

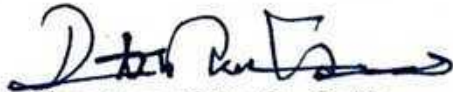


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CERTIFICATE

This is to certify that the thesis entitled "**Bioactive potential and characterization of *Gracilaria salicornia* derived methanol extract on Human pathogens**" submitted to Bharathidasan University, Tiruchirappalli - 620 024, in partial fulfilment for requirements of the award of the **Degree of Master of Science in Biotechnology**. It is an original work done by **Ms. M. ANITHA** during the period (2022-2023) of her study in J.J College of Arts and Science (Autonomous), Affiliated to Bharathidasan University, Pudukkottai - 622 422 and carried out her Dissertation at Department of Marine Science, Bharathidasan University, Tiruchirappalli - 620 024, under my co-guidance. This report is not previously formed on the basis for the award of any degree/diploma/associateship/fellowship or other similar title to any candidate of any university.


Signature of the Co-Guide



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TIRUCHIRAPPALLI-620024
TAMIL NADU, INDIA

Dr. B.KADALMANI
ASSOCIATE PROFESSOR

CERTIFICATE

This certify that this dissertation titled "**Effect of ethanolic fruit extract of *Morinda citrifolia* on genetic profiles of ovarian tissue against Letrozole - induced PCOS rats**" has been carried out in the Department of Animal Science, Bharathidasan University, Tiruchirappalli – 620024, and submitted in the partial fulfillment of the requirement for the award of the degree of **Master of Science** in Zoology. This study was carried out by Ms.Atchaya .R (Reg : P21BT1002) under my guidance and supervision during the period of December 2022 to April 2023. This work is original and no part of this thesis has been submitted for the award of any other degree or diploma to any other university, and should not reproduce in any form.

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Dr. K. MANJULA M.Sc., M.Phil., Ph.D Biotechnology
Managing Director

Date : 13.04.2023.

CERTIFICATE

This is to certify that Mrs. M. BANUPRIYA (P21BT1003), M. Sc., final year student of the Department of Biotechnology, J.J College of Arts and Science, Pudukkottai-622422 has successfully completed her final year project entitled "*IN VITRO STUDIES ON ANTIDIABETIC AND ANTIPERIODONTAL ACTIVITY OF SYNTHESIZED SILVER NANOPARTICLES USING LAWSONIA INERMIS ROOTS.*" under my guidance and supervision from 13th January 2023 to 13th April 2023 at Bio Techno Solutions Training and Research Institute, Trichy-620004. It is further certified that the dissertation or any part of the thesis has not submitted elsewhere for any degree or diploma.



[Signature]
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CERTIFICATE

This is to certify that the dissertation entitled “**NUTRITIONAL CHARACTERIZATION IN THE EPICARP OF CITRULLUS LANATUS (WATERMELON)**” submitted to Bharathidasan University, Tiruchirappalli – 24 in Partial fulfillment for requirements of the award of the **Degree of Master of Science in Biotechnology** is an original Work done by **Ms. S. JAIKIRTI** during the period of (2021 – 2023) of her study in J.J. College of Arts and Science (Autonomous), Affiliated to Bharathidasan University, Pudukkottai – 622422, under my Co - Guidance and the report is not previously formed on the basis for the award of any Degree/ Diploma/ Associate ship/ Fellowship or other similar title to any candidate of any university.

Date: 17.04.2023

Place: PUDUKKOTTAI

Unthir 12/4/23

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CERTIFICATE

This certify that this dissertation titled "**Mitigating the Genetic Profile of Ovarian Tissue in Letrozole - Induced PCOS Rats using the Ethanolic Leaf Extract of *Morindacitrifolia***" has been carried out in the Department of Animal Science, Bharathidasan University, Tiruchirappalli – 620024, and submitted in the partial fulfillment of the requirement for the award of the degree of **Master of Science** in Zoology. This study was carried out by **MS.KARTHIKA.S(Reg : P21BT1005)** under my guidance and supervision during the period of December 2022 to April 2023. This work is original and no part of this thesis has been submitted for the award of any other degree or diploma to any other university, and should not reproduce in any form.

(B. KADALMANI)



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CERTIFICATE

This is to certify that the thesis entitled **"FORMULATION AND CHARACTERIZATION OF SPIRULINA BASED OLEOGEL EMULSION FOR FOOD APPLICATIONS"** submitted to Bharathidasan University, Tiruchirappalli-24, in partial fulfilment for requirements of the award of the Degree of **Master of Science in Biotechnology** is an original work done by **Ms. C. KRISHNA VENI**, during the period (2021-2023) of her study in J.J College of Arts and Science (Autonomous), Affiliated to Bharathidasan University, Pudukkottai-622422, under my co-guidance and the report is not previously formed on the basis for the award of any degree/diploma/associateship/fellowship or other similar title to any candidate of any university.

Date: 12/04/2023

Place: Tiruchey


Signature of the Co-Guide

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NAAC A++Grade -State University- NIRF Rank 63 ARIIA 10

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CERTIFICATE

This is to certify that the dissertation entitled "**Nutritional characterization of selected species of *Alternanthera sessilis* flower & analysis of water content, color activity in different days**" submitted to Bharathidasan University, Tiruchirappalli – 24 in Partial fulfillment for requirements of the award of the **Degree of Master of Science in Biotechnology** is an original Work done by **Ms. U. MANJULA** during the period of (2021 – 2023) of her study in J.J. College of Arts and Science (Autonomous), Affiliated to Bharathidasan University, Pudukkottai – 622422, under my Co - Guidance and the report is not previously formed on the basis for the award of any Degree/ Diploma/ Associate ship/ Fellowship or other similar title to any candidate of any university.

Date: 17.04.2023

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This is to certify that the thesis entitled **"POTENTIAL BIODEGRADATION OF POLYPROPYLENE MICROPLASTICS BY MARINE MICROALGAE"** submitted to Bharathidasan University, Tiruchirappalli-24, in partial fulfilment for requirements of the award of the Degree of **Master of Science in Biotechnology** is an original work done by **Ms. N. NIVETHA**, during the period (2021-2023) of her study in J.J College of Arts and Science (Autonomous), Affiliated to Bharathidasan University, Pudukkottai-622422, under my co-guidance and the report is not previously formed on the basis for the award of any degree/diploma/associateship/fellowship or other similar title to any candidate of any university.

Date: 15/04/2023

Place: TRICHY


Signature of the Co-Guide

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Date:
Trichy

BONAFIDE CERTIFICATE

Certified that this project report “**Synthesis of Magnesium nanoparticles from Seaweed *Padina Tetrastrumastica* against fish pathogen**” is the bonafied work of **Ms. C. PAVITHRA (Reg.No.P21BT1009)**, Department of Botany, **BHARATHIDASAN UNIVERSITY** who carried out the project work under my supervision as part of fulfilment of her **MSc., in Biotechnology** program from **January 20, 2023 to April 12, 2023.**

SIGNATURE OF THE SUPERVISOR

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Department of Botany,
Bharathidasan University, Trichy-24

Dr.S.R.SIVAKUMAR, MSc., M.Phil., Ph.D.,

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Email.: drsrsivakumar@gmail.com

Date:

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BONAFIDE CERTIFICATE

Certified that this project report “**Synthesis of Magnesium nanoparticles from Seaweed *Gracilaria crassa* against fish pathogen**” is the bonafied work of **Ms. V. SANGEETHA (Reg.No.P21BT1010), Department of Botany, BHARATHIDASAN UNIVERSITY** who carried out the project work under my supervision as part of fulfilment of her **MSc., in Biotechnology** program from **January 20, 2023 to April 12, 2023.**

SIGNATURE OF THE SUPERVISOR

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CERTIFICATE

This is to Certify that Ms. S.SUSMITHA (Reg.No. P21BT1011), Student of J.J college of Arts and Science, Worked for his project entitled on "PHYTOCHEMICAL ANALYSIS AND ANTIMICROBIAL ACTIVITIES OF AEGLE MARMELOS" in our laboratory, during the period of January 2023-March 2023.

Date:

Place: Trichy



Director

Dr.V.BHARATHI, M.Sc., M.Phil., B.Ed.,
SET, PGDBI, Ph.D.,

Director

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CERTIFICATE

This is to Certify that Ms. G.VIDHYA (Reg.No. P21BT1012), Student of JJ College Of Arts and Science College, Worked for his project entitled on "INVITRO STUDY OF ANTIDIABETIC ACTIVITY & ANTI OXIDANT ACTIVITY OF AQUEOUS EXTRACTS OF *catharanthus roseus*" in our laboratory, during the period of January 2023-March 2023.

Date: 17.04.23

Place: Trichy


Director

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BONAFIDE CERTIFICATE

Certified that this project report “**Bioactive compounds extraction and characterization from *Fasciospongia cavernosa* (schmist 1862)**” is the bonafied work of **Mr. T. AYYAPPAN (Reg.No.P21BT2001)**, Department of Botany, **BHARATHIDASAN UNIVERSITY** who carried out the project work under my supervision as part of fulfilment of his **MSc., in Biotechnology** program from **January 20, 2023 to April 12, 2023.**


SIGNATURE OF THE SUPERVISOR

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Date:

Trichy

BONAFIDE CERTIFICATE

Certified that this project report "**Synthesis of Magnesium nanoparticles from Seaweed *Padina bovancia* against fish pathogen**" is the bonafied work of **Mr. M. DILIP KUMAR (Reg.No.P21BT2002), Department of Botany, BHARATHIDASAN UNIVERSITY** who carried out the project work under my supervision as part of fulfilment of his **MSc., in Biotechnology** program from **January 20, 2023 to April 12, 2023.**

SIGNATURE OF THE SUPERVISOR :

Dr. S. R. SIVAKUMAR, M.Sc., M.Phil., Ph.D.,

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Dr.S.R.SIVAKUMAR, M.Sc., M.Phil., Ph.D.,
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Email.: drsrsivakumar@gmail.com

Date:
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BONAFIDE CERTIFICATE

Certified that this project report "**Identification and extraction of caffeic acid from the root of *Tragia involucrata***" is the bonafied work of **Mr. R. SURYA (Reg.No.P21BT2003)**, Department of Botany, **BHARATHIDASAN UNIVERSITY** who carried out the project work under my supervision as part of fulfilment of his **MSc., in Biotechnology** program from **January 20, 2023 to April 12, 2023**.


SIGNATURE OF THE SUPERVISOR

Dr.S.R.SIVAKUMAR, M.Sc., M.Phil., Ph.D.,
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Bharathidasan University, Trichy-24



Dr. N.G.P. ARTS AND SCIENCE COLLEGE

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Dr.P. ARUN, M. Sc., M.Phil., MBA., PGDCRDM., Ph.D.

Assistant Professor

DEPARTMENT OF BIOTECHNOLOGY

CERTIFICATE

This is to certify that the project entitled “**FORMULATION AND EVALUATION OF POLYHERBAL TOOTHPASTE FROM *Phyllanthus amarus***” submitted to Bharthidasan university, Trichy-24 in partial fulfillment of the requirement for the award of degree of **MASTER OF BIOTECHNOLOGY** is a record of original project work done by **Mr. S.VETRI** during the period (2020-022) of his/ her study in **Department of Biotechnology, J.J College of Arts and science college** and the project work done by **Dr.N.G.P. Arts and Science College, Coimbatore-48** under my supervision and guidance, and the project has not formed the basis for the award of any Degree/ Diploma/ Associateship/ Fellowship or other similar title to any candidate of any university.

(Dr. P. ARUN)
Project Guide

(Dr. P. CHIDAMBARARAJAN)
Professor and Head

(Prof. Dr. V. RAJENDRAN)
Professor and Principal

Place: Coimbatore
Date:


Guide signature

SARAH

CLINICAL AND BIORESEARCH LABORATORY



Dr.S.UMA,M.Sc,M.Phil,B.Ed,Ph.D(Microbiology)

Date :13/04/2023

Director

CERTIFICATE

This is to certify that **Mr. S.JAYAKUMAR**, Department of Biotechnology, J.J College of Arts and Science, Register No:**P21BT2005** has done his project titled "*Effect of fish amino acid in the decomposition of litter waste by vermicompost*" in our laboratory from January 2023 to April 2023 as part of his curriculum.



DR.S.UMA

Director

Dr.S.UMA,M.sc ,M.phil,B.Ed,Ph.D.

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