



# St Berchmans College

**AUTONOMOUS** College with Potential for Excellence | Accredited by NAAC with A Grade

Affiliated to Mahatma Gandhi University, Kottayam, Kerala  
Changanassery, Kottayam, Kerala, India-686101

## CERTIFICATE

This is to certify that this project work entitled “**MOLECULAR DOCKING OF ACTIVE INGREDIENTS FROM *Calotropis gigantea* AGAINST ASTHMA PROTEINS**” submitted to Mahatma Gandhi University, Kottayam, in partial fulfillment for the award of the degree of Master of Science in Zoology, is a bonafide record of research carried out by AMRUTHA K B under my supervision and guidance during the year 2020-2022 at St. Berchmans College, Changanassery and that it has not been previously submitted for the award of any degree or diploma or any other title of recognition in any university.

Dr. Philip Litto Thomas

Assistant Professor

Department of Zoology

St. Berchmans College Changanassery

Place: Changanassery

Date:

Examiners

## CERTIFICATE

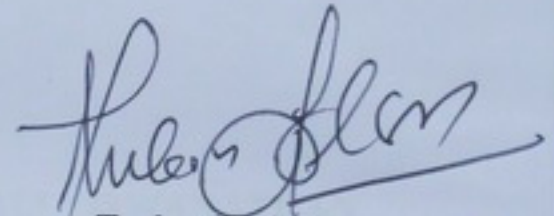
NAME: ANJALI VISWANATHAN

REGISTER NUMBER: 22004131

This is to certify that the dissertation entitled '**Diet Of The Barn Owl (Tyto alba) In An Urban Setting In Kottayam District, Kerala, South India**' is a bonafide record of the work carried out by MS. ANJALI VISWANATHAN (22004131) of the Department of Zoology, St. Berchmans College (Autonomous), Changanacherry under my guidance in partial fulfilment of the requirements for the award of Degree of **Master of Science in Zoology, 2020-2022**.

Place: Changanacherry

Date: 13/08/2022



Teacher in charge

**Dr. Rubin Philip**

Assistant Professor, Department of Zoology

St. Berchmans College, Changanacherry

Head of the Department

**Dr. Monichan K. K.**

Assistant Professor, Department of Zoology

St. Berchmans College, Changanacherry.

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Changanassery, Kottayam, Kerala, India-686101

## CERTIFICATE

This is to certify that this project work entitled "Prevalence of antibiotic resistance among the bacteria isolated from pets", submitted to St. Berchmans College, Changanassery (Affiliated to Mahatma Gandhi University, Kottayam), in partial fulfilment for the award of the degree of Master of Science in Zoology, is a bonafide record of research work carried out by ANJANA J MENON, Reg. No. 22004132, under my supervision and guidance during the year 2020-2022 and that it has not been previously submitted for the award of any degree or diploma or any other title of recognition in any university.

Place: Changanassery

Date: 12/09/2022

Dr. Jomon KV,

Associate Professor,

Department of Zoology,

St. Berchmans College, Changanassery

### Examiners

1.



## CERTIFICATE

This is to certify that the dissertation entitles “Distribution Status of Smooth Coated Otter (*Lutrogale perspicillata*) and its threats in Meenachil River” is an authentic record of the work done by **Mr. ANOOP P V, Reg. No 22004133** at St Berchmans College, Changanassery, under the guidance of **Dr. Rubin Philip, Assistant Professor**, Department of Zoology, St. Berchmans College, Changanassery, in partial fulfilment for the award of degree of Master of Science in Zoology in Mahatma Gandhi University, Kottayam.

Dr. Rubin Philip  
Project Guide

Dr. Monichan K K  
Head of Department of Zoology

Place: Changanassery

Date: 13/09/2022

Examiners:

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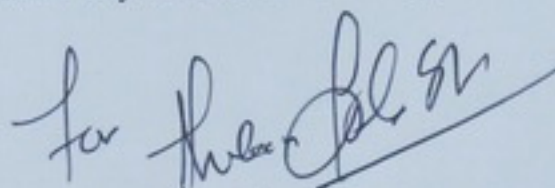
Dr. Jobin Mathew

## CERTIFICATE

This is to certify that this project work entitled 'ANALYSIS OF ANTI-DIABETIC ACTIVITY OF COSTUS IGNEUS ( INSULIN PLANT) DERIVED PHYTOCOMPOUNDS USING MOLECULAR DOCKING' submitted to Mahatma Gandhi University, Kottayam in partial fulfilment for the award of the degree of Master of Science in Zoology, is a bonafide record of research carried out by ANUSHKA V K under my supervision and guidance during the year 2020-2022 at St. Berchmans College, Chnganassery and that it has not been previously submitted for the award of any degree or diploma or any other title of recognition in any university.

Place: Changanassery

Date: 13-09-2022



Dr. Philip Litto Thomas

Asst. Professor

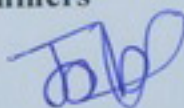
Department of Zoology

St. Berchmans College

Changanassery

### Examiners

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# St Berchmans College

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Affiliated to Mahatma Gandhi University, Kottayam, Kerala  
Changanassery, Kottayam, Kerala, India-686101

## CERTIFICATE

This is to certify that this project work entitled **PRELIMINARY SURVEY OF THE DIVERSITY OF CARABID BEETLES OF VAZHAKKAD WETLAND** Submitted to St. Berchmans college Autonomous (Affiliated to Mahatma Gandhi University, Kottayam) in partial fulfillment for the award of the degree of Master of Science in Zoology, is a bonafide record of research carried out by **ARCHANA V** under my supervision and guidance during the year 2020-2022 at St. Berchmans College, Changanassery and that it has not been previously submitted for the award of any degree or diploma or any other title of recognition in any university.

Place: Changanassery

Date: 13-09-2022

Dr. Jomon K V

Associate Professor

Department of Zoology

St. Berchmans College Changanassery

Examiners

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2.



# St Berchmans College

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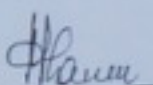
Affiliated to Mahatma Gandhi University, Kottayam, Kerala  
Changanassery, Kottayam, Kerala, India-686101

## DEPARTMENT OF ZOOLOGY



## CERTIFICATE

This is to certify that the dissertation entitled “**Isolation and characterization of cellulose-degrading bacteria from the gut of the termite genus *Odontotermes***” is the record of the bona fide work carried out by Ms.Aryanandha K S, in the Department of Zoology, St. Berchmans College (Autonomous), Changanacherry, under my supervision and guidance and is submitted in partial fulfillment of the requirements for the award of the degree of Masters of Science in Zoology. I further certify that the work is original and data presented in the dissertation are based on her observations and no part of this dissertation has formed the basis for the award of any degree earlier.

  
**Dr. Monichan K K**

Associate Professor

Department of Zoology

St. Berchmans College, Changanacherry



## CERTIFICATE

This is to certify that this project work entitled '*In Silico* Analysis of Anthraquinone Compounds from *Cassia obtusifolia* as Potential Drug Candidates Against Long Covid' Submitted to St. Berchmans College Changanassery (Affiliated to Mahatma Gandhi University, Kottayam) in partial fulfilment for the award of the degree of Master of Science in Zoology, is a bonafide record of research carried out by **FEYBA JIJIMON K** under my supervision and guidance during the year 2020-2022 and that it has not been previously submitted for the award of any degree or diploma or any other title of recognition in any university.

Dr. Philip Litto Thomas

Assistant Professor

Department of Zoology

St. Berchmans College Changanassery

Place: Changanassery

Date: 13-09-2022

### Examiners

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Changanassery, Kottayam, Kerala, India-686101

## CERTIFICATE

**Name: JERLYN VARGHESE**

**Register Number: 22004138**

*This is to certify that the Dissertation entitled "Observations on the Nesting Biology and the Behavioural Repertoire of Ropalidia brevita (Das&Gupta, 1989)" submitted to Mahatma Gandhi University, Kottayam, in partial fulfillment for the award of the degree of Master of Science in Zoology, is a bonafide record of the work carried out by Jerlyn Varghese under my supervision and guidance during the year 2020-2022 at St. Berchmans College (Autonomous), Changanassery and that it has not been previously submitted for the award of any degree or diploma or any other title of recognition in any university.*

**Dr. Martin J Babu**

**Assistant Professor**

**Department of Zoology**

**St. Berchmans College, Changanassery**

Place:

Date:

**Examiners:**

1.

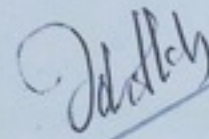
2.

# CERTIFICATE

This to certify that the project entitled "MICROBIAL ANALYSIS-FOR THE IDENTIFICATION OF BACTERIAA PRESENTIN PASTERISED MILK IN DIFFERENT MILK INDUSTRY " is an authentic record of the work carried out by Sr. JINU JOSEPH during the year 2022 and that no part of it has been submitted for any other programme.

Changanacherry


Date:

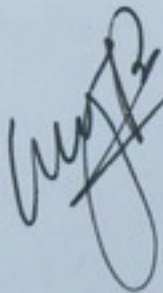


Dr. John .T. Kocheril

Department of zoology

SB College, Changanacherry.

Verified 





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CHANGANASSERY, KERALA

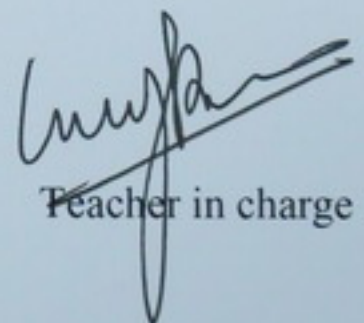
## CERTIFICATE

**Name: JOSY J VINCENT**

**Register Number: 22004140**

This is to certify that the dissertation entitled "**MUSHROOM BODY OF *Ropalidia brevita*; A PRELIMINARY STUDY**" is a bonafide record of the work carried out by **Ms. Josy J Vincent (Reg No: 22004140)** of the Department of Zoology, St. Berchmans College (Autonomous), Changanacherry under my guidance supervision in partial fulfilment of the requirements for the award of Degree of **Master of Science in Zoology, 2020-2022.**

Head of the Department

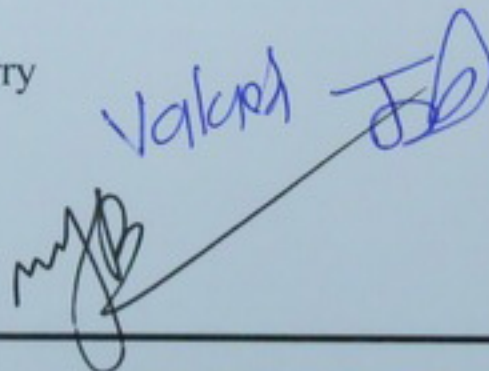


Teacher in charge

Changanacherry

Date:

Valappil JB





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## CERTIFICATE

**Name: LAYA MARIYA JOSEPH**

**Register Number: 22004142**


This is to certify that the dissertation entitled “ **Organization of the Compound Eye of *Ropalidia brevita*: A Light Microscopic Study**” is a bonafide record of the work carried out by **Ms. Laya Mariya Joseph (22004142)** of the Department of zoology, St. Berchmans College (Autonomous), Changanacherry under my guidance in partial fulfillment of the requirements for the award of degree of master of science in zoology, 2020-2022.

**Dr. Monichan K K**  
Head of the Department  
Department of Zoology  
St. Berchmans College,  
Changanassery.

  
**Dr. Martin J Babu**  
Assistant Professor  
Department of Zoology  
St. Berchmans College,  
Changanassery.

Place: Changanacherry

Date :

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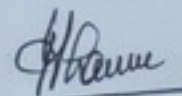
Affiliated to Mahatma Gandhi University, Kottayam, Kerala  
Changanassery, Kottayam, Kerala, India-686101

## CERTIFICATE

This is to certify that the project work entitled "**A COMPARATIVE STUDY OF SENSILLA ON THE MOUTHPARTS OF *XYLOCOPA LATIPES* AND *XYLOCOPA PUBESCENS***" is a bonafied record of the project work carried out by the candidate Ms. LITTY ROSE TITTO, Reg.No.22004143 under the supervision of Dr. Martin J Babu, Assistant Professor, Department of Zoology, St. Berchmans (Autonomous) College, Changanacherry and is submitted in partial fulfillment of the requirements for the award of the Master's degree of Zoology.

**Dr. Monichan K K**

Head of Department

  
**Dr. Martin J Babu**

Supervising Teacher

### Examiners

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## CERTIFICATE

This is to certify that '**THE STUDY OF ODONATE DIVERSITY IN CHUNKAPARA**' has been carried out by **Ms. Manju C Martin** in partial fulfilment of requirement of Master's Degree in Zoology program offered by college during the year 2020-2022. This is a bonafide report done by the student under my supervision and guidance.

Place : Changanassery

Date : 14/09/2022

**Dr. Rubin Philip**

Assistant Professor  
Zoology

Department of Zoology

**Dr. Monichen K K**

Head, Dept. of

*Maled*  
Examiners:

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14/09/2022



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Changanassery, Kottayam, Kerala, India-686101

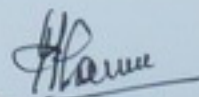
## CERTIFICATE

**Name: MARIA SEBASTIAN**

**Register Number: 22004145**

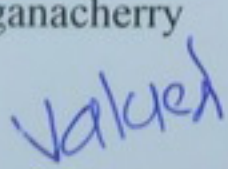


This is to certify that the dissertation entitled “ **Distribution of Different Types of Mechanoreceptors on Wings and Forelegs of *Ropalidia brevita***” is a bonafide record of the work carried out by **Ms. Maria Sebastian (22004145)** of the Department of Zoology, St. Berchmans College (Autonomous), Changanacherry under my guidance in partial fulfillment of the requirements for the award of degree of master of science in zoology, 2020-2022.

**Dr. Monichan K K**  
Head of the Department  
Department of Zoology  
St. Berchmans College,  
Changanassery.

  
**Dr. Martin J Babu**  
Assistant Professor  
Department of Zoology  
St. Berchmans College,  
Changanassery.

Place: Changanacherry

Date :

# St Berchmans College

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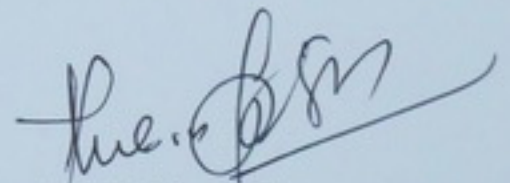
College with Potential for Excellence | Reaccredited by NAAC with A Grade

Changanacherry-686101, Kerala, India

2020-2022

## CERTIFICATE

This is to certify that the project work entitled "DELINEATION OF SPATIAL AND TEMPORAL PATTERN OF HUMAN-ELEPHANT CONFLICT AROUND AARALAM WILDLIFE SANCTUARY", is an authentic record of the work carried out by **Nickson Joseph**, Department of Zoology, SB College, Changanacherry, under my supervision and guidance. This work has not been presented earlier for the award of any other degree.



**Dr. Rubin Philip**

Assistant Professor

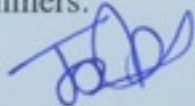
Place: Changanacherry

Date: September 14<sup>th</sup>, 2022

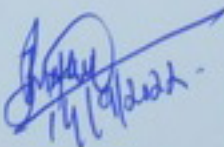
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Examiners:

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Affiliated to Mahatma Gandhi University, Kottayam, Kerala  
Changanassery, Kottayam, Kerala, India-686101

## CERTIFICATE

This is to certify that the dissertation entitled "STUDY OF AVIAN DIVERSITY AT CHELLANAM WETLANDS" is the record of the bona fide work carried out by Ms. Pooja Pradeep in the department of Zoology, St. Berchmans College (Autonomous), Changanacherry, Mahatma Gandhi University, under the supervision of **Dr. Monichan K K**, Associate professor Department Zoology, St. Berchmans College (Autonomous), Changanacherry, and submitted in partial fulfillment of the requirements for the award of the degree of Masters of Science in Zoology.

Place: Changanachery

Date:

Dr. Monichan K K

Assistant Professor

Department of Zoology

St. Berchmans College Changanassery

*Valid*  
Examiners

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14/09/2022



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CHANGANASSERY, KERALA

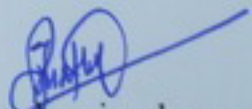
## CERTIFICATE

**Name:RESHMA RAVI**

**Register Number: 22004148**

This is to certify that the dissertation entitled “**STUDY OF FISH DIVERSITY IN POOVAKATTUCHIRA POND,CHANGANACHERRY, KOTTAYAM**” is a bonafide record of the work carried out by Ms.Reshma Ravi (Reg no:22004148) of the Department of Zoology, St. Berchmans College (Autonomous), Changanacherry under my guidance supervision in partial fulfilment of the requirements for the award of Degree of **Master of Science in Zoology, 2020-2022.**

Changanacherry

  
Teacher in charge



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CHANGANASSERY, KERALA

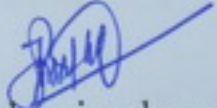
## CERTIFICATE

Name: RESMI M.R

Register Number: 22004149

This is to certify that the dissertation entitled “**TAXONOMIC STUDY OF FRESH WATER ZOOPLANKTON IN THE POOVAKKATTUCHIRA POND , CHANGANACHERRY**” is a bonafide record of the work carried out by Ms.Resmi M.R (Reg no:22004149) of the Department of Zoology, St. Berchmans College (Autonomous), Changanacherry under my guidance supervision in partial fulfilment of the requirements for the award of Degree of **Master of Science in Zoology, 2020-2022.**

Changanacherry

  
Teacher in charge



# St Berchmans College

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## DEPARTMENT OF ZOOLOGY

### CERTIFICATE

This is to certify that the project work entitled "A STUDY ON THE WATER QUALITY ANALYSIS USING PHYSICO CHEMICAL PARAMETERS IN POOVAKATTUCHIRA POND, CHANGANACHERRY, KOTTAYAM" is a bonafide record of the project work carried out by the candidate Ms. ROSEMARY SEBASTIAN, RegNo.22004150 under the supervision of Dr. Joe Prasad Mathew, Assistant Professor, Department of Zoology, St. Berchmans (Autonomous) College, Changanacherry and is submitted in partial fulfillment of the requirements for the award of the Master's degree of Zoology.

**Dr. Joe Prasad Mathew**

Supervising Teacher



## DEPARTMENT OF ZOOLOGY

### CERTIFICATE

This is to certify that the project work entitled "A STUDY ON THE FOOD PREFERENCE AND NEST BUILDING PREFERENCE OF WEAVER ANTS" is a bonafied record of the project work carried out by the candidate Mr. SEBASTIAN K JOSE, Reg.No.22004151 under the supervision of Dr. Jomon K V, Associate Professor, Department of Zoology, St. Berchmans (Autonomous) College, Changanacherry and is submitted in partial fulfillment of the requirements for the award of the Master's degree of Zoology.

**Dr.Monichan K K**

Head of Department

**Dr. Jomon K V**

Supervising Teacher

#### Examiners

1.

2.



## DEPARTMENT OF ZOOLOGY

### CERTIFICATE

This is to certify that the project work entitled “**A COMPARATIVE STUDY OF SENSILLA ON THE MOUTHPARTS OF *XYLOCOPA PUBESCENS* AND *XYLOCOPA LATIPES***” is a bonafied record of the project work carried out by the candidate Ms. SWATHY DEVASIA, Reg.No.22004152 under the supervision of Dr. Martin J Babu, Assistant Professor, Department of Zoology, St. Berchmans (Autonomous) College, Changanacherry and is submitted in partial fulfillment of the requirements for the award of the Master’s degree of Zoology.

**Dr.Monichan K K**

Head of Department

**Dr. Martin J Babu**

Supervising Teacher

#### Examiners

1.

2.



# St Berchmans College

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Affiliated to Mahatma Gandhi University, Kottayam, Kerala  
Changanassery, Kottayam, Kerala, India-686101

## CERTIFICATE

This is to certify that this project work entitled "*In-Silico* Analysis of Natural Compounds from *Annona squamosa* Leaves as Potential Drug Candidates Against DENV Proteins" submitted to Mahatma Gandhi University, Kottayam, in partial fulfillment for the award of the degree of Master of Science in Zoology, is a bonafide record of research carried out by VISHNUPRIYA B under my supervision and guidance during the year 2020-2022 at St. Berchmans College, Changanassery and that it has not been previously submitted for the award of any degree or diploma or any other title of recognition in any university.

Place: Changanassery

Date: 14/09/2022

**Dr. Philip Litto Thomas**

Assistant Professor

Department of Zoology

St. Berchmans College Changanassery

### Examiners

1.

2.