

**DEPARTMENT OF BOTANY  
MAHATMA GANDHI COLLEGE  
THIRUVANANTHAPURAM**

**PROJECT COMPLETION CERTIFICATE**


This is to certify that the project was submitted in partial fulfilment of the requirement for the award of the degree of Master of Science in Botany during the academic year 2022-23. The following students completed the project.

Sl. No.	Candidate Code	Name of the Candidate	Title of Project
1	64521118001	Akhila AG	Phytochemical Analysis and Biological Potentialities of <i>Luisia zeylanica</i> Lindl.
2	64521118002	Aparna B	Phytochemical Analysis and Biological Potentialities of <i>Pogonatum neesi</i> (Mull.Hal) Dozy.
3	64521118003	Aparna Chandran JS	Assessment of Phytoplankton Diversity as Indicators Along With Physiochemical Parameters in Water Quality Analysis of Three Selected Pond Ecosystem in Urban Area Trivandrum
4	64521118004	Joshna J Bosco	Morpho-anatomical and Phytochemical Analysis of <i>Lycopodium cernum</i> .Linn
5	64521118005	Mekha RS	Phytochemical Investigation of <i>In-vitro</i> conservation of <i>Amaranthus veridis</i> L. a Leafy Vegetable Plant of Kerala
6	64521118006	Reshma GS	Studies on <i>Centella asiatica</i> and <i>Hydrocotyle verticillata</i> : Taxonomical and Phytochemical Perspectives.
7	64521118007	Sandra Sreekumar	Preliminary Phytochemical Investigation on the Adulteration of Black Pepper ( <i>Piper nigrum</i> ) with Dry Fruits of <i>Macaranga peltata</i>
8	64521118008	Sanika Suresh	Phytochemical Screening, Nutritional, Antinutritional & Antioxidant Analysis of leaves of <i>Vigna unguiculata</i> L.Walp., an Underutilized Leafy Vegetable.
9	64521118009	Shilpa S Nair	Morpho-anatomical and Phytochemical Analysis of <i>Doryopteris ludens</i> (Wall.ex.Hook)



			J.Sm.
10	64521118010	Sreekutty R	Diversity & Influence of Freshwater Algae in Relation to Physico-chemical Water Quality Parameter in Selected Rural Aquatic Ecosystem of Thiruvananthapuram
11	64521118011	Sreelekshmi PS	Phytochemical Screening, Nutritional, Antinutritional & Antioxidant Analysis of <i>Portulaca oleraceae</i> L. an Underutilized Edible Weed
12	64521118012	Vrindha Viswam	Phytochemical Investigation of <i>Phyllanthus niruri</i> L. an ethno medicinal plant.



  
 Dr. Sivu. A.R.  
 Asst. Prof & IJED  
 Post Graduate Dept. of Botany  
 MG College, Thiruvananthapuram  
 Kerala-695004

**MORPHO-ANATOMICAL AND PHYTOCHEMICAL ANALYSIS  
OF DORYOPTERIS LUDENS (Wall. ex Hook.) J. Sm.**

**DISSERTATION  
SUBMITTED TO THE UNIVERSITY OF KERALA  
IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
DEGREE OF MASTER OF SCIENCE IN BOTANY**

**CANDIDATE CODE: 64521118009**

**PAPER CODE: BO 244**

**EXAM CODE: 64520402**



**POST GRADUATE AND RESEARCH DEPARTMENT OF BOTANY  
MAHATMA GANDHI COLLEGE  
AUGUST 2023**

74/5/23

A. V. V.

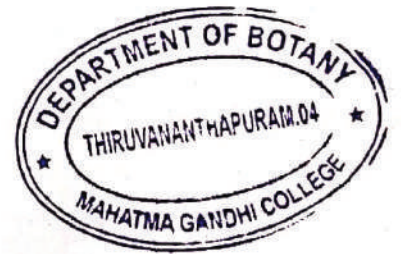
## CERTIFICATE

This is to certify that this dissertation "**Morpho-Anatomical and Phytochemical analysis of *Doryopteris ludens* (Wall. ex Hook.) J. Sm.**" is a record of research and analysis work done by Ms. Shilpa S Nair under my guidance and supervision and that this has not previously formed the basis for the award of any degree, diploma, fellowship to her.



**Dr. Sivu A R**

Assistant Professor &HOD  
Post Graduate and Research Department of Botany  
Mahatma Gandhi College, Thiruvananthapuram





**MORPHO-ANATOMICAL AND PHYTOCHEMICAL  
ANALYSIS OF LYCOPODIUM CERNUUM LINN.**

**DISSERTATION**

**SUBMITTED TO THE UNIVERSITY OF KERALA  
IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
DEGREE OF MASTER OF SCIENCE IN BOTANY**

**CANDIDATE CODE:64521118004**

**PAPER CODE:BO 244**

**EXAM CODE:64520402**



**POST GRADUATE AND RESEARCH DEPARTMENT OF BOTANY  
MAHATMA GANDHI COLLEGE, THIRUVANANTHAPURAM  
UNIVERSITY OF KERALA  
AUGUST 2023**

## CERTIFICATE

This is to certify that the dissertation "**Morpho-Anatomical and Phytochemical Analysis of *Lycopodium cernuum* Linn.**" is a record of the research and analysis work done by Ms. Joshna J Bosco under my guidance and supervision and that this has not previously formed the basis for the award of any degree, diploma, fellowship to her.

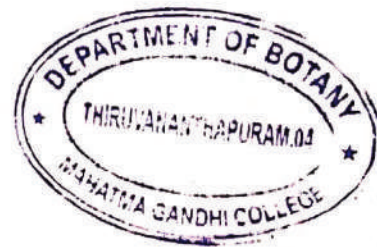


Dr.Sivu A R

Assistant Professor &HOD

Post Graduate And Research Department of Botany

Mahatma Gandhi College, Thiruvananthapuram



**PHYTOCHEMICAL ANALYSIS AND BIOLOGICAL  
POTENTIALITIES OF LUISIA ZEYLANICA Lindl.**

*Submitted to the University of Kerala in partial fulfilment for  
the requirements for award of Degree of Masters of Science in Botany*

**UNIVERSITY OF KERALA**

**AUGUST 2023**



**CANDIDATE NAME: AKHILA A G**

**CANDIDATE CODE:64521118001**



**Post graduate and Research Department of Botany  
Mahatma Gandhi College, Thiruvananthapuram**



CERTIFICATE

This is to certify that the project work entitled "Phytochemical Analysis and Biological Potentialities of *Luisia zeylanica* Lindl.," is based on the work carried out by Akhila A G, under the guidance of Dr. Manoj G S, Assistant Professor, Post Graduate Department of Botany & Research Centre M G College Thiruvananthapuram and has no part of this work has formed the basis for the award of any degree or diploma to any university.

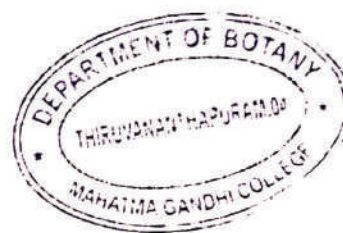


Supervising Teacher


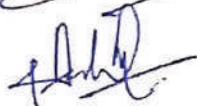
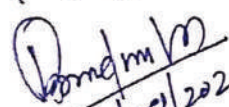


Head of the Department

Dr. MANOJ, GISG S  
Assistant Professor & Research Supervisor  
PG Department & Research Centre of Botany  
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Examiners

1.  14/9/23
2. 
3.  14/09/2023



**PHYTOCHEMICAL ANALYSIS AND BIOLOGICAL  
POTENTIALITY OF POGONATUM NEESHII (Müll. Hal.) Dozy**

*Submitted to the University of Kerala in partial fulfilment for  
the requirements for award of Degree of Master of Science in Botany*

**UNIVERSITY OF KERALA**

**AUGUST 2023**



**CANDIDATE NAME: APARNA B**

**CANDIDATE CODE: 64521118002**



**Post graduate and Research Department of Botany**

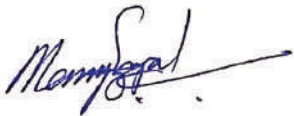
**Mahatma Gandhi College, Thiruvananthapuram**

**University of Kerala**

**2023**

### CERTIFICATE

This is to certify that the project work entitled “**Phytochemical analysis and biological potentiality of *Pogonatum neesii* (Müll. Hal.) Dozy**” is based on the work carried out by Aparna B, under the guidance of Dr. Manoj G S, Assistant professor, Post Graduate Department of Botany & Research center M.G Collage Thiruvananthapuram and has no part of this work has formed the basis for the award of any degree or diploma to any university.



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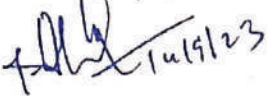
Dr. MANOJ. G.S  
Assistant Professor & Research Supervisor  
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Head of the department

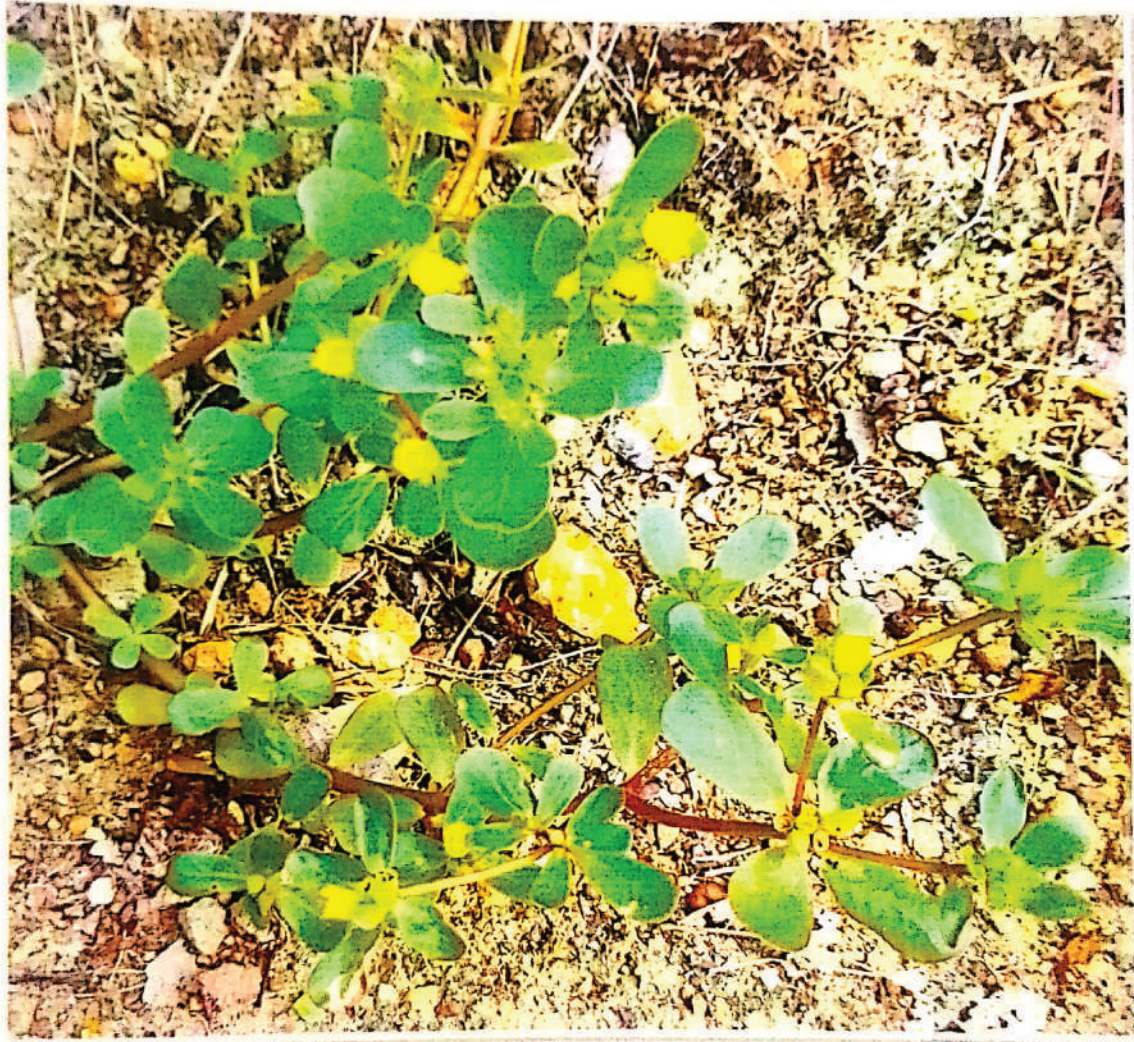


Examiners

- 1.  14/9/23
- 2.  14/9/23
- 3.



**PHYTOCHEMICAL SCREENING, NUTRITIONAL,  
ANTINUTRITIONAL AND ANTIOXIDANT ANALYSIS OF  
*Portulaca oleracea* L., AN UNDERUTILIZED EDIBLE WEED**



**DEPARTMENT OF BOTANY  
MAHATMA GANDHI COLLEGE  
THIRUVANANTHAPURM, 2023**



**PHYTOCHEMICAL SCREENING, NUTRITIONAL,  
ANTINUTRITIONAL AND ANTIOXIDANT ANALYSIS OF  
*Portulaca oleracea* L., AN UNDERUTILIZED EDIBLE WEED**

**DISSERTATION**

**SUBMITTED TO THE UNIVERSITY OF KERALA IN PARTIAL  
FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF  
DEGREE OF MASTER OF SCIENCE (M.Sc.) IN BOTANY**

**BY**

**SREELEKSHMI P S**

**Candidate code : 64521118011**

**Subject code : BO 244**

**Exam code : 64520402**



**POSTGRADUATE DEPARTMENT AND RESEARCH CENTRE OF BOTANY**

**MAHATMA GANDHI COLLEGE**

**THIRUVANANTHAPURAM - 695004**

**KERALA, INDIA**

**AUGUST 2023**

## CERTIFICATE

This is to certify that the dissertation entitled “**PHYTOCHEMICAL SCREENING, NUTRITIONAL, ANTINUTRITIONAL AND ANTIOXIDANT ANALYSIS OF *Portulaca oleracea* L., AN UNDERUTILIZED EDIBLE WEED**” is an authentic record of work carried out by **Sreelekshmi P S**, Candidate code: 64521118011 under the supervision of **Mrs. Sreelekshmi S**, Assistant Professor, in the Postgraduate Department and Research Centre of Botany, Mahatma Gandhi College, Thiruvananthapuram in partial fulfilment of the requirement for the award of Degree of Master of Science in Botany of the University of Kerala. No part of this work has been submitted earlier for the award of any degree or diploma in any of the Universities.

**Place: Thiruvananthapuram**

**Date:**

**Mrs. SREELEKSHMI S**

**Assistant professor**

**Department of Botany**



PHYTOCHEMICAL SCREENING, NUTRITIONAL,  
ANTINUTRITIONAL AND ANTIOXIDANT ANALYSIS OF  
LEAVES OF *Figna unguiculata* (L.) Walp., AN UNDERUTILIZED LEAFY  
VEGETABLE  
DISSERTATION

*Submitted to the University of Kerala in the partial fulfilment of the  
requirements for the degree of Master of Science in botany*

BY

SANIKA SURESH

CANDIDATE CODE: 64521118008

SUBJECT CODE: 645

EXAM CODE: 64520402



POSTGRADUATE AND RESEARCH DEPARTMENT OF BOTANY  
MAHATMA GANDHI COLLEGE  
THIRUVANANTHAPURAM  
KERALA

AUGUST, 2022

*[Signature]*

*[Signature]*  
14/9/23

*[Signature]*  
14/09/23



## CERTIFICATE

This is to certify that the dissertation entitled "**PHYTOCHEMICAL SCREENING, NUTRITIONAL, ANTINUTRITIONAL AND ANTIOXIDANT ANALYSIS OF LEAVES OF *Vigna unguiculata* (L.) Walp., AN UNDERUTILIZED LEAFY VEGETABLE**" is an authentic record of work carried out by **SANIKA SURESH**, Candidate code:64521118008 under the supervision of **Mrs. SREELEKSHMI.S**, Assistant Professor, in the Postgraduate Department and Research Centre of Botany, Mahatma Gandhi College, Thiruvananthapuram in partial fulfilment of the requirement for the award of degree of Master of Science in Botany of the University of Kerala. No part of this work has been submitted earlier for the award of any degree or diploma in any of the universities.

**Place: Thiruvananthapuram**

**Date:**

**Mrs. SREELEKSHMI S**

**Assistant Professor in Botany**

**DIVERSITY AND INFLUENCE OF FRESH WATER ALGAE IN  
RELATION TO PHYSICO – CHEMICAL WATER QUALITY  
PARAMETERS IN SELECTED RURAL AQUATIC ECOSYSTEMS OF  
THIRUVANANTHAPURAM**

**DISSERTATION**

**SUBMITTED TO UNIVERSITY OF KERALA IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN  
BOTANY**

**BY**

**SREEKUTTY R**

**Candidate Code : 64521118010**

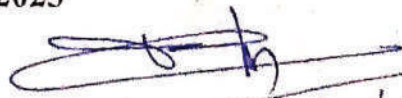
**Examination Code : 64520402**

**Subject Code : BO 244**



**POST GRADUATE DEPARTMENT AND RESEARCH CENTRE OF BOTANY,  
MAHATMA GANDHI COLLEGE, THIRUVANANTHAPURAM - 695004**

**AUGUST - 2023**

  
14/9/23

## CERTIFICATE

I do hereby certify that this dissertation entitled "Diversity and Influence of Fresh Water Algae in Relation to Physico- Chemical Water Quality Parameters in Selected Rural Aquatic Ecosystems of Thiruvananthapuram" is a record of bonafide study carried out by **SREEKUTTY. R**, under my supervision and guidance in the Post Graduate Department and Research Center of Botany, Mahatma Gandhi College, Thiruvananthapuram in partial fulfillment of the requirement for the award of Degree of Master of Science in Botany, University of Kerala. No part of this work has been submitted earlier for the award of any other degree or diploma in any of the Universities

Date:

Thiruvananthapuram

  
Ms. Sharanya K.P

Supervising Teacher



**ASSESSMENT OF PHYTOPLANKTON DIVERSITY AS INDICATORS  
ALONG WITH PHYSICO-CHEMICAL PARAMETERS IN WATER  
QUALITY ANALYSIS OF THREE SELECTED POND ECOSYSTEMS  
IN URBAN AREAS OF THIRUVANANTHAPURAM**

**DISSERTATION**

Submitted to University of Kerala in partial fulfilment of the requirements for the  
award of Degree of Master of Science in Botany

Candidate Name : APARNA CHANDRAN J. S  
Candidate Code : 64521118003  
Examination Code : 64520402  
Subject Code : BO244



**POST GRADUATE DEPARTMENT AND RESEARCH CENTRE  
OF BOTANY, MAHATMA GANDHI COLLEGE THIRUVANANTHAPURAM**

**AUGUST 2023**

## CERTIFICATE

I do hereby that the dissertation entitled "ASSESSMENT OF PHYTOPLANKTON DIVERSITY AS INDICATORS ALONG WITH PHYSICO-CHEMICAL PARAMETERS IN WATER QUALITY ANALYSIS OF THREE SELECTED POND ECOSYSTEMS IN URBAN AREAS OF THIRUVANANTHAPURAM " is an authentic record of the research work carried out by APARNA CHANDRAN J. S, Candidate Code: 64521118003 under my supervision in the partial fulfillment of the requirements for the Degree of Master of Science in Botany of the University of Kerala and that no part of this dissertation has been presented earlier for any Degree or Diploma in any of the Universities.

Date :

  
Ms. SHARANYA K. P

Assistant Professor  
Department of Botany  
Mahatma Gandhi College,  
Thiruvananthapuram

**PHYTOCHEMICAL INVESTIGATION OF *PHYLLANTHUS NIRURI* L.  
AN ETHNOMEDICINAL PLANT OF KERALA**

**DISSERTATION**

*Record of project work submitted to the University of Kerala in partial  
fulfillment of the requirements for the Degree of Master of Science in Botany*

**CANDIDATE NAME : VRINDHA VISWAM**

**EXAM CODE : 64520402**

**CANDIDATE CODE : 64521118012**

**SUBJECT CODE : BO 244**



**DEPARTMENT OF BOTANY  
MAHATMA GANDHI COLLEGE  
THIRUVANANTHAPURAM**

**2023**



## CERTIFICATE

This is to certify that the dissertation entitled "Phytochemical investigation and *in vitro* conservation of *Phyllanthus niruri* L. an ethnomedicinal plant of Kerala." is an authentic record of work carried out by Vrindha Viswam., under my supervision and guidance, in the Post Graduate and Research, Department of Botany, Mahatma Gandhi College, Kesavadasapuram, Thiruvananthapuram in partial fulfilment of the requirement for the award of Degree of Master of Science in Botany, University of Kerala. No part of this work has been submitted earlier for the award of any degree or diploma in any of the Universities.

Date:

Place: Kesavadasapuram

Dr. Pradeesh.S.

Supervising Teacher

**Dr. PRADEESH S.**  
Assistant Professor  
Department of Botany  
MG College, Kesavadasapuram

**PHYTOCHEMICAL INVESTIGATION AND *IN VITRO*  
CONSERVATION OF *AMARANTHUS VIRIDIS* L. A  
LEAFY VEGETABLE PLANT OF KERALA.**

**DISSERTATION**

*Record of project work submitted to the University of Kerala in partial fulfillment of the  
requirements for the Degree of Master of Science in Botany*

**CANDIDATE NAME : MEGHA. R. S**

**EXAM CODE : 64520402**

**CANDIDATE CODE : 64521118005**

**SUBJECT CODE : BO244**



**DEPARTMENT OF BOTANY  
MAHATMA GANDHI COLLEGE  
THIRUVANANTHAPURAM**

**2023**

## CERTIFICATE

This is to certify that the dissertation entitled “ Phytochemical investigation and *in vitro* conservation of *Amaranthus viridis L.* a leafy vegetable plant of kerala.” is an authentic record of work carried out by Megha.R.S., under my supervision and guidance, in the Post Graduate and Research, Department of Botany, Mahatma Gandhi College, Kesavadasapuram, Thiruvananthapuram in partial fulfilment of the requirement for the award of Degree of Master of Science in Botany, University of Kerala. No part of this work has been submitted earlier for the award of any degree or diploma in any of the Universities.

Date:

Place: Kesavadasapuram

  
Dr. Pradeesh.S.

Supervising Teacher

**Dr. PRADEESH S.**  
Assistant Professor  
Department of Botany  
MG College, Kesavadasapuram



**Studies on *Centella asiatica* and *Hydrocotyle verticillata***  
**Taxonomical and phytochemical perspectives**

**DISSERTATION**

Submitted to the University of Kerala  
in partial fulfilment of the requirements for the  
**DEGREE IN MASTER OF SCIENCE IN BOTANY**

Candidate Code : 64521118006

Name of Candidate : RESHMA.G.S



POST GRADUATE DEPARTMENT OF BOTANY & RESEARCH CENTER  
MAHATMA GANDHI COLLEGE, THIRUVANANTHAPURAM  
AUGUST, 2023

**Dr. Remya Krishnan**

Assistant Professor & Research Supervisor

Post Graduate Department of Botany & Research Center  
Mahatma Gandhi College, Thiruvananthapuram- 695004  
Kerala, India



Phone: 9846761037

Email: drkbotany2020@gmail.com

## Certificate

This is to certify that the project entitled “*Studies on Centella asiatica and Hydrocotyle verticillata* Taxonomical and phytochemical perspectives” is carried out by Ms. Reshma G.S. is an authentic work done by her, under my guidance and no part of this work has formed the basis for the award of any degree or Diploma to any university.

Thiruvananthapuram

26/08/2023

**Dr. Remya Krishnan**  
Assistant Professor  
Post Graduate Department of Botany  
& Research Center  
Mahatma Gandhi College, Tvm-695004

**Preliminary Phytochemical Investigations on the  
Adultration of Black Pepper (*Piper nigrum*) with Dry  
Fruits of *Macaranga peltata***

**DISSERTATION**

Submitted to the University of Kerala  
in partial fulfilment of the requirements for the  
**DEGREE IN MASTER OF SCIENCE IN BOTANY**

Candidate Code : 64521118007

Name of Candidate : SANDRA SREEKUMAR



POST GRADUATE DEPARTMENT OF BOTANY & RESEARCH CENTER  
MAHATMA GANDHI COLLEGE, THIRUVANANTHAPURAM  
AUGUST, 2023



**Dr. Remya Krishnan**

Assistant Professor & Research Supervisor

Post Graduate Department of Botany & Research Center  
Mahatma Gandhi College, Thiruvananthapuram- 695004  
Kerala, India



Phone: 9846761037

Email: derkbotany2020@gmail.com

## Certificate

This is to certify that the project entitled “**Preliminary Phytochemical Investigations on the Adulteration of Black Pepper (*Piper nigrum*) with Dry Fruits of *Macaranga peltata***” is carried out by Ms. Sandra Sreekumar, is an authentic work done by her, under my guidance and no part of this work has formed the basis for the award of any degree or Diploma to any university.

Thiruvananthapuram

26/08/2023

Dr. Remya Krishnan

**Dr. REMYA KRISHNAN**  
Assistant Professor  
Post Graduate Department of Botany  
& Research Center  
Mahatma Gandhi College, Tvm-695004