

**Prodigiosin Pigment Production from *Serratia marcescens*
using Fish Waste as Substrate**

DISSERTATION

Submitted to the University of Kerala in
Partial fulfillment to the requirement for the
Master of Science Degree in Zoology

By

ANJITHA SREEDHARAN
REG. NO- P1715001
COURSE CODE- 15PZ045

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**POST GRADUATION AND RESEARCH
DEPARTMENT OF ZOOLOGY**



**FATIMA MATA NATIONAL COLLEGE, KOLLAM
AUTONOMOUS**

July 2019

**COMPARISON OF SEDIMENTOLOGICAL PARAMETERS
ALONG THE KOLLAM CANAL IN RELATION TO
MICROBIAL CONTENT**

*Dissertation submitted to the University of Kerala
in the partial fulfilment of the requirement for the
Master of science in zoology*

By

**Athira BS
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**PG & Research Department of Zoology
FATIMA MATA NATIONAL COLLEGE (AUTONOMOUS), KOLLAM**

June 2019

**Detection of microplastics in a bivalve, *Paphia malabarica* (Chemnitz 1782) of Ashtamudi Lake,
Kollam**

*Submitted to the Fatima Mata National College, (Autonomous)
In partial fulfillment of the Requirements for the award of the Degree of*
MASTER OF SCIENCE

**IN
ZOOLOGY**

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JUNE 2019

**Detection of Microplastics in a bivalve, *Crassostrea
madrasensis* (Preston, 1916) of Ashtamudi Lake,
Kollam**

Submitted to the Fatima Mata National College, (Autonomous)

In partial fulfillment of the

Requirements for the award of the Degree of

MASTER OF SCIENCE

IN

ZOOLOGY

Name : DEEPTHI S

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JUNE 2019

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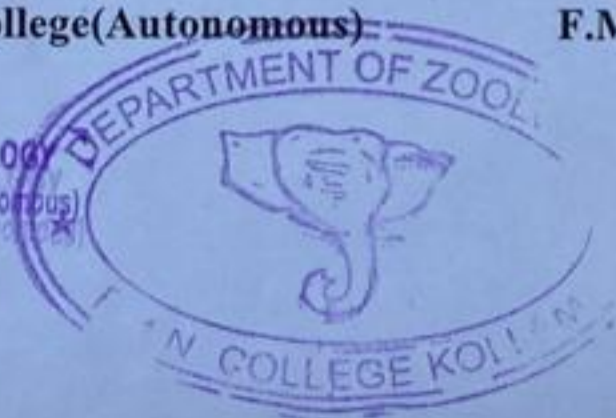
CERTIFICATE

This is to certify that this project entitled "Detection of Microplastics in a bivalve, *Crassostrea madrasensis* (Preston, 1916) of Ashtamudi Lake, Kollam" is an authentic record of the work carried out by Miss. DEEPTHI S Candidate code(P1715004) during the period of her study in the Department of Zoology, Fatima Mata National College (Autonomous), Kollam, under my supervision and guidance and that no part therefore has been presented earlier for any other degree .

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**WASTE WATER TREATMENT USING CLAY BEAD
IMMOBILIZATION - A LABORATORY STUDY**

DISSERTATION

Submitted to the University of Kerala
In partial fulfillment of the
Requirements for the award of the Degree of
MASTER OF SCIENCE
IN
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CERTIFICATE

This is to certify that dissertation entitled “WASTE WATER TREATMENT USING CLAY BEAD IMMOBILIZATION A LABORATORY STUDY” is an authentic record of the work carried out by Ms.Fini Francis under my supervision and guidance in Fatima Mata National College, (Autonomous), Kollam, in partial fulfillment of the requirements for the Master of Science in Zoology and no part of this work

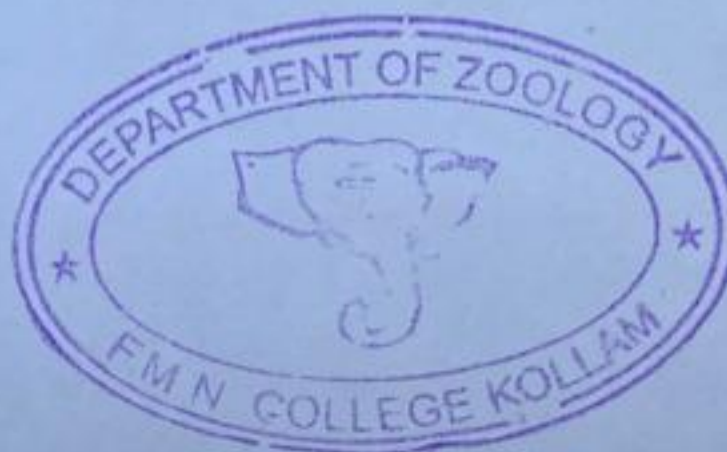
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This is to certify that this project entitled **IMPACT OF SELECTED HEAVY METALS ON THE CHROMATOPHORES OF *ETROPLUS SURATENSIS* FROM TWO DIFFERENT SITES OF ASHTAMUDI LAKE** is an authentic record of the work carried out by **Miss. GEETHU RAJ** (Candidate code P1715006) during the period of her study in the Department of Zoology, Fatima Mata National College (Autonomous), Kollam, under my supervision and guidance, and that no part thereof has been presented earlier for any other degree .

for, Nisha

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*DETECTION OF MICROPLASTICS IN BRANDED TABLE SALTS
MARKETED IN KOLLAM, KERALA*

Submitted to the Fatima Mata National College, (Autonomous)

In partial fulfillment of the Requirements for the award of the

Degree of

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IN

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KOLLAM, KERALA



CERTIFICATE

JISHAMOL JOHN

This is to certify that this project entitled "*DETECTION OF MICROPLASTICS IN BRANDED TABLE SALTS MARKETED IN KOLLAM, KERALA*" is an authentic record of the work carried out by Miss. JISHAMOL JOHN (Candidate code:P1715007) during the period of her study in the Department of Zoology, Fatima Mata National College (Autonomous), Kollam , under my supervision and guidance and that no part thereof has been presented earlier for any other degree .

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**COMPARISON OF HYDROLOGICAL PARAMETERS
ALONG THE KOLLAM CANAL IN RELATION TO
MICROBIAL CONTENT AND PLANKTON DIVERSITY**

*Dissertation submitted to the University of Kerala
in the partial fulfilment of the requirement for the
Master of science in zoology*

By

**Jothy Peter
Candidate Code: P1715008**

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**PG & Research Department of Zoology
FATIMA MATA NATIONAL COLLEGE (AUTONOMOUS), KOLLAM**

June 2019



FATIMA MATA NATIONAL COLLEGE (AUTONOMOUS)

Kollam - 691001, Kerala, Pin: 691001

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This is to certify that the project entitled "*Comparison of hydrological parameters along the Kollam canal in relation to microbial content and plankton diversity*" is an authentic record of the group work carried out by Jothy Peter (Candidate Code: P1715008) Department of Zoology, Fatima Mata National College(Autonomous), Kollam, as a part of University of Kerala in partial fulfilment of the Degree of Master of Science in Zoology under my supervision and guidance and it has not been submitted anywhere else for any other degree, diploma, or title.

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Dr. Mumthas Y
(Supervising Teacher)

EVALUATION OF ANTIOXIDANT POTENTIAL, BIOCHEMICAL,
AND HISTOPATHOLOGICAL RESPONSES OF AIR BREATHING
CATFISH, *CLARIAS BATRACHUS* (LINNAEUS, 1758) EXPOSED TO
STREPTOZOTOCIN & INSULIN

DISSERTATION

Submitted to the University of Kerala

In partial fulfillment of the

Requirements for the award of the Degree of

MASTER OF SCIENCE

IN

ZOOLOGY

REG.NO - P1715009

COURSE CODE - 15PZ045

Mary Merrin



**POST GRADUATE DEPARTMENT OF ZOOLOGY,
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JULY 2019



Shubodha
8/2/19

HEAD, DEPARTMENT OF ZOOLOGY
Fatima Mata National College (Autonomous)
Kollam

*Bioactive Properties of Skin Peptides Isolated from
Oxyurichthys tentacularis*

DISSERTATION

Submitted to the University of Kerala in
Partial fulfillment to the requirement for the
Master of Science Degree in Zoology

By

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**POST GRADUATION AND RESEARCH
DEPARTMENT OF ZOOLOGY**



**FATIMA MATA NATIONAL COLLEGE, KOLLAM
AUTONOMOUS**

July 2019

**ROLE OF INSULIN ON ALLOXAN - INDUCED DIABETES:
HAEMATOLOGICAL, BIOCHEMICAL AND HISTOPATHOLOGICAL
STUDIES OF THE INDIAN FRESHWATER TELEOST,
OREOCHROMIS MOSSAMBICUS (PETERS, 1852)**

DISSERTATION

Submitted to the University of Kerala

In partial fulfillment of the

Requirements for the award of the Degree of

MASTER OF SCIENCE

IN

ZOOLOGY

REG.NO - P1715011 *Rejeena*

COURSE CODE - 15PZ045



**POST GRADUATE DEPARTMENT OF ZOOLOGY,
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JULY 2019



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**HEAD, DEPARTMENT OF ZOOLOGY
Fatima Mata National College (Autonomous)
Kollam**

**BIOPOTENTIALITIES OF PHYLLANTHUS EMBLICA FEED AS A
GROWTHPROMOTER AND COLOUR ENHANCER IN
XIPHOPHOROUS MACULATUS (GUNTHER,1866)**

DISSERTATION

Submitted to the University
of Kerala In partial
fulfillment of the
Requirements for the award of the Degree of

MASTER OF SCIENCE

IN

ZOOLOGY

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**PG & RESEARCH DEPARTMENT OF ZOOLOGY,
FATIMA MATA NATIONAL COLLEGE (AUTONOMOUS), KOLLAM-691001**

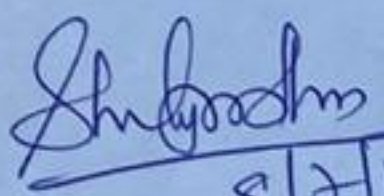
JULY 2019

CERTIFICATE

This is to certify that dissertation entitled "**Biopotentialities Of *Phyllanthus Emblica* Feed As A Growth Promoter And Colour Enhancer In *Xiphophorus Maculatus* (Gunther,1866)**" is an authentic record of the work carried out by Ms. Sibi B (Reg.No. - P1715013) under my supervision and guidance in Fatima Mata National College, (Autonomous), Kollam, in partial fulfillment of the requirements for the Master of Science in Zoology and no part of this work thereof has been submitted for any other degree in any University.


Divya M S
Supervising Teacher
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8/2/19
Dr. Sherly Williams E

Head of the Department
FMN College, Kollam

HEAD, DEPARTMENT OF ZOOLOGY
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Kollam

**A COMPREHENSIVE REVIEW ON THE EFFICACY OF BACOPA
MONNIERISUPPLEMENTED FEED AS ENHANCER OF GROWTH
AND COLOUR IN POECILIA RETICULATA (W.PETERS,1859)**

DISSERTATION

Submitted to the University
of Kerala In partial
fulfillment of the
Requirements for the award of the Degree of

**MASTER OF SCIENCE
IN
ZOOLOGY**

**THEERTHA THAMPI S
REG.NO-P1715014
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**PG & RESEARCH DEPARTMENT OF ZOOLOGY,
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JULY 2019**

*Isolation, Screening and Identification Of Hydrocarbon
Degrading Bacteria From Ashtamudi Mangrove Soil, Kollam,
Kerala*

DISSERTATION

Submitted to the University of Kerala in
Partial fulfillment to the requirement for the
Master of Science Degree in Zoology

By

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POST GRADUATION AND RESEARCH
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FATIMA MATA NATIONAL COLLEGE, KOLLAM
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July 2019

**EVALUATION OF ANTIOXIDANT POTENTIAL, BIOCHEMICAL,
AND HISTOPATHOLOGICAL RESPONSES OF AIR BREATHING
CATFISH, *CLARIAS BATRACHUS* (LINNAEUS, 1758) EXPOSED TO
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DISSERTATION

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MASTER OF SCIENCE

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ZOOLOGY

REG.NO - P1715009

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**POST GRADUATE DEPARTMENT OF ZOOLOGY,
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JULY 2019

**Histopathological alterations in gill of
Etroplus suratensis as a tool in
environmental monitoring**

*Submitted to the Fatima Mata National College,
(Autonomous)*



*In partial fulfillment of the
Requirements for the award of the Degree of*

MASTER OF SCIENCE

IN

ZOOLOGY

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REG.NO: P1715012

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JUNE 2019

4709

P1715012

**IMPACT OF SELECTED HEAVY METALS ON THE
CHROMATOPHORES OF *ETROPLUS SURATENSIS* FROM TWO
DIFFERENT SITES OF ASHTAMUDI LAKE**

*Submitted to the Fatima Mata National College,
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*In partial fulfillment of the
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