

**ISOLATION OF MARINE BACTERIUM AND EVALUATION OF
EFFECT IN WASTE WATER TREATMENT**

A project report submitted to the UNIVERSITY OF CALICUT in partial
fulfillment

of the requirement for the award of degree of

BACHELOR OF SCIENCE IN MICROBIOLOGY

BY

IFNA K (EMAVSMB010)

FARHANA SHIRIN.M (EMAVSMB003)

HINANA ELACHOLA (EMAVSMB009)

GOVIND C (EMAVSMB037)

VIKANAND (EMAVSMB052)



DEPARTMENT OF MICROBIOLOGY

EMEA COLLEGE OF ARTS AND SCIENCE

(Affiliated to the University of Calicut)

Re-accredited with 'A' grade by NACC

KUMMINIPARAMBA (PO), KONDOTTY, MALAPPURAM (DT), KERALA,

INDIA, PIN: 673638



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KUMMINIPARAMBA (PO), KONDOTTY, MALAPPURAM (DT), KERALA,

INDIA, PIN: 673638

(Accredited with 'A' Grade by NACC)

CERTIFICATE

This is to certify that IFNA.K (EMAVSMB010), FARHANA SHIRIN.M (EMAVSMB003), HINANA ELACHOLA (EMAVSMB009), GOVIND C (EMAVSMB037) and VIKANAND (EMAVSMB052) are bonafide students of EMEA College of Arts and Science, Kondotty, has done the project on **“ISOLATION OF MARINE BACTERIUM AND EVALUATION OF EFFECT IN WASTE WATER TREATMENT ”** submitted to the Calicut University in partial fulfillment for the requirement of award of Bachelor of Science in Microbiology under the guidance and supervision of Mrs. DHANYA VIJAYAN of Merit Biolabs, Kochi during the academic year 2023-2024.


Dr. SHIJI THOMAS


Head of the Department

Department of Microbiology

EMEA College of Arts and Science,

Kondotty

External examiner

1. Dr. Pramima PP 
- 2.

Dr. SHIJI THOMAS
HOD, Dept. Of MICROBIOLOGY
E.M.E.A. COLLEGE OF ARTS & SCIENCE
KONDOTTY, MALAPPURAM, Pin: 673 638

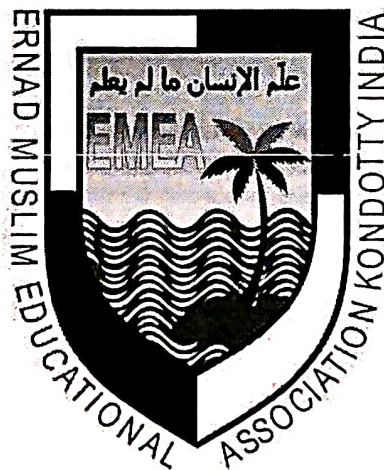
**“MOLECULAR CHARACTERIZATION AND SCREENING OF
NITROGEN FIXING BACTERIA ISOLATED FROM RHIZOSPHERE
SOIL OF LEGUMINOUS PLANTS TO DEVELOP A POTENTIAL
BIOFERTILIZER”**

A Project Report submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the
requirement for the award of degree of

BACHELOR OF SCIENCE IN MICROBIOLOGY

BY

HIBA SHERI A P	EMAVSMB008
NISMAH SALEEM	EMAVSMB015
SADEEDA M K	EMAVSMB016
RISANA K	EMAVSMB034
ABHINAV T H	EMAVSMB051



DEPARTMENT OF MICROBIOLOGY
E.M.E.A COLLEGE OF ARTS AND SCIENCE, KONDOTTY
(Aided by govt. of Kerala, Affiliated to the University of Calicut)
(Accredited with 'A' Grade by NAAC)
KUMMINIPARAMBA (PO), MALAPPURAM, KERALA,
PIN : 673638



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(Affiliated to the University of Calicut)


Kumminiparambu (PO), Kondotty, Malappuram (DT) ,

Kerala, India, PIN : 673638

(Accredited with 'A' Grade by NAAC)

CERTIFICATE

Certified bona-fide project work entitled “MOLECULAR CHARACTERIZATION AND SCREENING OF NITROGEN FIXING BACTERIA ISOLATED FROM RHIZOSPHERE SOIL OF LEGUMINOUS PLANTS TO DEVELOP A POTENTIAL BIOFERTILIZER” submitted to Calicut University in partial fulfilment of the requirement for the award of Bachelor of Science in Microbiology under the guidance and supervision of **Mr. Jismon Thomas, supervising guide, VETA GENOMICS PVT LTD, THRISSUR** during the academic year 2023-2024.


Dr. SHIJI THOMAS
HEAD OF DEPARTMENT
DEPARTMENT OF MICROBIOLOGY
EMEA COLLEGE OF ARTS AND SCIENCE
KONDOTTY
P.O. KUMMINIPARAMBU

Dr. SHIJI THOMAS
HOD, Dept. Of MICROBIOLOGY
E.M.E.A. COLLEGE OF ARTS & SCIENCE
KONDOTTY, MALAPPURAM, Pin: 673 638

EXTERNAL EXAMINER :

1. Dr. Ramina PP 

2.

ANTIBACTERIAL ACTIVITY OF SECONDARY METABOLITE EXTRACTED FROM *Streptomyces* sp. AGAINST BIOFILM PRODUCING BACTERIA ISOLATED FROM BUCCAL CAVITY

Project work submitted to UNIVERSITY OF CALICUT in partial fulfilment of the requirement of award for the degree of bachelor of science in microbiology 2023-2024

By

AJISHA NAZRIN.KV	EMAVSMB001
ASHWAG.CH	EMAVSMB043
SALMIYA.N	EMAVSMB017
FAHEEMA SRAMBIKKAL	EMAVSMB043
FATHIMA SHIRIN.PK	EMAVSMB006
MOHAMMED NAHAS.P	EMAVSMB024



DEPARTMENT OF MICROBIOLOGY
EMEA COLLEGE OF ARTS AND SCIENCE, KONDOTTY

Affiliated to the University of Calicut

Re-accredited with 'A' grade by NAAC

P. O. Kumminiparamba 673638

Malappuram Dist. Kerala- India




EMEA COLLEGE OF ARTS AND SCIENCE KONDOTTY

Affiliated to the university of Calicut
Re-accredited with 'A' grade by NAAC
P. O. Kumminiparamba-673638
Malappuram Dist. Kerala-India

CERTIFICATE

This is to certify that AJISHA NAZRIN.KV (EMAVSMB001), ASHWAG.CH (EMEVSMB042), SALMIYA.N (EMAVSMB017), FAHEEMA SRAMBIKKAL (EMAVSMB043), FATHIMA SHIRIN.PK (EMAVSMB006), MOHAMMED NAHAS.P (EMAVSMB024), a bonafide student of EMEA College of Arts and Science, Kondotty, has done the project entitled "ANTIBACTERIAL ACTIVITY OF SECONDARY METABOLITE EXTRACTED FROM *Streptomyces* sp. AGAINST BIOFILM PRODUCING BACTERIA ISOLATED FROM BUCCAL CAVITY," submitted to The Calicut University in partial fulfilment of the requirement for the award of Bachelor of Science in Microbiology under the guidance and supervision of Ms. DHANYA of Merit Biolabs, Kochi during the academic year 2023-2024.


Dr. SHIJI THOMAS
HEAD OF DEPARTMENT
DEPARTMENT OF MICROBIOLOGY
EMEA COLLEGE OF ARTS AND SCIENCE KONDOTTY
P.O. KUMMINIPARAMBU

Dr. SHIJI THOMAS
HOD, Dept. Of MICROBIOLOGY
E.M.E.A. COLLEGE OF ARTS & SCIENCE
KONDOTTY, MALAPPURAM, Pin: 673 638

EXTERNAL EXAMINER :

1. Dr. Pramima PP 
- 2.

STABILIZATION OF FRESH ORANGE JUICE BY USING PECTIN EXTRACTED FROM FRUIT PEEL

A Project Report submitted to UNIVERSITY OF CALICUT in partial fulfilment of the requirement for the award of the degree of Bachelor of science in microbiology 2023-2024

By

NAHLA SHIRIN C	EMAVSMB012
SAHAD ABDURAHMAN	EMAVSMB025
JEMSHEENA SHARIN	EMAVSMB044
ANANYA	EMAVSMB040
FATHIMA NIDHA	EMAVSMB005
ABDUL BASITH	EMAVSMB021



DEPARTMENT OF MICROBIOLOGY

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(Aided by govt.of kerala,Affiliated to University of Calicut)

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(Affiliated to the university of Calicut)
Kumminiparamba (PO), Kondotty, Malappuram
Kerala, India, PIN: 673638
(Accredited with 'A' Grade by NAAC)

CERTIFICATE

This is to certify that NAHLA SHIRIN C (EMAVSMB012), SAHAD ABDURAHMAN (EMAVSMB025), JEMSHEENA SHARIN (EMAVSMB044), ANANYA (EMAVSMB040), FATHIMA NIDHA (EMAVSMB005), ABDUL BASITH (EMAVSMB021) are bona-fide students of EMEA College of Arts and Science, Kondotty, has done the project on **“STABILIZATION OF FRESH ORANGE JUICE BY USING PECTIN EXTRACTED FROM FRUIT PEEL”** submitted to Calicut University in partial fulfilment of the requirement for the award of Bachelor of Science in Microbiology under the guidance and supervision of **Mrs. Danya Vijayan, of MERIT BIO LABS , COCHIN** during the academic year 2023-2024

Dr SHIJI THOMAS

HEAD OF DEPARTMENT

DEPARTMENT OF MICROBIOLOGY

EMEA COLLEGE OF ARTS AND
SCIENCE

KONDOTTY

Dr. SHIJI THOMAS
HOD, Dept. of MICROBIOLOGY
E.M.E.A. COLLEGE OF ARTS & SCIENCE
KONDOTTY, MALAPPURAM, Pin: 673 638

EXTERNAL EXAMINER :

1. Dr. Ramina PP

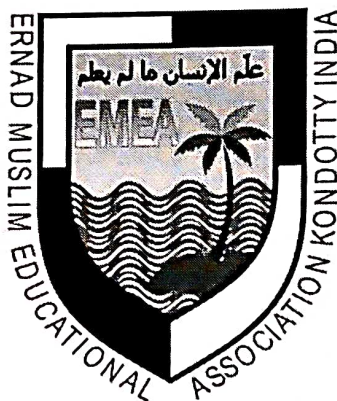
2.

**CHOCOLATE STAIN REMOVAL EFFICIENCY OF AMYLASE EXTRACTED
FROM BACTERIA**

A Project Report submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the requirement for the award of degree of Bachelor of science in microbiology 2023-2024

By

ELFA NASEEM	EMAVSMB002
HANOONA SHABOOM KP	EMAVSMB029
SHAHLA T S	EMAVSMB019
LAMIYA PARAYYIL	EMAVSMB031
FATHIMA FIDHA EV	EMAVSMB027



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E.M.E.A COLLEGE OF ARTS AND SCIENCE, KONDOTTY
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Kumminiparambu (PO), Kondotty, Malappuram (DT) ,

Kerala, India, PIN : 673638

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CERTIFICATE

This is to certify that ELFA NASEEM (EMAVSMB002), HANOONA SHABOOM KP (EMAVSMB029), LAMIYA PARAYIL (EMAVSMB031), SHAHLA TS (EMAVSMB019), FATHIMA FIDHA EV (EMAVSMB027), a bona-fide students of EMEA College Of Arts and Science, Kondotty, has done the project entitled "CHOCOLATE STAIN REMOVAL EFFICIENCY OF AMYLASE EXTRACTED FROM BACTERIA" submitted to Calicut University in partial fulfilment of the requirement for the award of Bachelor of Science in Microbiology under the guidance and supervision of Mrs. Dhanya Vijayan, Academic Coordinator, PVT MERIT BIO LABS, COCHIN during the academic year 2023-2024


Dr. SHIJI THOMAS

HEAD OF DEPARTMENT

DEPARTMENT OF MICROBIOLOGY

EMEA COLLEGE OF ARTS AND SCIENCE KONDOTTY

P.O. KUMMINIPARAMBU

Dr. SHIJI THOMAS
HOD, Dept. Of MICROBIOLOGY
E.M.E.A. COLLEGE OF ARTS & SCIENCE
KONDOTTY, MALAPPURAM, Pin: 673 638

EXTERNAL EXAMINER :

1. Dr. Ramina PP 

2.

**“SENSITIVE REAL TIME-PCR DETECTION OF PATHOGENIC *LEPTOSPIRA*
SP BY DEVELOPING A PRIMER SPECIFIC TO ITS OMPL1 GENE FOR THE
DETECTION OF LEPTOSPIROSIS”**

A Project Report submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the
requirement for the award of degree of
BACHELOR OF SCIENCE IN MICROBIOLOGY

BY

RUMANA ABDUL RAUF	EMAVSMB035
MUFEEDA PARVI C	EMAVSMB011
NASLA P C	EMAVSMB014
LIYANA SHIRIN K	EMAVSMB032
RAHUL S V	EMAVSMB038
MUBEENA	EMAVSMB046



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E.M.E.A COLLEGE OF ARTS AND SCIENCE, KONDOTTY
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CERTIFICATE

Certified bona-fide project work entitled “SENSITIVE REAL TIME-PCR DETECTION OF PATHOGENIC *LEPTOSPIRA* SP BY DEVELOPING A PRIMER SPECIFIC TO ITS OMPL1 GENE FOR THE DETECTION OF LEPTOSPIROSIS” submitted to Calicut University in partial fulfilment of the requirement for the award of Bachelor of Science in Microbiology under the guidance and supervision of **Mr. Jismon Thomas, supervising guide, VETA GENOMICS PVT LTD, THRISSUR** during the academic year 2023-2024.


Dr. SHIJI THOMAS

HEAD OF DEPARTMENT

DEPARTMENT OF MICROBIOLOGY


EMEA COLLEGE OF ARTS AND SCIENCE

KONDOTTY

P.O. KUMMINIPARAMBU

Dr. SHIJI THOMAS
HOD, Dept. Of MICROBIOLOGY
E.M.E.A. COLLEGE OF ARTS & SCIENCE
KONDOTTY, MALAPPURAM, Pin: 673 638

EXTERNAL EXAMINER :

1. Dr. Plamina PP 

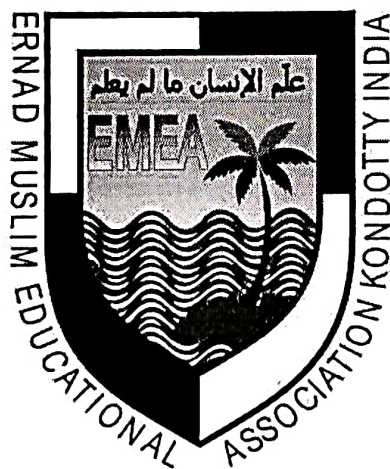
2.

**“DEVELOPMENT OF REAL TIME - PCR METHOD FOR RAPID DETECTION OF
PATHOGENIC ANAPLASMA SP IN CATTLES BY DESIGNING THE PRIMER
SPECIFIC TO VIRULENCE FACTOR MSP2”**

A Project Report submitted to the UNIVERSITY OF CALICUT in partial fulfillment of the
requirement for the award of degree of
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BY

FATHIMA FIDA K	EMAVSMB004
HASNA HALAM K	EMAVSMB030
SHIBINA SHIRIN	EMAVSMB036
JIFNA MOIDEEN	EMAVSMB045
NADHA FATHIMA P	EMAVSMB047



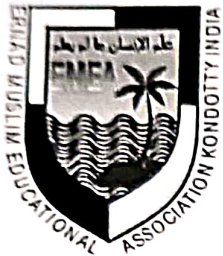
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Certified bona-fide project work entitled “DEVELOPMENT OF REAL TIME - PCR METHOD FOR RAPID DETECTION OF PATHOGENIC ANAPLASMA SP IN CATTLES BY DESIGNING THE PRIMER SPECIFIC TO VIRULENCE FACTOR MSP2” submitted to Calicut University in partial fulfillment of the requirement for the award of Bachelor of Science in Microbiology under the guidance and supervision of Mr. Jismon Thomas, supervising guide, VETA GENOMICS PVT LTD, THRISSUR during the academic year 2023-2024.

Dr. SHIJI THOMAS

HEAD OF DEPARTMENT

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MICROBIOLOGY

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KONDOTTY

P.O. KUMMINIPARAMBU

Dr. SHIJI THOMAS
HOD, Dept. Of MICROBIOLOGY
E.M.E.A. COLLEGE OF ARTS & SCIENCE
KONDOTTY, MALAPPURAM, Pin: 673 638

EXTERNAL EXAMINER:

1. Dr. Ramina PP

2.

ISOLATION OF POLY- β -HYDROXY BUTYRATE PRODUCING BACTERIA FROM MANGROVE SOIL

Project work submitted to UNIVERSITY OF CALICUT in partial fulfilment of the requirement of award for the degree of Bachelor of Science in microbiology 2023-2024

By

SHAHLA AK

(EMAVSMB018)



**DEPARTMENT OF MICROBIOLOGY
EMEA COLLEGE OF ARTS AND SCIENCE, KONDOTTY**

Affiliated to THE University of Calicut

Re-accredited with 'A' grade by NAAC

P.O Kumminiparamba-673638

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P.O Kumminiparamba -673638

Malappuram Dist.Kerala-India

CERTIFICATE

This is to certify that SHAHLA AK (EMAVSMB018), FATHIMA SAJA NK (EMAVSMB028), SHIFANA SHERIN KC (EMAVSMB020), ARYA SREE K (EMAVSMB041), FAHMIDA K (EMAVSMB026), SREEYUKTHA K (EMAVSMB050) a bonafide student of EMEA College of Arts and Science, Kondotty, has done the project entitled "ISOLATION OF POLY- β -HYDROXYBUTYRATE (PHB) PRODUCING BACTERIA FROM MANGROVE SOIL" submitted to The Calicut University in partial fulfillment of the requirement for the award of Bachelor of Science in Microbiology under the guidance and supervision of Mrs . Dhanya Vijayan of Merit biolabs, Kochi during academic year 2023-24

Dr.Shiji Thomas

Head of the Department

Department of Microbiology

EMEA College of arts and science,

kondotty

External examiner

1. Dr. Ramina P.P
- 2.

DR. SHIJI THOMAS
HOD, Dept. OF MICROBIOLOGY
E.M.E.A. COLLEGE OF ARTS & SCIENCE
KONDOTTY, MALAPPURAM, Pin: 673 638

PROBIOTIC POTENTIAL OF LACTIC ACID BACTERIAL STRAIN ISOLATED FROM HUMAN ORAL MICROBIOME

A Project report submitted to UNIVERSITY OF CALICUT in partial fulfilment of the requirement of award for the degree of bachelor of science in microbiology 2023 -2024

By

NASEERA BANU . K

(EMAVSMB048)



DEPARTMENT OF MICROBIOLOGY

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Certified bona-fide project work entitled "PROBIOTIC POTENTIAL OF LACTIC ACID BACTERIAL STRAIN ISOLATED FROM HUMAN ORAL MICROBIOME" submitted to Calicut University in partial fulfilment of the requirement for the award of Bachelor of Science in Microbiology under the guidance and supervision of Mrs. Dhanya Vijayan, Academic Coordinator, PVT MERIT BIOLABS, COCHIN during the academic year 2023-2024

Dr. SHIJI THOMAS
HEAD OF DEPARTMENT
DEPARTMENT OF MICROBIOLOGY
EMEA COLLEGE OF ARTS AND SCIENCE
KONDOTTY
P.O KUMMINIPARAMBA

External examiner:

1. Muhammed Taseel. A 
2. Dr. Lancelo. P.P 