Mangalore University, carried out during the academic year 2023 -24, under the guidance of **Mrs. Annapoorna**, faculty, Microbiology Programme, Department of Biosciences, Mangalore University.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: *Mangalagangothri*

Date: *31/07/2024*

Chairperson

**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





## MANGALORE UNIVERSITY

Department of Biosciences

Mangalagangothri-574199

Karnataka, India

### CERTIFICATE

This is to certify that the project work entitled "Isolation and identification of bacteria from mangrove soil" is a bonafide work of **Mr. Nishanth Kumar (Reg. No. P05AZ22S132060)** towards the partial fulfilment of M.Sc., degree in Microbiology, Mangalore University, carried out during the academic year 2023 -24, under the guidance of **Dr. Nannu Shafakatullah**, faculty, Microbiology Programme, Department of Biosciences, Mangalore University.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31/07/2024

Chairperson

**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





# MANGALORE UNIVERSITY

Department of Biosciences, Mangalagangothri-574199 Karnataka, India.

## Certificate

This is to certify that the project work entitled “Antibacterial Properties and Phytochemical Analysis of *Areca catechu* seeds” is a bonafide work of Ms. VAISHNAVI (Reg. No.P05AZ22S132053) towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of Ms.Athira Pattolath, Professor, Department of Microbiology in the Mangalore University, Mangalagangothri, Konaje. This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2021

### Examiners:

1.

2.

  
Chairperson  
**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





# MANGALORE UNIVERSITY

Department of Biosciences  
Mangalagangothri-574199  
Karnataka, India

## Certificate

This is to certify that the project work entitled “Microbiological Study of Raw Milk” is a bonafide work of **Ms. SUSHRAVYA K (Reg. No. P05AZ22S132071)** towards the partial fulfilment of M.Sc. degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of **Dr. Zephyr C. Kottayil**, Department of Biosciences Mangalore University.

This work is original and has not been submitted in part or full to any other university for any degree or diploma.

Place: Mangalagangothri

Date: 31 - 07 - 2024

**Examiners:**

1.

2.

**Chairperson**  
**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)



## MANGALORE UNIVERSITY

Department of Biosciences  
Mangalagangothri-574199  
Karnataka, India

### Certificate

This is to certify that the project work entitled “Identification of Marine bacteria using MALDI-TOF and its bioactive Potential” is a bonafide work of **Ms. Keerthi (Reg. No. P05AZ22S132064)** towards the partial fulfilment of M.Sc., degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of Mrs Annapoorna, Department of Biosciences Mangalore University, Mangaluru.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2024

Chairperson  
**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





## MANGALORE UNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka, India.

### Certificate

This is to certify that the project work entitled is a bonafide work of **Ms. LATHA M S** (Reg. No.P05AZ22S132079) towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2022-24, under the guidance of **DR. NANNU SHAFAKATULLAH** Professor, Department of Biosciences Mangalagangothri-574199. This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 30.07-2024

Examiners:

1.

2.

Chairperson  
**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)



## MANGALORE UNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka, India.

### Certificate

This is to certify that the project work entitled “Assessment of Microflora in Fresh Vegetables sold on street vendors” is a bonafide work of Ms. Greeshma PT (Reg. No.P05AZ22S132054) towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2022-23, under the guidance of Dr. Zephyr C. Kottayil, faculty, Microbiology Course, Department of Bio-Sciences, Mangalore University.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 30.07.2024

**Chairperson**  
**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





# MANGALORE UNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka, India.

## Certificate

This is to certify that the project work entitled “**Isolation of bacteria from dirty cloth and antibacterial effect of detergents**” is a bonafide work of Ms. N Shipali (Reg. No.P05AZ22S132048) towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2022-24, under the guidance of **Dr. Sushma K S**, Guest faculty, Department of Microbiology. This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31/07/2024

Chairperson

**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)



## MANGALORE UNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka,  
India.

### Certificate

This is to certify that the project work entitled “ Isolation and identification of endophytic fungi from *Moringa oleifera* Leaves ” is a bonafide work of Ms. AKSHATHA .N (Reg. No.P05AZ22S132057) towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of Dr.Nannu shafakatullah, Professor, Department of Microbiology in Mangalore University. This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2024

Chairperson  
**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





# MANGALORE UNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka, India.

## Certificate

This is to certify that the project work entitled “**Microbial Analysis of Cows Urine**” is a bonafide work of **Ms. RUTHU ANN FERNANDES (Reg. No. P05AZ22S132045)** towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2022-24, under the guidance of **Dr. Sushma K S**, Guest faculty, Department of Microbiology. This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31.07.2024.

**Chairperson**

**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)



# MANGALORE UNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka, India.

## Certificate

This is to certify that the project work entitled “Assessment of microflora in fresh fruits sold by street vendors” is a bonafide work of Ms. Shradda G (Reg. No. P05AZ22S132047) towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2022-23, under the guidance of Dr. Zephyr C. Kottayil, Guest faculty, Microbiology Course, Department of Bio-Sciences, Mangalore University.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2024

Chairperson  
CHAIRPERSON

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





## MANGALORE UNIVERSITY

Department of  
Biosciences  
Mangalagangothri-574199  
Karnataka, India

### Certificate

This is to certify that the project work entitled “**Effectiveness of natural substances on gram positive and gram negative bacteria isolated from human skin**” is a Bonafide work of **Mr. Sourav S. Naik (Reg. No. P05AZ22S132049)** towards the partial fulfilment of M.Sc., degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of Mrs. Annapoorna, Department of Biosciences Mangalore University, Mangalore.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2024

Chairperson

**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)



## MANGALORE UNIVERSITY

Department of  
Biosciences  
Mangalagangothri-574199  
Karnataka, India

### Certificate

This is to certify that the project work entitled "BACTERIAL ANALYSIS OF WELL WATER" is a Bonafide work of **Mr. Varun Gond (Reg. No. P05AZ22S132046)** towards the partial fulfilment of M.Sc., degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of Mrs. Athira Pattolath, Department of Biosciences Mangalore University, Mangalore.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31/07/24

Chairperson  
**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





## MANGALORE UNIVERSITY

Department of Biosciences  
Mangalagangothri-574199  
Karnataka, India

### Certificate

This is to certify that the project work entitled "Evaluation of Medicated and Non-medicated Soaps for Antibacterial Effects on Skin Microbiota" is a Bonafede work of **Mr. Sarvesh Pednekar (Reg. No. P05AZ22S132043)** towards the partial fulfilment of M.Sc., degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of Dr. Sushma KS, Department of Biosciences Mangalore University, Mangalore.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31/07/24

Chairperson

**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)



## MANGALORE UNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka, India.

### Certificate

This is to certify that the project work entitled "Isolation and Identification of bacteria from Mimosa pudica Rhizosphere soil with weed control and antipathogenic activities" is a bonafide work of **Ms. VAISHNAVI (Reg. No. P05AZ22S132072)** towards the partial fulfilment of M.Sc. degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of **Dr. Nannu Shafakatullah** Department of Biosciences Mangalore University.

This work is original and has not been submitted in part or full to any other university for any degree or diploma.

Place: Mangalagangothri

Date: 31/07/2024

**Examiners:**

1.

2.

  
**Chairperson**  
**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)





## MANGALORE UNIVERSITY

Department of Biosciences  
Mangalagangothri-574199  
Karnataka, India

### Certificate

This is to certify that the project work entitled “Characterisation of marine bacteria from malpe sea water with its bioactive potential” is a Bonafede work of **Ms. Ankitha** (Reg. No. **P05AZ22S132075**) towards the partial fulfilment of M.Sc., degree in Microbiology, Mangalore University, carried out during the academic year 2023-24, under the guidance of Mrs. Annapoorna, Department of Biosciences Mangalore University, Mangalore.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31-07-2024

Chairperson

**CHAIRPERSON**

Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)



# MANGALORE UNIVERSITY

Department of Biosciences Mangalagangothri-574199 Karnataka,  
India.

## Certificate

This is to certify that the project work entitled **“Isolation and identification of microorganisms from Chicken Slaughter house”** is a bonafide work of Ms. Vinisha (Reg. No.P05AZ22S132058) towards the partial fulfilment of M.Sc. Degree in Microbiology, Mangalore University, carried out during the academic year 2022-23, under the guidance of **Dr. Zephyr C. Kottayil**, guest faculty, Microbiology Course, Department of Bio-Sciences, Mangalore University.

This work is original and has not been submitted in part or full to any other University for any degree or diploma.

Place: Mangalagangothri

Date: 31.07.2024

  
**Chairperson**  
**CHAIRPERSON**  
Department of Biosciences  
Mangalore University  
Mangalagangothri 574 199  
Karnataka State (India)