SCREENING OF INVITRO ANTHELMINTIC ACTIVITY OF Cassia alata LEAVES AND FLOWERS

Dissertation Submitted to
Bharadhidasan University, Tiruchirappaffi

In the partial fulfilment of the requirement for the award of the Degree of

MASTER OF SCIENCE IN MICROBIOLOGY

Submitted by G.AKILANDESWARI Register No: P19390901



Under the Guidance of Dr. R. SUJA PANDIAN, M.Sc., M.Phil., Ph.D., ASSISTANT PROFESSOR,

DEPARTMENT OF BIOCHEMISTRY.

ANNAI COLLEGE OF ARTS &SCIENCE

KOVILACHERI – KUMBAKONAM. 612503

APRIL - 2021



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Affiliated to Bharathidasan University, Tiruchirappalli. E-mail:acasdmn@gmail.com

CERTIFICATE

I here certify that the thesis entitled "SCREENING OF DIFFERENT SOLVENT EXTRACTS OF SPILANTHES CALVA DC AND SYNTHESIS OF SILVER NANO PARTICLES USING THE AQUEOES EXTRACTS" submitted to University, for the award of degree of Master of Science in of *Microbiology* embodies the result of bonafide research work carried out by

M. ANJALI

(Reg. No: P19390902)

Under my guidance and supervision in the Annai College of Arts & Science, Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirapalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature, Head of the Department

NBalam Darris 0 3 13 13

Submitted for Viva Voce Examination held on 30.03.2021

Examiner: 1.5

1. 21. 1/2/2/2 Cm.

2. M. Dy



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Affiliated to Bharathidasan University Tiruchirappath. E-mail acasdmn@gmail.com

CERTIFICATE

I hereby certify that the thesis entitled "ISOLATION, CHARACTERIZATION
AND DETERMINING THE ABILITY OF PROTEASE PRODUCTION
BACTERIA FROM SOIL

" submitted to University, for the award of degree of Master of Science in Microbiology embodies the result of bonafide research work carried out by

M.ARUN

(REG NO: P19390903)

Under my guidance and supervision in the Annai College of arts & Science Kovilachery, Kumbakonam (Affiliated to Bharathidasan University, Tiruchirappalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature Head of the Department

Signature of the Guide 30/8/2/

Submitted for Viva voce Examination held on 20/3/2/

Examiners: 1. $^{\prime} \lor$

2. M. J.



PG AND RESEARCH DEPARTMENT OF MICROBIOLOGY ANNAI COLLEGE OF ARTS & SCIENCE,

Kovilacheri, Kumbakonam, (Affiliated to Bharathidasan University, Tiruchirappalli) Thanjavur District, Tamilnadu. Pin - 612 503

Dr. R. SUJA PANDIAN, M.Sc., M.Phil., Ph.D.

Date: 30 . 03 . 2021

Assistant Professor, PG and Research Department of Biochemistry,

CERTIFICATE

This is to certify that the dissertation entitled "PRODUCTION OF HERBAL FERMENTED HONEY USING ISOLATED Candida sp. AND ANALYSIS OF ANTIMICROBIAL AND ANTIOXIDANT ACTIVITY" submitted by ASATH ALL L (REG. No.: P 19390904) in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE IN MICROBIOLOGY, PG and Research Department of Microbiology, Annai College of Arts & Science, (Affiliated to Bharathidasan University, Tiruchirappalli), Kumbakorum, is a bonafide work done by her under my guidance and supervision during the academic year 2019-2021. This dissertation has not previously formed the basis for the award of any degree or fellowship.

Signature of the HOD

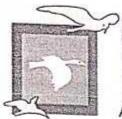
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Dept. of Microbiology

Submit for Viva-voce examination held on 30.03.2021

Examiners

1. S. Hebry By m 31/3/21 2. M. Dy



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Affiliated to Bharathidasan University, Tiruchirappalli. E-mail:acasdmn@gmail.com

CERTIFICATE

I here certify that the thesis entitled "ANTIMOSQUITOCIDAL ACTIVITY AND PHYTOCHEMICAL ANALIYSIS OF LEAF EXRACT IN JUSTICIA ADHADOTO" submitted to University, for the award of degree of Master of Science in of Microbiology embodies the result of bonafide research work carried out by

K. CHANDIRA

(Reg. No: P19390905)

Under my guidance and supervision in the Annai College of Arts & Science, Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirapalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature, Head of the Department

Signature of the Guide 30/3/2

Submitted for Viva Voce Examination held on 30/03/2021



D.MEHARAJ BEGUM, M.Sc.,M.Phil., Department of Microbiology Annai College of Arts & Science Kovilachery, Kumbakonam-612 503

CERTIFICATE

This To Certify That This Dissertstion Entitled "PHYTOCHEMICAL INVESTIGATIONS AND ANTIBACTERIAL ACTIVITY OF CAPRATIA TRIFOLIA PLANT EXTRACT AGAINST PATHOGENIC BACTERIA" submitted to University, for the award of degree of Master of Science in of Microbiology embodies the result of bonafide research work carried out by Miss. S.DHAVAMANI (Reg. No: P 19390906) Under my guidance and supervision in the Annai College of Arts & Science Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirappalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature of the Candidate

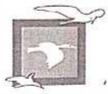
Signature of the Guide

Submitted for Viva Voce Examination held on 30/03/9091

Examiners:

1. V. M. 30/5/199/

2. <u>M. H.</u>



DEPARTMENT OF MICROBIOLOGY ANNAI COLLEGE OF ARTS & SCIENCE (Affiliated to Bharathidasan University) KOVILACHERI, KUMBAKONAM

Dr. R. SHALINI, M.Sc., M.Phil., Ph.D., Assistant Professor, Department of Biochemistry

CERTIFICATE

This is to certify that the project work was done under my guidance and the dissertation entitled "SCREENING OF PHYTOCHEMICALS AND EVALUATION OF ANTIMICROBIAL ACTIVITY OF Aristolochia bructeolata LEAVES EXTRACT AGAINST DIABETIC FOOT ULCER CAUSING MICROBES" submitted by B. DIVYA DHARSHINI (Reg. No. P19390907), to the Bharathidasan University in partial fulfillment of requirement for the award of the degree of Master of Science in Microbiology, during the period (2020-2021) is the original work of the candidate. The project work was carried out under the guidance and supervision. I further certify that this dissertation had not previously formed the basis for the award of any degree, diploma or fellowship to the candidate.

SIGNATURE OF THE GUIDE

HEAD OF THE DEPARTMENT

Submitted for University examination held at Annai College of Arts & science, Kovilacheri, Kumbakonam on ..30/.3/2021.

External Examiners:

2. M. DOJ



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KOVILACHERI, KUMBAKONAM

Dr. R. SHALINI, M.Sc., M.Phil., Ph.D., Assistant Professor, Department of Biochemistry

CERTIFICATE

This is to certify that the project work was done under my guidance and the dissertation entitled "EVALUATION OF PHYTOCHEMICAL AND IN VITRO ANTIMICROBIAL ACTIVITY OF Cissus quadrangularis AGAINST SKIN CAUSING PATHOGENS" submitted by N. ISHWARYA (Reg. No. P19390908), to the Bharathidasan University in partial fulfillment of requirement for the award of the degree of Master of Science in Microbiology, during the period (2020-2021) is the original work of the candidate. The project work was carried out under the guidance and supervision. I further certify that this dissertation had not previously formed the basis for the award of any degree, diploma or fellowship to the candidate.

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HEAD OF HIE DEP JOHNENT

Submitted for University examination held at Annai College of Arts & science, Kovilacheri, Kumbakonam on 30.[3.]21.

External Examiners:

1.1 431/07 4

2. M. DE



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Dr. R. SHALINI, M.Sc., M.Phil., Ph.D., Assistant Professor, Department of Biochemistry

CERTIFICATE

This is to certify that the project work was done under my guidance and the AND ANALYSIS dissertation "PHYTOCHEMICAL entitled ANTIMICROBIAL PROPERTIES OF Moringa oleifera LEAVES EXTRACT AGAINST URINARY TRACT CAUSING MICROBES" submitted by T. KARTHIKA (Reg. No. P19390909), to the Bharathidasan University in partial fulfillment of requirement for the award of the degree of Master of Science in Microbiology, during the period (2020-2021) is the original work of the candidate. The project work was carried out under the guidance and supervision. I further certify that this dissertation had not previously formed the basis for the award of any degree, diploma or fellowship to the candidate.

P. s. Lahin: 80/3/27
URE OF THE GUIDE HEAD OF THE DEPARTMENT

Submitted for University examination held at Annai College of Arts & science, Kovilacheri, Kumbakonam on . 20:03.0.2021

External Examiners:

1. V 1 3 1 3 1 2021 2. M. III



DEPARTMENT OF MICROBIOLOGY ANNAL COLLEGE OF ARTS & SCIENCE

(Affiliated to Bharathidasan University) KOVILACHERI, KUMBAKONAM

Dr. P. SURIYA, M.Sc., Ph.D., ADTP., Head and Assistant Professor, Department of Biochemistry

CERTIFICATE

This is to certify that the project work was done under my guidance and the dissertation entitled "EVALUATION OF PHYTOCHEMICAL AND IN VITRO ANTIMICROBIAL ACTIVITY OF Eclipta prostrata LEAVES EXTRACT" submitted by M. KEERTHIKA (Reg. No. P19390910), to the Bharathidasan University in partial fulfillment of requirement for the award of the degree of Master of Science in Microbiology, during the period (2019-2021) is the original work of the candidate. The project work was carried out under the guidance and supervision. I further certify that this dissertation had not previously formed the basis for the award of any degree, diploma or fellowship to the candidate.

SIGNATURE OF THE GUIDE

HEAD OF WIE BENARUMEST

Submitted for University examination held at Annai College of Arts & science, Kovilacheri, Kumbakonam on .302.03. 20.

External Examiners:

1. 1 1 3 2 1

2. M. F.



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CERTIFICATE

I here certify that the thesis entitled "SCREENING OF ANTIMICROBIAL ACTIVITIES AND ANTIFUNGAL ACTIVITIES OF <u>Cyclea peltata</u> PLANT EXTRACTS ON SOME SELECTED PATHOGENIC MICROORGANISM" submitted to University, for the award of degree of Master of Science in of <u>Microbiology</u> embodies the result of bonafide research work carried out by

M. MAHA

(Reg. No: P19390911)

Under my guidance and supervision in the Annai College of Arts & Science, Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirapalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature, Head of the Department

Signature of the Guide

Submitted for Viva Voce Examination held on 20.03. 2001

Examiner .

2. <u>M. D.</u>



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CERTIFICATE

I hereby certify that the thesis entitled "STUDIES ON SCREENING AND COCONUT RAW THE QUALITY EVALVUATION OF (Cocos nucifera L.) WATER, RAW COCONUT MILK AND RAW COCONUT SCRAPPINGS DURING FREEZING CONDITIOIN" submitted to University, for the award of degree of Master of Science in Microbiology embodies the result of bonafide research work carried out by

S. MANIKANDAN (REG NO: P19390912)

Under my guidance and supervision in the Annai College of arts & Science Kovilachery, Kumbakonam (Affiliated to Bharathidasan University, Tiruchirappalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature Head of the Department

Signature of the Guide

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CERTIFICATE

I here certify that the thesis entitled IN VITRO MICROPROPAGATION OF

Cavratia trifolia (L) DOMAIN IN TRADITIONAL MEDICINAL PLANT FROM NODE

AND LEAF EXPLANTS submitted to University, for the award of degree of Master of Science
in of Microbiology embodies the result of bonafide research work carried out by

P. MOHANA PRIYA

(Reg. No: P19390913)

Under my guidance and supervision in the Annai College of Arts & Science, Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirapalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature, Head of the Department

Signature of the Guide (2)

Submitted for Viva Voce Examination held on 30/03/21

Examiner:

1. V M 87/M 21

2. M. Du



PG AND RESEARCH DEPARTMENT OF MICROBIOLOGY ANNAI COLLEGE OF ARTS & SCIENCE,

Kovilacheri, Kumbakonam, (Affiliated to Bharathidasan University, Tiruchirappalli) Thanjavur District, Tamilnadu. Pin - 612 503

Mrs. S. DURGADEVI, M.Sc.,

Assistant Professor, PG and Department of Microbiology, Date: 30.03.2021

CERTIFICATE

OPTIMIZATION OF PROTEASE ENZYME USING RICE BRAN SUBSTRATE
BY Streptomyces griseus AND Streptomyces clavuligerus" submitted by
MUSERIYA. H (REG. No.: P 19390914) in partial fulfillment of the requirements
for the award of the degree of MASTER OF SCIENCE IN MICROBIOLOGY, PG
and Research Department of Microbiology, Annai College of Arts & Science,
(Affiliated to Bharathidasan University, Tiruchirappalli), Kumbakonam, is a bonafide
work done by her under my guidance and supervision during the academic year 20192021. This dissertation has not previously formed the basis for the award of any
degree or fellowship.

Signature of the HOD

Signature of the Guide

Dept. of Microbiology

Submit for Viva-voce examination held on 30/02/91

Examiners

1. D. Kelang Begun 31/5/21

CERTIFICATE

I here certify that the thesis entitled "ANTIBACTERIAL ACTIVITY AND PHYTOCHEMICAL SCREENING OF MELIA AZEDARACH L AGAINST URINARY TRACT PATHOGENS" submitted to University for the award of degree of Master of Science in of Micro biology embodies the result of bonafide research work carried out by.

S. POOIA

(Reg No: P19390916)

Under my supervision and submitted to Annai College of Arts & Science, Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirapalli) in partial fulfillment of the requirements for the award of by the Master of Science in microbiology

S. Paga

Signature of the Candidate

Signature of the Guide

Examiner: $\sim M 3000 Lo Lo$

Signature of the HOD & A



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"SCREENING OF ANTIBACTERIAL ACTIVITY AND ANTIFUNGAL ACTIVITYOF THE CRUDE EXTRACT OF Celastrus Paniculatus WILD ON SELECTED PATHOGENIC BACTERIA AND FUNGUS" submitted to University, for the award of degree of Master of Science in of Microbiology embodies the result of bonafide research work carried out by

Mr. B. PRAKASH

(Reg. No: P 19390917)

Under my guidance and supervision in the Annai College of Arts & Science Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirappalli). I further certify that under such help or source of information have been availed in this connection is any acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature of the Candidate

Signature of the Guide

Submitted for Viva Voce Examination held on 30-03-2-2-21

Examiners:

1. ~ \ 37/07 goer

2. N. D.Y



ANNAI COLLEGE OF ARTS AND SCIENCE

Dr. V.MOORTHI, M.SC., M.Phil., Ph.D.,

ASSISTANT PROFESSOR AND HOD

PG RESEARCH DEPARTMENT AND MICROBIOLOGY,

ANNAI COLLEGE OF ARTS AND SCIENCE

Place: KOVILACHERY

Date : 30/03/2021

CERTIFICATE

This is to certify that the dissertation entitled "SCREENING OF BIOACTIVE IN ETHONOLIC LEAF EXTRACT OF Celastrus paniculatus PLANT BY USING QUALITATIVE PHYTOCHEMICAL ANALYSIS" submitted in partial fulfilment of the award of the degree of MASTER OF SCIENCE to the Annai college of Arts and Science, Kovilachery, is a record of Bonafide research work carried out by Mrs.V.PRIYA Under my supervision and guidance and that no part of this dissertation has been submitted for the award of any degree ,diploma ,fellowship or similar titles or prizes and that the work has not been published in part or full in any scientific or popular journal or magazine.

NAME : V PRIVA . MSc.

Reg No : P 19390919

Approved by : N. Mark M. 2.92)

External Examiner : M. D. D. Date



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CERTIFICATE

I hereby certify that the thesis entitled "SYNTHESIZE SILVER NANOPARTICLES USING AQUEOUS LEAFEXTRACT OF CYCLEA PELTATA AND CHARACTERIZE THE NANOPARTICLES USING SEM" submitted to University. for the award of degree of Master of Science in Microbiology embodies the result of bonafide research work carried out by

C.ROSHAN

(REG NO: P19390920)

Under my guidance and supervision in the Annai College of arts & Science Kovilachery, Kumbakonam (Affiliated to Bharathidasan University, Tiruchirappalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

D. Day 301314

Signature of the Guide

Dr.D.Elamparithi, M.Sc., M.Phil., Ph.D., Head & Assistant Professor, PG & Research Department Of Biotechnology Annai College Of Arts and Science Kovilacheri-612 503.Ceil 98946 64962

Submitted for Viva voce Examination held on 38 /3/2021

Examiners: 1. V A 3/2



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CERTIFICATE

I here certify that the thesis entitled GREEN SYNTHESIS AND CHARACTERIZATION OF SILVER NANOPARTICLES USING Cayratia trifolia (L) EXTRACT AGAINST REPRESENTATIVE MICROORGANISMS submitted to University, for the award of degree of Master of Science in of Microbiology embodies the result of bonafide research work carried out by

B. RUBA

(Reg. No: P19390921)

Under my guidance and supervision in the Annai College of Arts & Science, Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirapalli). I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities.

Signature, Head of the Department

Signature of the Guide

Dr.D.Elamparithi, M.Sc., M.Phil., Ph.D., Head & Assistant Professor, PG & Research Department of Biotechnology Annai College Of Arts and Science Kovilacheri-612 503. Ceil: 98946 54962

Submitted for Viva Voce Examination held on 30.03.2021

Examiner:	1.	
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Affiliated to Bharathidasan University, Tiruchirappath E-mail acasedmn@gmail.com

CERTIFICATE

I here certify that the thesis entitled "A STUDY CONCERNING IN VITRO CONSERVATION STRATEGIES USING Cayratia Trifolia (L) DOMIN PROTOCOL FOR MICRO PROPAGATION FROM NODE AND LEAF EXPLANTS " submitted to University, for the award of degree of Master of Science in of Microbiology embodies the result of bonafide research work carried out by

Miss. V. RUBILA

(Reg. No: P 19390920)

Under my guidance and supervision in the Annai College of Arts & Science Kovilacheri, Kumbakonam (Affiliated to Bharadhidasan University, Tiruchirappalli) I further certify that under such help or source of information have been availed in this connection is duly acknowledged and that no part of the thesis has been submitted anywhere else for any other degree, diploma, fellowship or their similarities

Signature of the Candidate

Abalam 30/3 /2021.

Submitted for Viva Voce Examination held on 50, 03, 2021

Examiners:

1. V M3)10/2022

2. <u>N. F. W.</u>