



St. Thomas College, Pala

UGC APPROVED College with Potential for Excellence

CERTIFICATE

Certified that this is a bonafide report of the project work entitled
**“MEDICINAL PROPERTIES OF THE DIFFERENT
SOLVENT EXTRACTS OF THE FRUIT OF *Artocarpus
hirsutus* AGAINST CLINICALLY ISOLATED DIARRHEA
CAUSING *E. Coli*”** Carried out by **Mr. AJITH.M.R,** Reg.
No:160011013023 in the Department of Applied microbiology &
Biotechnology St. Thomas College, Pala, under the guidance of **Mr.
NOBY MATHEW** during the academic year 2015- 2017 towards the
partial fulfillment of the requirement for the award of Masters Degree in
Biotechnology under Mahatma Gandhi University.

Prof. James Joseph
Prof. James Joseph

HEAD, DEPT. OF BIOTECHNOLOGY
Course Coordinator

ST. THOMAS COLLEGE

Mr. Noby Mathew
Mr. Noby Mathew

Faculty Member

Dept. of Applied Microbiology & Biotechnology

St. Thomas College Palai

External examiner

Dr. Sajithkumar
Dr. Sajithkumar
31/8/17



St. Thomas College, Pala

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Affiliated to M.G. University Kottayam

DEPARTMENT OF APPLIED MICROBIOLOGY & BIOTECHNOLOGY

ARUNAPURAM P O, PALAI, KOTTAYAM, KERALA

CERTIFICATE

This is to certify that the project work entitled "STUDY ON THE EFFECT OF LOW LEVEL LASER ON EXPRESSION OF TELOMERASE REVERSE TRANSCRIPTASE IN HUMAN MELANOMA CELLS" is an authentic record of the work carried out by Ms. Amritha G.A, Reg. No: 150011015821 in the Department of Applied Microbiology & Biotechnology, St.Thomas College, Palai, under the guidance of Mr. Rajesh Ramachandran, Biogenix Research Center, Center for Molecular Biology and Applied Science, Poojapura, Trivandrum, Kerala and the internal guidance of Ms. PraveenaGeorge, Department of Applied Microbiology & Biotechnology, St.Thomas College, Palai during the academic year 2015-2017 towards the partial fulfillment of the requirement for the award of Masters Degree in Biotechnology under Mahatma Gandhi University.

Prof. James Joseph

Course Coordinator

Department of Applied Microbiology & Biotechnology

Ms. PraveenaGeorge

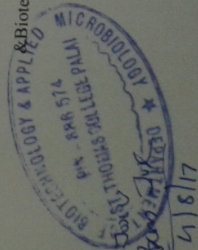
Lecturer

Department of Applied Microbiology

Department of Applied Microbiology & Biotechnology

Examiners

1. Dr. Poin
- 2.



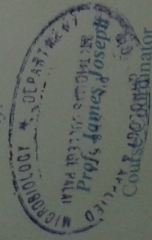


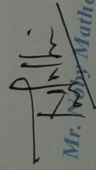
St. Thomas College, Pala

UGC APPROVED College with Potential for Excellence

CERTIFICATE

Certified that this is a bonafide report of the project work entitled
**ANTIBACTERIAL ACTIVITIES OF THE LEAF
EXTRACT OF *Hevea brasiliensis* AGAINST MASTITIS
CAUSING BACTERIAL PATHOGENS** Carried out by *Miss.*
ARCHANA MOHANAN, Reg. No: 150011014160 in the Department of
Applied microbiology & Biotechnology St. Thomas College, Pala, under
the guidance of **Mr. NOBY MATHEW** during the academic year 2015-
2017 towards the partial fulfillment of the requirement for the award of
Masters Degree in Applied Microbiology under Mahatma Gandhi
University.




Mr. Noby Mathew

Faculty Member

Dept. of Applied Microbiology & Biotechnology
St. Thomas College Pala

APPLIED MICROBIOLOGY & BIOTECHNOLOGY
ST. THOMAS COLLEGE, PALA



St. Thomas College, Pala

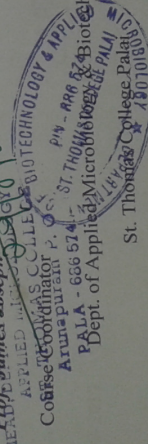
UGC APPROVED College with Potential for Excellence

CERTIFICATE

Certified that this is a bonafide report of the project work entitled
"ANTIBACTERIAL ACTIVITY OF FLOWER EXTRACTS OF *Caesalpinia pulcherrima* AGAINST EYE INFECTION CAUSING PATHOGENS" Carried out
by Miss. ATHIRA T. RAMESHAN, Reg. No:150011014161 in the Department of
Applied microbiology & Biotechnology St. Thomas College, Pala, under the
guidance of Mr. NOBY MATHEW during the academic year 2015- 2017 towards
the partial fulfillment of the requirement for the award of Masters Degree in
Biotechnology under Mahatma Gandhi University.

Prof. James Joseph
Head, Department of Applied Microbiology & Biotechnology
St. Thomas College Pala
Arundhaty P. O., Pala - 686 574
Dept. of Applied Microbiology & Biotechnology
St. Thomas College Pala
8070180809

Mr. Noby Mathew
Faculty Member



Examiner 1 Dr. S. Sajesh Kumar
Examiner 2 Dr. Ramesh Kumar Ramesh
2017

RANK	10	RANK
Bhushan Choudhary		Debabarna Dutta
TOTAL SELECTION 282		
RANK	10	RANK
Jayashri Ladke		



St. Thomas College, Pala

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CERTIFICATE

Certified that this is a bonafide report of the project work entitled "ANTIBACTERIAL ACTIVITY OF FLOWER EXTRACTS OF *Caesalpinia pulcherima* AGAINST EYE INFECTION CAUSING PATHOGENS" Carried out by Miss. ATHIRA T. RAMESHAN, Reg. No:150011014161 in the Department of Applied microbiology & Biotechnology St. Thomas College, Pala, under the guidance of Mr. NOBY MATHEW during the academic year 2015- 2017 towards the partial fulfillment of the requirement for the award of Masters Degree in Biotechnology under Mahatma Gandhi University.

Prof. JAMES JOSEPH
HEAD, DEPT. OF APPLIED MICROBIOLOGY & BIOTECHNOLOGY

COURSE COORDINATOR
ARUNAPURAM P. O.

PALA - 686 574

Dept. of Applied Microbiology & Biotechnology

St. Thomas College Pala

Mr. Noby Mathew

Faculty Member

Examiner 1 Dr. Sajesbhaman

Examiner 2

Rathnam Ramesh

30/8/2017



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DEPARTMENT OF APPLIED MICROBIOLOGY & BIOTECHNOLOGY

ARUNAPURAM P.O., PALAI, KOTTAYAM, KERALA

CERTIFICATE

This is to certify that the project work entitled “**Anticancer activity of Terminalia chebulaRetz in HepG2 liver cancer cell line**” is an authentic record of the work carried out by **Ms. Athira Unnikrishnan, Reg. No: 150011015820** in the Department of Applied Microbiology & Biotechnology, St.Thomas College, Palai, under the guidance of **Dr. P.J. Wills, PhD Senior Scientist, MIMS Research Foundation, Mayon building, Valayanad Temple Road, Mankavu P.O.Calicut-673 007, Kerala** and the internal guidance of **Ms. Simi Jacob Department of Applied Microbiology & Biotechnology, St.Thomas College, Palai** during the academic year 2015-2017 towards the partial fulfillment of the requirement for the award of Masters Degree in Biotechnology under Mahatma Gandhi University.

Prof. James Joseph

Course Coordinator

Department of Applied Microbiology

& Biotechnology

Examiners

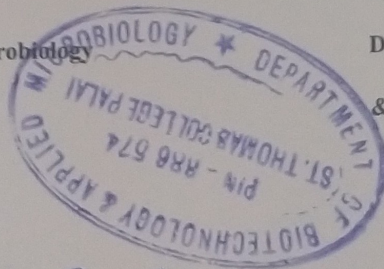
1. Dr. Paes Juv ✓
- 2.

Ms. Simi Jacob

Lecturer

Department of Applied Microbiology

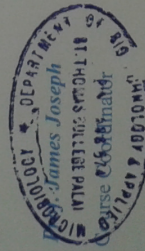
& Biotechnology

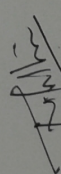


4/8/17

CERTIFICATE

Certified that this is a bonafide report of the project work entitled
**“ANTIBACTERIAL ACTIVITIES OF Piper longum LEAF EXTRACT
AGAINST DENTAL CARIES CAUSING CLINICAL ISOLATES”** carried
Out by Miss **ATHIRA V.M, Reg.No:** in the Department of Applied microbiology &
Biotechnology, St.Thomas College, Pala, under the guidance of **Mr. NOBY
MATHEW** during the academic year 2015- 2017 towards the partial fulfillment of
the requirement for the award of Masters Degree in Applied Microbiology under
Mahatma Gandhi University.

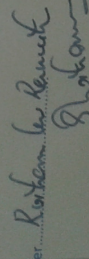



Mr. Noby Mathew

Supervising Guide

Dept. of Applied Microbiology & Biotechnology

St. Thomas College Palai



Examiner.....



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DEPARTMENT OF APPLIED MICROBIOLOGY & BIOTECHNOLOGY

ARUNAPURAM P O, PALAI, KOTTAYAM, KERALA

CERTIFICATE

This is to certify that the project work entitled "2-METHOXY ESTRADIOL MODULATES ESTROGEN- α RECEPTOR BINDING AND INDUCES CELL DEATH IN CERVICAL CANCER" is an authentic record of the work carried out by Ms. Bham Francis, Reg. No: 150011015821 in the Department of Applied Microbiology & Biotechnology, St. Thomas College, Palai, under the guidance of Mr. Rajesh Ramachandran, Biogenix Research Center, Center for Molecular Biology and Applied Science, Poojapura, Trivandrum, Kerala and the internal guidance of Ms. Praveena George, Department of Applied Microbiology & Biotechnology, St. Thomas College, Palai during the academic year 2015-2017 towards the partial fulfillment of the requirement for the award of Masters Degree in Biotechnology under Mahatma Gandhi University.

Prof. James Joseph

Course Coordinator

Department of Applied Microbiology

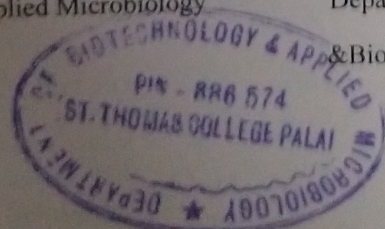
& Biotechnology

Ms. Praveena George

Lecturer

Department of Applied Microbiology

& Biotechnology



Examiners

1. Do. James Joseph *James Joseph*
4/8/17
- 2.



St. Thomas College, Pala

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CERTIFICATE

Certified that this is a bonafide report of the project work entitled

"EFFECT OF SODIUM BENZOATE ON XYLITOL PRODUCTION

BY *Debaryomyces nepalensis* NCYC 3413" Carried out by Ms. Bhavya S,

Reg. No: 150011015822 in the Department of Biotechnology, Indian

Institute of Technology, Madras under the guidance of Prof.

Sathyanarayana N. Gummadi during the academic year 2015-2017

towards the partial fulfillment of the requirement for the award of Masters

Degree in Biotechnology under Mahatma Gandhi University, Kottayam,

Kerala.

Prof. James Joseph

Course Coordinator

Department of Biotechnology

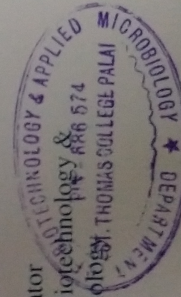
Applied Microbiology, THOMAS COLLEGE PALAI

Lecturer

Department of Biotechnology

& Applied Microbiology

Mrs. Anupama K S



Subodh
Dr. Peter Joseph
Gen. Secy
4/8/17



**DEPARTMENT OF APPLIED MICROBIOLOGY
& BIOTECHNOLOGY ST. THOMAS COLLEGE**

PALA

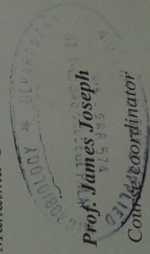
CERTIFICATE

Certified that this is a bonafide report of the project work entitled

**“OPTIMIZATION OF MEDIA FORMULATIONS FOR CALLUS
INDUCTION, AND DIRECT ORGANOGENESIS IN JUSTICIA
GENDARUSSA BURM FIL., AN EXOTIC MEDICINAL PLANT”**

Carried out by **ELIZABETH CHERLAN**, Reg. No: 150011015823 in the

Department of Applied microbiology & Biotechnology St. Thomas
College, Pala, under the guidance of **Mr. NOBY MATHEW** during the
academic year 2015- 2017 towards the partial fulfillment of the
requirement for the award of Masters Degree in Biotechnology under
Mahatma Gandhi University.



Mr. Noby Mathew
Faculty member

Department of Biotechnology
& Applied Microbiology

Department of Biotechnology
& Applied Microbiology

SELECTION 245

7

RANK



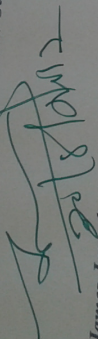
10

RANK

Researcher Ladke

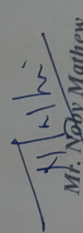
CERTIFICATE

Certified that this is a bonafide report of the project work entitled "Naregamia alata, A MEDICINAL REMADY FOR MASTITIS" Carried out by Miss. HANNA THOMAS, Reg. No:15001101416 in the Department of Applied microbiology & Biotechnology St. Thomas College, Pala, under the guidance of Mr. NOBY MATHEW during the academic year 2012- 2014 towards the partial fulfillment of the requirement for the award of Masters Degree in Applied microbiology under Mahatma Gandhi University.



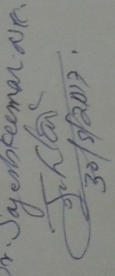
Prof. James Meseth

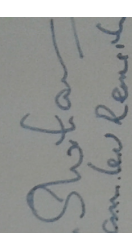
HEAD, DEPT. OF BIOTECHNOLOGY
Course Coordinator, DEPARTMENT OF BIOTECHNOLOGY
ST. THOMAS COLLEGE
Arunapuram P. O. INTD. SETTING SPOHHLIS
PALA - 688 579.
St. Thomas College Pala



Mr. Noby Mathew

Faculty Member

Examiner 1
Dr. Syobekumar N.R.

30/9/2017

Examiner 2  Roshan. K. R.



St. Thomas College, Pala

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CERTIFICATE

Certified that this is a bonafide report of the project work entitled
"Therapeutic Potential of *Passiflora edulis* var. *flavicarpa* Leaves
against *Streptococcus* Isolates from Decayed Tooth Sample "
Carried out by Mr. Jeevan Mathew, Reg. No:150011014166 in the
Department of Applied microbiology & Biotechnology St. Thomas College,
Pala, under the guidance of Mr. NOBY MATHEW during the academic year
2015- 2017 towards the partial fulfilment of the requirement for the award of
Masters Degree in Applied Microbiology under Mahatma Gandhi University.

Prof. Jeevan Mathew
HEAD, DEPARTMENT OF APPLIED MICROBIOLOGY & BIOTECHNOLOGY
ST. THOMAS COLLEGE, PALA
Trunapuram P. O. 719 822 - 443
Dept. of Applied Microbiology & Biotechnology
16010803000

St. Thomas College Pala

External Examiner 1

External Examiner 2

Dr. Jeevan Mathew

Dr. Jeevan Mathew

FOUNDED MICRO LECTURES

STUDY MATERIAL

stream / Online Class Plan

Monsoon Session (Target Dec. 2020)
BATCH START



**DEPARTMENT OF APPLIED MICROBIOLOGY
& BIOTECHNOLOGY ST. THOMAS COLLEGE
PALA**

CERTIFICATE

Certified that this is a bonafide report of the project work entitled
"THE INFLUENCE OF DIFFERENT HORMONE CONCENTRATION
AND COMBINATION ON DIRECT ORGANOGENESIS FROM THE
NODAL EXPLANTS OF ROUVOLFIA SERPENTINA(L.)BENTH" Carried
out by **JESNI K, Reg. No: 150011015824** in the Department of Applied
microbiology & Biotechnology St. Thomas College, Pala, under the
guidance of **Mr. NOBY MATHEW** during the academic year 2015- 2017
towards the partial fulfillment of the requirement for the award of Masters
Degree in Biotechnology under Mahatma Gandhi University.

James Joseph
Prof. James Joseph

Course Coordinator

Department of

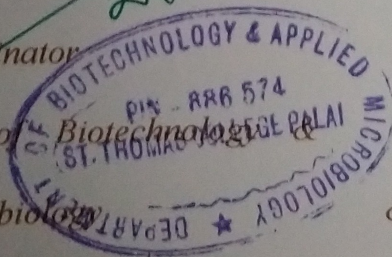
Applied microbiology

Noby Mathew
Mr. Noby Mathew

Faculty Member

Department of Biotechnology

& Applied Microbiology



Valuel
Dr. Poom Jose
Ben Jose
4/8/17

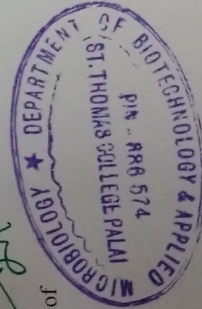


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CERTIFICATE

Certified that this is a bonafide report of the project work entitled “Introductory studies on morphological characterization and genomic DNA isolation of selected land races in the germplasm repository of small cardamom (*Elettaria cardamomum* Maton)” Carried out by Miss **JITYMOL SEBASTIAN**, Reg. No: 150011015826 in the Department of Biotechnology St. Thomas College, Pala, under the guidance of Miss **Anupama K.S.** during the academic year **2015-2017** towards the partial fulfilment of the requirement for the award of Masters Degree in Biotechnology under Mahatma Gandhi University.

Prof. James Joséph
Head of the Department of
Biotechnology
ST. Thomas College
Palai.



Miss: Anupama K.S.
Internal Project Guide
Department of Biotechnology
ST. Thomas college
Palai.

External viva- voce examination conducted on: 5.1.8.2017.....

External Examiner: Dr. Poom John Bern Joe
4/8/17

Place:

Date: 4/8/17



**DEPARTMENT OF APPLIED MICROBIOLOGY
& BIOTECHNOLOGY ST. THOMAS COLLEGE
PALA**

CERTIFICATE

Certified that this is a bonafide report of the project work entitled
"Efficient in vitro callus induction protocol for three endemic medicinal plants
Cyclea peltata, Naregamia alata, and Kaempferia galanga Linn" Carried out
by **LAKSHMI B NAIR**, Reg. No: **150011015827** in the Department of Applied
microbiology & Biotechnology St. Thomas College, Pala, under the guidance
of **Mr. NOBY MATHEW** during the academic year 2015- 2017 towards the
partial fulfillment of the requirement for the award of Masters Degree in
Biotechnology under Mahatma Gandhi University.

Prof. James Joseph

Course Coordinator

Department of

Applied microbiology

[Handwritten signature of Prof. James Joseph]

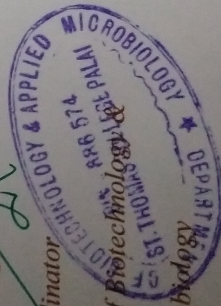
[Handwritten signature of Mr. Noby Mathew]

Mr. Noby Mathew

Faculty Member

Department of Biotechnology

& Applied Microbiology



[Handwritten notes: Subrah 2015, Dec 2015, 21/8/17]

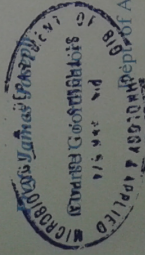


St. Thomas College, Pala

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CERTIFICATE

Certified that this is a bonafide report of the project work entitled
**“PHARMACOLOGICAL ACTIVITY OF LEAVES OF *Thespesia populnea*
 AGAINST CLINICAL ISOLATES FROM WOUND SAMPLES IN DIEBITIC
 PATIENTS”** Carried out by **Miss. LINTA MARIA THOMAS JOHN, Reg.**
 No:150011014167 in the Department of Applied microbiology & Biotechnology
 St.Thomas College, Pala, under the guidance of **Mr. NOBY MATHEW** during the
 academic year 2015- 2017 towards the partial fulfilment of the requirement for the
 award of Masters Degree in Biotechnology under Mahatma Gandhi University.



Mr. Noby Mathew

Faculty Member

Department of Applied Microbiology & Biotechnology

St. Thomas College Pala

TOTAL SELECTION 243

7 RANK



Jayashri Ladke

TOTAL SELECTION 282

Pushan Choudhary

10 RANK



**DEPARTMENT OF APPLIED MICROBIOLOGY
& BIOTECHNOLOGY ST. THOMAS COLLEGE
PALA**

CERTIFICATE

Certified that this is a bonafide report of the project work entitled

‘IN VITRO CULTURE STUDIES OF VERNONIA CINEREA (L.)

AN IMPORTANT MEDICINAL HERB” Carried out by **MARIYA**

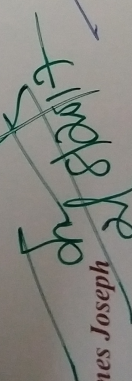
SUNNY, Reg. No: 150011015828 in the Department of Applied

microbiology & Biotechnology St. Thomas College, Pala, under the

guidance of **Mr. NOBY MATHEW** during the academic year 2015- 2017

towards the partial fulfilment of the requirement for the award of Masters

Degree in Biotechnology under Mahatma Gandhi University.

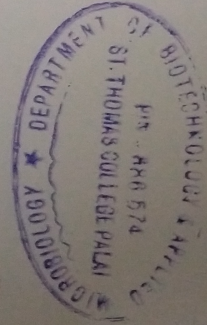

~~Mr. Noby Mathew~~

Prof. James Joseph

Course Coordinator

Department of Biotechnology &

Applied microbiology



Valued
Dr. James Joseph
Ben-Joe
6/8/17



St. Thomas College, Pala

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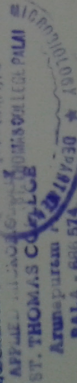
CERTIFICATE

Certified that this is a bonafide report of the research work entitled "INFECTION CONTROL ACTIVITY OF LEAFEXTRACTS OF Citruslimon AGAINSTMULTIDRUG RESISTANT CLINICALISOLATES FROM WOUND SAMPLE" Carried out by Miss. NAMITHA SURESH, Reg. No:150011014168 in the Department of Applied microbiology & Biotechnology St.Thomas College, Pala, under the guidance of Mr. NOBY MATHEW during the academic year 2012- 2014 towards the partial fulfillment of the requirement for the award of Masters Degree in Applied Microbiology under Mahatma Gandhi University.

Prof. James Joseph

Coordinator

Faculty Member



External Examiners.

1. Dr. Sajidkumar N/C.

[Signature]
2019/10/17

2. Dr. Suresh Kumar

[Signature]

RANK 10 RANK 10 RANK 10

Bhushan Choudhary Jayashri Laddu Pradiya Pachpatil Debanshi

- TOTAL SELECTION 282



**DEPARTMENT OF APPLIED MICROBIOLOGY
& BIOTECHNOLOGY ST. THOMAS COLLEGE
PALA**

CERTIFICATE

Certified that this is a bonafide report of the project work entitled

“Development of a simple, reproducible and efficient in vitro culture protocol for callus proliferation and direct organogenesis from nodal explants of *scoparia dulcis* linn, an exotic medicinal plant.” Carried out

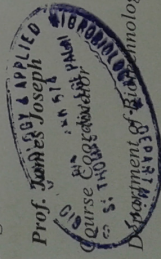
by PADMASREE P R, Reg. No: 150011015829 in the Department of

Applied microbiology & Biotechnology St. Thomas College, Pala, under the

guidance of Mr. NOBY MATHEW during the academic year 2015- 2017

towards the partial fulfilment of the requirement for the award of Masters

Degree in Biotechnology under Mahatma Gandhi University.



Mr. Noby Mathew

Faculty Member

Department of Biotechnology

& Applied Microbiology

Applied microbiology



St. Thomas College, Pala

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CERTIFICATE

Certified that this is a bonafide report of the project work entitled
**"ISOLATION AND CHARACTERIZATION OF ANKYRIN GENE
FROM PIPER NIGUM"** Carried out by **Miss. Reshma Krishnan S R,**
Reg. No: 150011015830 in the Department of Biotechnology & Applied
Microbiology St. Thomas College, Pala, under the guidance of **Mr. NOBY
MATHEW** during the academic year 2015 - 2017 towards the partial
fulfillment of the requirement for the award of Master's Degree in
Biotechnology under Mahatma Gandhi University.

[Signature]
Prof. James Joseph

Course Coordinator

Department of Biotechnology

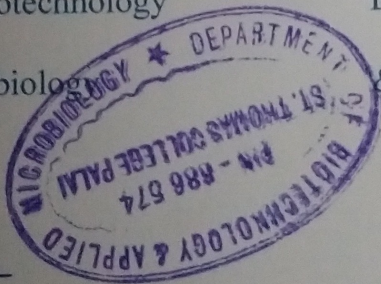
& Applied Microbiology

[Signature]
Mr. Noby Mathew

Lecturer

Department of Biotechnology

& Applied Microbiology



Valued
Dr. P. J. Jose
Bem Jose
4/8/17



St. Thomas College, Pala

UGC APPROVED College with Potential for Excellence

CERTIFICATE

Certified that this is a bonafide report of the project work entitled
**“DIFFERENTIAL EXPRESSION STUDY OF APOPTOSIS
INDUCING GENE IN ZINGIBER-PYTHIUM PATHOSYSTEM”**
*Carried out by Mr. Siva Prasad D.G, Reg. No: 150011015832 in the
Department of Biotechnology & Applied Microbiology St.Thomas College,
Pala, under the guidance of Mr. NOBY MATHEW during the academic
year 2015 - 2017 towards the partial fulfillment of the requirement for the
award of Master's Degree in Biotechnology under Mahatma Gandhi
University.*

Prof. James Joseph

Course Coordinator

Department of Biotechnology

& Applied Microbiology

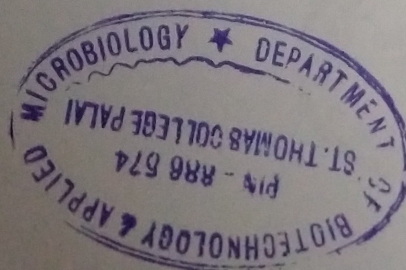
Mr. Noby Mathew

Lecturer

Department of Biotechnology

& Applied Microbiology

*Valueed
Dr. Peter Jose ✓
Peter Jose
4/8/17*



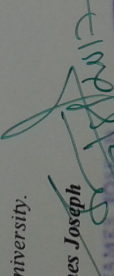
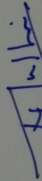


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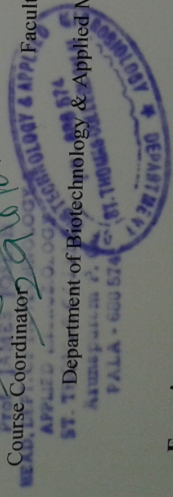
CERTIFICATE

Certified that this is a bonafide report on the project work entitled
**“BIOCONTROL ACTIVITY OF LEAF EXTRACT OF Solanum
torvum AGAINST MULTI DRUG RESISTANT SKIN
INFECTION CAUSING CLINICAL ISOLATES”** carried out by
*Miss. THEERTHA V.P., Reg. No:150011014176 in the Department of
Applied microbiology & Biotechnology St. Thomas College, Pala,
under the guidance of Mr. NOBY MATHEW during the academic
year 2015- 2017 towards the partial fulfillment of the requirement for
the award of Masters Degree in Applied Microbiology under Mahatma
Gandhi University.*

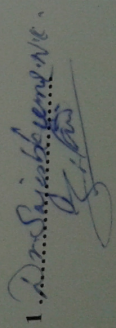
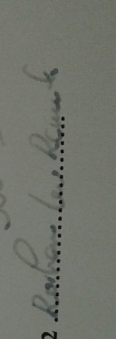
Prof. James Joseph 
Mr. Noby Mathew 

Course Coordinator Faculty Member

Department of Biotechnology & Applied Microbiology



Examiners :

1.  2. 



**DEPARTMENT OF APPLIED MICROBIOLOGY
& BIOTECHNOLOGY ST. THOMAS COLLEGE
PALA**

CERTIFICATE

*Certified that this is a bonafide report of the project work entitled "PLANTLET REGENERATION THROUGH INDIRECT ORGANOGENESIS AND OPTIMIZATION OF MEDIA FORMULATIONS FOR CENTELLA ASIATICA LINN." Carried out by VAISHNAJA MOHAN V, Reg. No: 150011015833 in the Department of Applied microbiology & Biotechnology St. Thomas College, Pala, under the guidance of **Mr. NOBY MATHEW** during the academic year 2015-2017 towards the partial fulfillment of the requirement for the award of Masters Degree in Biotechnology under Mahatma Gandhi University.*

Prof. James Joseph
Course Coordinator

Mr. Noby Mathew
Faculty Member

Department of Biotechnology & Applied microbiology
St. Thomas College Pala

