



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

**“ANTIBODY SUBCLASS RESPONSE TO RSV STRUCTURAL
PROTEINS AFTER INFECTION”**

A REVIEW ARTICLE SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY,
BHARATI VIDYAPEETH DEEMED TO BE UNIVERSITY, PUNE**

FOR AWARD OF DEGREE OF

MASTERS OF SCIENCE IN MEDICAL BIOTECHNOLOGY

SUBMITTED BY

Ms. Abhilasha Dattatray Kadu

UNDER THE GUIDANCE OF

Dr. Harshad Padmanabh Patil

RESEARCH CENTRE

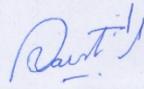
**INTERACTIVE RESEARCH SCHOOL FOR HEALTH AFFAIRS(IRSHA)
BHARATI VIDYAPEETH (DEEMED TO BE UNIVERSITY)**

DATE OF SUBMISSION – 17 July 2021

Certificate

This is to certify that the work incorporated in the review article entitled “Antibody subclass response to RSV structural proteins after infection” for the degree of Master of Science in the subject Medical Biotechnology under the faculty of Science has been carried out by Ms Abhilasha Dattatray Kadu at Interactive Research School For Health Affairs (IRSHA) Bharati Vidyapeeth (deemed to be university) during the period from January to June 2021 under the guidance of Dr. Harshad Padmanabh Patil.

Date: 08.07.2021


Signature of the guide

Place: IRSHA, Pune

Dr. Harshad P. Patil
Bharati Vidyapeeth
(Deemed to be University)
Interactive Research School for Health Affairs (IRSHA)
Pune-Satara Road, Pune - 411 043.

DECLARATION BY THE CANDIDATE

I hereby declare that the review article entitled “**ANTIBODY SUBCLASS RESPONSE TO RSV STRUCTURAL PROTEIN AFTER INFECTION**” submitted by me to the Bharati Vidyapeeth Deemed to be University, Pune for the degree of Master of Science (M Sc.) in Medical Biotechnology under the Faculty of Interdisciplinary Science is original piece of work carried out by me under the supervision of **Dr. Harshad Padmanabh Patil**. I further declare that it has not been submitted to this or any other university or Institution for the award of any degree or Diploma.

I also confirm that all the material which I have borrowed from other sources and incorporated in this review is duly acknowledged. If any material is not duly acknowledged and found incorporated in this review, it is entirely my responsibility.

I am fully aware of the implications of any such act which might have been committed by me advertently or inadvertently.

PLACE – Pune

DATE - 17 July 2021



Abhilasha Dattatray Kadu
Name & Signature of Research Student



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

ANTIBACTERIAL ACTIVITY OF METHANOLIC LEAF

EXTRACT OF LEEA INDICA ON CLINICALLY ISOLATED UTI

BACTERIAL PATHOGENS

REVIEW SUBMITTED TO

RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY,
BHARATI VIDYAPEETH (DEEMED TO BE UNIVERSITY), PUNE

FOR AWARD OF DEGREE OF
MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY
Ms. DARSHANA MISAL

UNDER THE GUIDANCE OF
Dr. SHIRDHAR GHAGANE

SUBMISSION DATE :15/07/2021

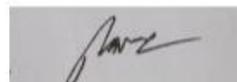
CERTIFICATION OF GUIDE

This is to certify that the work incorporated in the Review and Research proposal entitled “**ANTIBACTERIAL ACTIVITY OF METHANOLIC LEAF EXTRACT OF LEEA INDICA ON CLINICALLY ISOLATED BACTERIAL PATHOGENS**” for the degree of ‘Master of Science’ in the subject of Medical Biotechnology under the faculty of Science has been carried out by **Ms. DARSHANA MISAL** at KLEs Dr. Prabhakar Kore Hospital and Medical Research centre BELGAUM KARNATAKA during the period from January 2021 to June 2021 under my supervision and guidance of **Dr. SHRIDHAR GHAGANE RESEARCH SCIENTIST DIVISION OF UROLOGIC AND ONCOLOGY .**

PLACE: BELGAUM

Dr. Shridhar Ghagane

DATE:15/07/2021



DECLARATION BY THE CANDIDATE

I hereby declare that the Review and the Research proposal entitled “**ANTIBACTERIAL ACTIVITY OF METHANOLIC LEAF EXTRACT OF LEEA INDICA ON CLINICALLY ISOLATED UTI BACTERIAL PATHOGENS**” submitted by me to the Bharati Vidyapeeth Deemed to be University, Pune for the degree of Master of Science (M Sc.) in Medical Biotechnology under the Faculty of Interdisciplinary Science is an original piece of work carried out by me under the supervision of **Dr. SHRIDHAR GHAGANE**. I further declare that it has not been submitted to this or any other university or Institution for the award of any degree or Diploma.

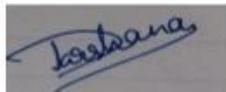
I also confirm that all the material which I have borrowed from other sources and incorporated in this dissertation is duly acknowledged. If any material is not duly acknowledged and found incorporated, it is entirely my responsibility. I am fully aware of the implications of any such act which might have been committed by me advertently or inadvertently.

Place : PUNE

Date :15-07-2021

Ms. DARSHANA MISAL

(Research student)

A rectangular box containing a handwritten signature in blue ink that reads "Darshana".



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

**“ANTIMICROBIAL SUSCEPTIBILITY PATTERN OF
BACTERIAL PATHOGENS CAUSING URINARY TRACT
INFECTION IN PREGNANT WOMEN”**

A REVIEW SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY, BHARATI
VIDYAPEETH DEEMED TO BE UNIVERSITY, PUNE**

FOR AWARD OF DEGREE OF

MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

REVIEW

BY

MR. GANESH L. PATIL

MSc. II

UNDER THE GUIDANCE OF

Dr. SEEMA PATIL

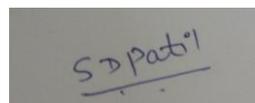
10th July, 2021

Certificate

This is to certify that the work incorporated in the Review entitled “**Antimicrobial susceptibility pattern of bacterial pathogens causing urinary tract infection in Pregnant Women**” for the degree of Master of Science in the subject Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by **Mr. GANESH LAHU PATIL** at Rajiv Gandhi Institute of IT and Biotechnology, Bharati Vidyapeeth (deemed to be) University, Dhanakwadi, Pune. During the period from February to May under the guidance of **Dr. SEEMA PATIL**.

Date: 10/07/2021

Place: PUNE

A rectangular box containing a handwritten signature in blue ink that reads "S Patil".

Signature of the Guide
[Dr. SEEMA PATIL]

Rajiv Gandhi Institute of IT and Biotechnology

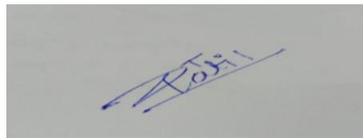
DECLARATION

I hereby declare that the review entitled “**Antimicrobial susceptibility pattern of bacterial pathogens causing urinary tract infection in Pregnant Women**” submitted by me to the Bharati Vidyapeeth Deemed to be university, Pune for the degree of Master of Science (M.Sc.) in Medical Biotechnology under the faculty of Interdisciplinary Science is original piece of work carried out by me under the supervision of Dr. Seema Patil. I further declare that it has not been submitted to this or any other university or institution for the award of any Degree or Diploma.

I also confirm that all the material which I have borrowed from other sources and incorporated in this dissertation is duly acknowledge. If any material is not duly acknowledge and found incorporated in this dissertation, it is entirely my responsibility. I am fully aware of the implication of any such act which might have been committed by me advertently or inadvertently.

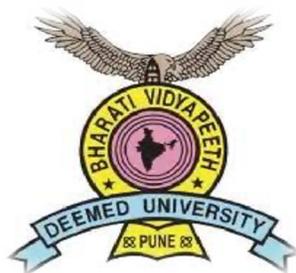
Date: 10/07/2021

Place: PUNE



[GANESH L.PATIL]
Name and signature of
Research student

**ANTIVIRAL DRUG ASSESMENT STRATERGIES
AGAINST FLAVIVIRUSES: CURRENT
APPROCHES AND RECENT ADVANCES.**



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

**A REVIEW SUBMITTED TO
RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY,
BHARATI VIDYAPEETH DEEMED TO BE UNIVERSITY, PUNE
FOR AWARD OF DEGREE OF
MASTER OF SCIENCE in BIOTECHNOLOGY**

**Submitted by
Jayshri Bhagat.
M.Sc Medical Biotechnology
Roll No:1916120016**

**UNDER THE GUIDENCE OF
Dr.Rashmi Virkar**

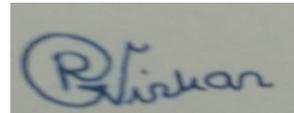
**RESEARCH CENTRE
Interactive Research School For Health Affairs
(IRSHA), Pune**

Certificate

This is to certify that the work incorporated in the review **Antiviral drug assessment strategies' against flavivirus: Current approaches and Recent advances** and for the degree of Master of Science in the subject Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by Ms. Jayshree Bhagat at Interactive Research School for Health Affairs(IRSHA) Bharati Vidyapeeth (deemed to be) University, Dhanakwadi, Pune during the period from January 2021 to June 2021 under the guidance of Dr. Rashmi Virkar.

Date: 22/07/2021

Signature of the guide

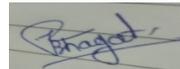
A rectangular box containing a handwritten signature in blue ink. The signature appears to be 'R. Virkar' with a stylized flourish above the 'V'.

Place: Pune

DECLARATION BY CANDIDATE

I hereby declare that the Review entitled “**Antiviral drug assessment strategies’ against flavivirus: Current approaches and Recent advances** submitted by me to the Bharati Vidyapeeth Deemed to be University, Pune for the degree of Master of Science (M Sc.) in Medical Biotechnology under the Faculty of Interdisciplinary Science is original piece of work carried out by me under the supervision of Dr. Rashmi Virkar. I further declare that it has not been submitted to this or any other university or Institution for the award of any degree or Diploma. I also confirm that the material which I have borrowed from other sources and incorporated in this Review is duly acknowledged. If any material is not duly acknowledged and found incorporated in this review, it is entirely my responsibility. I am fully aware of the implication of any such act which might have been committed by me advertently or inadvertently.

Jayshree Bhagat



Place: Pune

Date: 10/07/2021

Name & signature of

Research Student



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

"ANTIMICROBIAL EFFECTS OF GRAS ORGANISMS ON ADULT ACNE"

A DISSERTATION SUBMITTED TO

RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY, BHARATI VIDYAPEETH
DEEMED TO BE UNIVERSITY, PUNE

FOR AWARD OF DEGREE OF

MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY JUILEE YAWALKAR

UNDER THE GUIDANCE OF DR. RAMA BHADEKAR.

RESEARCH CENTRE Rajiv Gandhi Institute of I.T and Biotechnology, Bharati
Vidyapeeth Deemed to be University, Dhankawadi, Pune

CERTIFICATE

This is to certify that the work incorporated in the dissertation entitled "*ANTIMICROBIAL EFFECTS OF GRAS ORGANISMS ON ADULT ACNE*" for the degree Of 'Master of Science' in the subject of Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by JUILEE YAWALKAR, Rajiv Gandhi Institute of I.T and Biotechnology, Bharati Vidyapeeth Deemed to be University, Dhankawadi, Pune during the period from April, 2021 to July, 2021 under the guidance of DR. RAMA BHADEKAR.

Place: Pune

(Signature of Head of the Institute with seal)

Date: 10/07/2021

Principal / Director

Seal

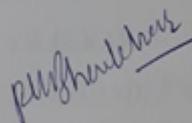
CERTIFICATION OF GUIDE

This is to certify that the work incorporated in the dissertation entitled
"ANTIMICROBIAL EFFECTS OF GRAS ORGANISMS ON ADULT ACNE"

Submitted by **JUILEE YAWALKAR** for the degree of 'Master of Science' in the subject of 'Medical Biotechnology' under the faculty of Interdisciplinary Science has been carried out in the Department (laboratory) of RGIITBT, BVDU during the period from April, 2021 to July, 2021 under my direct supervision/ guidance.

Place: Pune

Date: 10/07/2021


(Signature of Research Guide)

(Name & Designation)

Dr. Mrs. Rama Bhadekar

HOD
Dept. of Microbial Biotechnology
BVU, Rajiv Gandhi Institute of I.T. & B.T.
Katraj, Pune - 411 046.

CAUDAL FIN REGENERATION IN ZEBRAFISH



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

A DISSERTATION SUBMITTED TO
**RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY,
BHARATI VIDYAPEETH DEEMED TO BE UNIVERSITY, PUNE**

FOR AWARD OF DEGREE OF
MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY

MEDHA KAR

ROLL No. 1916120003

UNDER THE GUIDANCE OF

Dr. CHINMOY PATRA

DEPARTMENT OF DEVELOPMENTAL BIOLOGY

AGHARKAR RESEARCH INSTITUTE, PUNE



महाराष्ट्र विज्ञान परिषदे
आघारकर अनुसंधान संस्थान
Maharashtra Association for the Cultivation of Science
AGHARKAR RESEARCH INSTITUTE

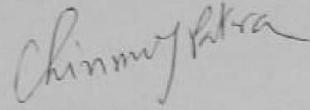
Submitted on: 10-05-2021.

CERTIFICATE

This is to certify that the work incorporated in the review entitled '**Caudal Fin Regeneration in Zebrafish**' for the degree of Master of Science in the subject Medical Biotechnology, has been carried out by Miss Medha Kar at the department of Developmental Biology, Agharkar Research Institute, Pune, during the period from 21-01-2021 to 1-03-2021 under the guidance of Dr. Chinmoy Patra.

Date: 08.07.2021

Place: PUNE



Signature of the guide

(Name of the guide with stamp and seal of the institute)

डॉ. चिन्मय पात्रा / Dr Chinmoy Patra
वैज्ञानिक, डी डेवलपमेंटल बायोलॉजी ग्रुप /
Scientist, D Developmental Biology Group
आघारकर अनुसंधान संस्थान / Agharkar Research Institute
पुणे - 411004, भारत / Pune-411004, India



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

**MESOPOROUS SILICA NANOPARTICLES: SYNTHESIS AND DRUG
DELIVERY APPLICATION**

REVIEW SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY,
BHARATI VIDYAPEETH (DEEMED TO BE UNIVERSITY), PUNE**

**FOR AWARD OF DEGREE OF
MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY**

**SUBMITTED BY
Mr. MOHAMMADUSMAN J MOMIN**

**UNDER THE GUIDANCE OF
Dr. VIDYA S TALE**

SUBMISSION DATE:-10-07-2021

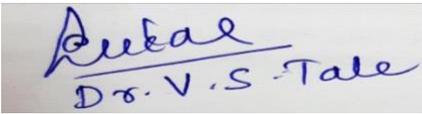
CERTIFICATE

This is to certify that the work incorporated in the Review/Dissertation entitled “Mesoporous Silica Nanoparticles: Synthesis and Drug Delivery Application ” for the degree of 'Master of Science' in the subject Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by Mr. MohammadUsman J Momin at Rajiv Gandhi Institute of IT and Biotechnology, Bharati Vidyapeeth (deemed to be) University, Dhanakwadi, Pune under my supervision and guidance.

Date:10/07/2021

Signature of the guide

Place: Pune



Dr. V.S. Tale

DECLARATION BY CANDIDATE

I hereby declare that the Review/Dissertation entitled “Mesoporous Silica Nanoparticles: Synthesis and Drug Delivery Application” submitted by me to the Bharati Vidyapeeth Deemed to be University, Pune for the degree of Master of Science (M Sc.) in Medical Biotechnology under the Faculty of Interdisciplinary Science is original piece of work carried out by me under the supervision of Dr. Vidya S Tale. I further declare that it has not been submitted to this or any other university or Institution for the award of any degree or Diploma. I also confirm that the material which I have borrowed from other sources and incorporated in this Review is duly acknowledged. If any material is not duly acknowledged and found incorporated in this review, it is entirely my responsibility. I am fully aware of the implication of any such act which might have been committed by me advertently or inadvertently.

Place: Pune

MohammadUsman J Momin



Date:10/07/2021



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

*“PREVENTIVE ROLE OF LACTIC ACID BACTERIA IN THE ONSET OF
COLORECTAL CANCER”*

A DISSERTATION SUBMITTED TO

RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY, BHARATI VIDYAPEETH
DEEMED TO BE UNIVERSITY, PUNE

FOR AWARD OF DEGREE OF

MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY **NEHA OAK**

UNDER THE GUIDANCE OF **DR. RAMA BHADDEKAR.**

RESEARCH CENTRE Rajiv Gandhi Institute of I.T and Biotechnology, Bharati
Vidyapeeth Deemed to be University, Dhankawadi, Pune

CERTIFICATE

This is to certify that the work incorporated in the dissertation entitled "*PREVENTIVE ROLE OF LACTIC ACID BACTERIA IN THE ONSET OF COLORECTAL CANCER*" for the degree Of 'Master of Science' in the subject of Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by NEHA OAK, Rajiv Gandhi Institute of I.T and Biotechnology, Bharati Vidyapeeth Deemed to be University, Dhankawadi, Pune during the period from April, 2021 to July, 2021 under the guidance of DR. RAMA BHADEKAR.

Place: Pune

(Signature of Head of the Institute with seal)

Date:

Principal / Director

Seal

CERTIFICATION OF GUIDE

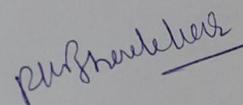
This is to certify that the work incorporated in the dissertation entitled

***“PREVENTIVE ROLE OF LACTIC ACID BACTERIA IN THE
ONSET OF COLORECTAL CANCER”***

Submitted by **NEHA OAK** for the degree of 'Master of Science' in the subject of 'Medical Biotechnology' under the faculty of Interdisciplinary Science has been carried out in the Department (laboratory) of RGIITBT, BVDU during the period from April, 2021 to July, 2021 under my direct supervision/ guidance.

Place: Pune

Date:


(Signature of Research Guide)

(Name & Designation)

Dr. Mrs. Rama Bhaelekar

HOD

**Dept. of Microbial Biotechnology
BVU, Rajiv Gandhi Institute of I.T.& B.T.
Katraj, Pune - 411 046.**



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

**CONDUCTIVE BIOPOLYMERS: SYNTHESIS AND
APPLICATION**

DISSERTATION SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY,
BHARATI VIDYAPEETH DEEMED TO BE UNIVERSITY, PUNE**

FOR AWARD OF DEGREE OF
MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY
NISHA N. KARWA

Name of Co-Guide
Dr. R Bhadekar

Name of Guide
Dr. J M Rajwade

RESEARCH CENTRE
Agharkar Research Institute, Pune.

10th July 2021

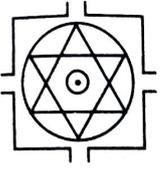
DECLARATION BY THE CANDIDATE

I hereby declare that the dissertation entitled “**CONDUCTIVE BIOPOLYMERS: SYNTHESIS AND APPLICATION**” submitted by me to the Bharati Vidyapeeth Deemed to be University, Pune for the degree of Master of Science (M Sc.) in Medical Biotechnology under the Faculty of Interdisciplinary Science is original piece of work carried out by me under the supervision of **Dr. J M Rajwade** and **Dr. Rama Bhadekar**. I further declare that it has not been submitted to this or any other university or Institution for the award of any degree or Diploma.

I also confirm that all the material which I have borrowed from other sources and incorporated in this dissertation is duly acknowledged. If any material is not duly acknowledged and found incorporated in this dissertation, it is entirely my responsibility. I am fully aware of the implications of any such act which might have been committed by me advertently or inadvertently.

Place: Pune
Date: 10/7/2021

Name & signature of Research Student



दूरभाष / Tel : 020-2532 5000, 2565 3680

फैक्स / Fax : 020-2565 1542

वेब / Web : www.aripune.org

ई-मेल / E-mail : director@aripune.org

महाराष्ट्र असोसिएशन फॉर द कल्चिव्हेशन ऑफ सायन्स

आधारकर अनुसंधान संस्थान

(विज्ञान और प्रौद्योगिकी विभाग, भारत सरकार के अधिन स्वायत्त संस्थान)

गो. ग. आगरकर पथ, पुणे - ४११ ००४.

Maharashtra Association for the Cultivation of Science

AGHARKAR RESEARCH INSTITUTE

(An Autonomous Body under the Department of Science and Technology, Govt. of India)

G. G. Agarkar Road, Pune - 411 004.

CERTIFICATE

This is to certify that the work incorporated in the dissertation entitled "CONDUCTIVE BIOPOLYMERS: SYNTHESIS AND APPLICATION" for the degree of 'Master of Science' in the subject of Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by Ms. NISHA N. KARWA at AGHARKAR RESEARCH INSTITUTE, PUNE during the period from January 2021 to June 2021 under the guidance of Dr. J. M. RAJWADE

Place: Pune
Date : १७/१२/२०२१



Dr. P. K. Dhakephalkar
Director
Agharkar Research Institute, Pune

Dr. P. K. Dhakephalkar
Director
Agharkar Research Institute
(Govt. of India, DST Autonomous Institute)
G.G. Agarkar Road, Pune-411 004.



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

“FUNCTIONAL ROLE OF GRAS ORGANISM ON SKIN AGEING”

A DISSERTATION SUBMITTED TO

RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY, BHARATI VIDYAPEETH
DEEMED TO BE UNIVERSITY, PUNE

FOR AWARD OF DEGREE OF

MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY POOJA MIRKHALKAR

UNDER THE GUIDANCE OF DR. RAMA BHADEKAR.

RESEARCH CENTRE Rajiv Gandhi Institute of I.T and Biotechnology, Bharati
Vidyapeeth Deemed to be University, Dhankawadi, Pune

CERTIFICATION OF GUIDE

This is to certify that the work incorporated in the dissertation entitled

"FUNCTIONAL ROLE OF GRAS ORGANISM ON SKIN AGEING"

Submitted by **POOJA MIRKHALKAR** for the degree of 'Master of Science' in the subject of 'Medical Biotechnology' under the faculty of Interdisciplinary Science has been carried out in the Department (laboratory) of RGIITBT, BVDU during the period from April, 2021 to July, 2021 under my direct supervision/ guidance.

Place: Pune

Date: 10/07/2021

Dr. Rama Bhaelekar

(Signature of Research Guide)

(Name & Designation)

Dr. Mrs. Rama Bhaelekar

HOD

**Dept. of Microbial Biotechnology
BVU, Rajiv Gandhi Institute of I.T. & B.T.
Katraj, Pune - 411 046.**

CERTIFICATE

This is to certify that the work incorporated in the dissertation entitled "*FUNCTIONAL ROLE OF GRAS ORGANISM ON SKIN AGEING*" for the degree Of 'Master of Science' in the subject of Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by POOJA MIRKHALKAR, Rajiv Gandhi Institute of I.T and Biotechnology, Bharati Vidyapeeth Deemed to be University, Dhankawadi, Pune during the period from April, 2021 to July, 2021 under the guidance of DR. RAMA BHADEKAR.

Place: Pune

(Signature of Head of the Institute with seal)

Date: 10/07/2021

Principal / Director

Seal



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

**“VDAC3 IS A CANDIDATE MARKER OF MULTIPLE
MYELOMA: A QUANTITATIVE PROTEOMIC APPROACH”**

A DISSERTATION SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY, BHARATI VIDYAPEETH DEEMED
TO BE UNIVERSITY, PUNE**

FOR AWARD OF DEGREE OF
MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY

Rajeshwari Shome

UNDER THE GUIDANCE OF

Dr. Srikanth Rapole

**National Centre for Cell Science,
Pune, Maharashtra**

05.07.2021

Acknowledgement

First and foremost, I would like to express my heartfelt gratitude to National Centre for Cell Science (NCCS), Pune for giving me the opportunity to carry out this project. I am very grateful to Dr. Srikanth Rapole, who has guided, mentored and provided me the privilege of working under his expert supervision. I am deeply indebted to him for allowing me to complete my project in such an esteemed and renowned research institute.

I sincerely thank my mentor Dr. Bhargab Kalita for such valuable advices and excellent scientific guidance during my research work. I am thankful to all other members of my lab including the technical staff for their constant support, facilities and encouragement.

Lastly, I would like to thank almighty and my parents for providing me all facilities to complete this project successfully.

NCCS

राष्ट्रीय कोशिका विज्ञान केन्द्र
National Centre For Cell Science

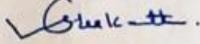
जैवप्रौद्योगिकी विभाग, भारत सरकार का स्वायत्त संस्थान
(An Autonomous Institution of the Department of Biotechnology, Government of India)

CERTIFICATE

This is to certify that the work incorporated in the dissertation entitled “**VDAC3 is a candidate marker of Multiple myeloma: A quantitative proteomic approach**” submitted by Rajeshwari Shome for the degree of ‘Master of Science’ in the subject of ‘Medical Biotechnology’ under the faculty of Interdisciplinary Science has been carried out in the Proteomics Lab, National Centre for Cell Science, Pune during the period from January, 2021 to June, 2021 under my direct supervision/ guidance.

Place: Pune

Date: 05-07-2021


(Signature of Research Guide)

Dr. Srikanth Rapole
Scientist ‘E’



एनसीसीएस कॉम्प्लेक्स, पो. बं. नं. ४०, गणेशखिंड पी. ओ., पुणे ४११ ००७, महाराष्ट्र, भारत
NCCS Complex, P.B. No. 40, Ganeshkhind P. O., Pune - 411 007. Maharashtra,
दूरभाष / Tel.: (020) 25708000 फैक्स / Fax : 91 (020) 25692259

ई मेल / E- mail.infonccs@nccs.res.in

वेबसाईट / Website : <http://www.nccs.res.in>



***In vitro* Regeneration Studies on Selected Medicinal Plants.**

**A REVIEW SUBMITTED TO
BHARATI VIDYAPEETH DEEMED UNIVERSITY,
PUNE**

**FOR THE AWARD OF DEGREE OF MASTER OF
SCIENCE IN
MEDICAL BIOTECHNOLOGY**

**SUBMITTED BY
MS. MANALI KULKARNI**

**UNDER GUIDANCE OF
DR. N.T METI**

**DEPARTMENT OF PLANT BIOTECHNOLOGY
BHARATI VIDYAPEETH DEEMED UNIVERSITY
RAJIV GANDHI INSTITUTE OF IT AND
BIOTECHNOLOGY,**

Signature of Guide

PUNE- 411046

JUNE- 2021

Declaration

We hereby declare that the dissertation report entitled “*In vitro* regeneration studies on selected medicinal plants” submitted by us to the **Bharati Vidyapeeth Deemed to be University, Pune** for the degree of Master of Science(M.Sc) in Medical Biotechnology under the faculty of Interdisciplinary Science is original piece of work carried out by us under the supervision of **Dr. N.T.Meti** and **Dr. Vanita Atre**. We further declare that it has not been submitted to this or any other University or Institution for the award of any degree or Diploma. I also confirmed that all the material which we have borrowed from other sources and incorporated in this dissertation is duly acknowledged. If any material is not duly acknowledged and found incorporated in this dissertation, it is entirely my responsibility. We fully aware of implications of any such act which might have been committed by us advertently or inadvertently.

Date:

Place:

Name & signature of
Research student

Manali D. Kulkarni

M.D.Kulkarni.

Ruchika S. Kanholkar

Ranholkar

Acknowledgement

We would like to express my sincere gratitude to my guide, **Dr. N.T. Meti**, without whose help this dissertation wouldn't have been possible. we really owe our thanks for the constant support, encouragement and valuable guidance rendered by her throughout the project.

We would also like to thanks **Dr. Vanita Atre** for providing us such a greatful information about the techniques and medicinal plant.

Our sincere gratitude to **Dr. Ninad Nagare, College of Ayurved, Bharati Vidyapeeth Deemed University, Pune** for providing us the seedlings of the *Andrographis Paniculata* & *Desmodium gangeticum*.

We would also extend my sincre thanks to **prof. Dr. Shamim Shaikh, Principal of Rajiv Gandhi Institute of I.T & Biotechnology** for providing us the requisite facilities.

We would also thanks to and our sincere gratitude to Head of the Department of Plant Biotechnology **Dr. Singh** for giving permission and provide facilities for Research work.

Also I wish to thanks the Lab assistant **Mrs. Poonam Shedge** for supporting and helps us to maintain our cultures.



***In-vitro* Regeneration Studies & Selected Medicinal Plants.**

**A REVIEW SUBMITTED TO
BHARATI VIDYAPEETH DEEMED UNIVERSITY,
PUNE**

**FOR THE AWARD OF DEGREE OF MASTER OF
SCIENCE IN**

MEDICAL BIOTECHNOLOGY

SUBMITTED BY

MS.RUCHIKA KANHOLKA

UNDER GUIDANCE OF

DR. N.T METI

DEPARTMENT OF PLANT BIOTECHNOLOGY

BHARATI VIDYAPEETH DEEMED UNIVERSITY

RAJIV GANDHI INSTITUTE OF IT AND

BIOTECHNOLOGY,

Signature of Guide

PUNE- 411046

JUNE 2021

Declaration

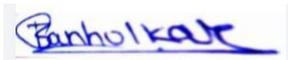
We hereby declare that the dissertation report entitled **“Invitro regeneration studies on selected medicinal plants”** submitted by us to the **Bharati Vidyapeeth Deemed to be University, Pune** for the degree of Master of Science (M.Sc) in Medical Biotechnology under the faculty of Interdisciplinary Science is original piece of work carried out by us under the supervision of **Dr. N.T.Meti** and **Dr. Vanita Atre**. We further declare that it has not been submitted to this or any other University or Institution for the award of any degree or Diploma. We also confirmed that all the material which we have borrowed from other sources and incorporated in this dissertation is duly acknowledged. If any material is not duly acknowledged and found incorporated in this dissertation, it is entirely my responsibility. We fully aware of implications of any such act which might have been committed by us advertently or inadvertently.

Date:

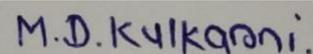
Place:

Name & signature of
Research student

Ruchika S. Kanholkar



Manali D. Kulkarni





RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

“Ethnopharmacological approach for wound care and management.”

A SYSTEMATIC REVIEW SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY BHARATI
VIDYAPEETH DEEMED TO BE UNIVERSITY, PUNE**

FOR AWARD OF DEGREE OF

MASTER OF SCIENCE IN MEDICAL BIOTECHNOLOGY

SUBMITTED BY

Miss. SAMANTHA SHARMA

UNDER THE GUIDANCE OF

Dr. ALPANA S. MOGHE

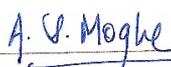
(ASSISTANT PROFESSOR, HOD, DEPARTMENT OF CELL AND MOLECULAR BIOLOGY)

**RAJIV GANDHI INSTITUTE OF I.T AND
BIOTECHNOLOGY (BVDU), PUNE**

10th July 2021

CERTIFICATE

This is to certify that the work incorporated in the review entitled “**Ethnopharmacological approach for wound care and management.**” for the degree of Master of Science in the subject Medical Biotechnology under the faculty of Science has been carried out by **MISS. SAMANTHA SHARMA** at Rajiv Gandhi Institute of IT and Biotechnology, Bharati Vidyapeeth (Deemed to be University), Dhanakwadi, Pune during the period from January 2021 to June 2021 under the guidance of **Dr. ALPANA S. MOGHE** Assistant Professor, HOD, DEPARTMENT OF CELL AND MOLECULAR BIOLOGY, Rajiv Gandhi Institute of I.T and Biotechnology (BVDU), Pune.


Bharati Vidyapeeth
(Deemed to be University)
Rajiv Gandhi Institute of I.T. & B.T.
Pune Satara Road, Pune - 411 046.

Date: 10/07/2021

Place: Pune, Maharashtra

Signature of the guide

(Name of the guide with stamp and seal of the institute)



**SANT GADGE BABA
AMRAVATI UNIVERSITY**
AMRAVATI - 444602
(M.S.)

☎ : 2662206, 2662207, 2662208, 2662249, 2662358. FAX NO. 0721-2660949, 2662135
website : www.sgbau.ac.in

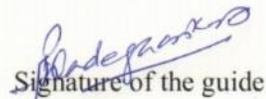
Certificate

This is to certify that the work incorporated in the review entitled "To determine lifestyle factors causing cardiovascular diseases, diabetes and cancer" for the degree of Master of Science in the subject Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by Ms. Shruti Meghraj Shete at Sant Gadge Baba Amravati University, Amravati during the period from January to April under my guidance and supervision.

Date: 02/07/2021

Place Amravati




Signature of the guide

(Dr. Prasad A. Wadegaonkar)
Professor & Head
Department of Biotechnology
Sant Gadge Baba Amravati University
Amravati

**RAJIV GANDHI INSTITUTE OF IT AND
BIOTECHNOLOGY**

**“A comprehensive review on mutation in SARS
CoV-2 CoVID-19: Indian variants.”**

A SYSTEMATIC REVIEW SUBMITTED TO
**RAJIV GANDHI INSTITUTE OF I.T. AND
BIOTECHNOLOGY BHARATI VIDYAPEETH
DEEMED TO BE UNIVERSITY, PUNE**

FOR AWARD OF DEGREE OF
**MASTER OF SCIENCE IN MEDICAL
BIOTECHNOLOGY**

SUBMITTED BY
Miss. SURBHI TAK

UNDER THE GUIDANCE OF

Dr. Mrs. RAMA BHADEKAR

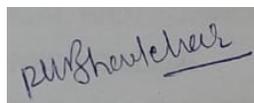
(ASSOCIATE PROFESSOR, HOD, DEPARTMENT OF MICROBIAL
BIOLOGY)

**RAJIV GANDHI INSTITUTE OF I.T AND
BIOTECHNOLOGY (BVDU), PUNE**

10th July 2021

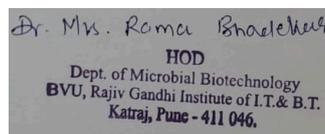
CERTIFICATE

This is to certify that the work incorporated in the review entitled “**A comprehensive review on mutation in SARS CoV-2 CoVID-19: Indian variants**” for the degree of Master of Science in the subject Medical Biotechnology under the faculty of Science has been carried out by **MISS. SURBHI TAK** at Rajiv Gandhi Institute of IT and Biotechnology, Bharati Vidyapeeth (Deemed to be University), Dhanakwadi, Pune during the period from January 2021 to June 2021 under the guidance of **Dr. Mrs. RAMA BHADEKAR** Associate Professor, HOD, DEPARTMENT OF MICROBIAL BIOLOGY, Rajiv Gandhi Institute of I.T and Biotechnology (BVDU), Pune.



Date: 10/07/2021
Place: Pune, Maharashtra

Signature of the guide
(Name of the guide with stamp and seal of the institute)



Dr. Mrs. Rama Bhadekar
HOD
Dept. of Microbial Biotechnology
BVU, Rajiv Gandhi Institute of I.T. & B.T.
Katraj, Pune - 411 046.

DECLARATION

I hereby declare that the dissertation entitled “**A comprehensive review on mutation in SARS CoV-2 CoVID-19: Indian variants**” submitted by me to Rajiv Gandhi Institute of I.T and Biotechnology, Bharati Vidyapeeth Deemed to be University, Pune for the degree of Master in Science (M.Sc.) in Medical Biotechnology under the Faculty of Interdisciplinary Science is an original piece of work carried out by me under the supervision of Professor, Dr. Mrs. Rama Bhadekar, Associate professor, HOD, Rajiv Gandhi Institute of I.T and Biotechnology (BVDU), Pune.

I further declare that it has not been submitted to this or any other University or Institution for the award of any degree or Diploma.

I also confirm that the material which I have borrowed from other sources and incorporated in this dissertation is duly acknowledged. If any material is not duly acknowledged and found incorporated in this dissertation, it is entirely my responsibility. I am fully aware of the implication of any such act which might have been committed by me advertently or inadvertently.

Place: Pune, Maharashtra

Date: 10/07/2021

Miss. Surbhi Tak
M.Sc. Medical Biotechnology
Rajiv Gandhi Institute of I.T
And Biotechnology, Pune



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

Isolation of microvillous membrane and basal membrane and enrichment from placentas of different pregnancy conditions

A DISSERTATION SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY,
BHARTI VIDTAPEETH DEEMED TO BE UNIVERSITY, PUNE.**

FOR AWARD OF DEGREE OF
MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY
BHAKTI AKARAM KAVADE

UNDER THE GUADIANCE OF
DR. SADAHNA JOSHI
HOD, MOTHER AND CHILD HEALTH DEPARTMENT, IRSHA,
Pune.

Date:

[Type here]

CERTIFICATE

This is to certify that the work incorporated in the dissertation entitled "Isolation of microvillous membrane and basal membrane and enrichment from placentas of different pregnancy conditions" for the degree of 'Master of Science' in the subject of Medical Biotechnology under the faculty of Mother and Child Health department has been carried out by Ms. Bhakti Kavade at Interactive Research School For Health Affairs (IRSHA), Pune during period of 25 January 2021 to 27 March 2021 under guidance of Dr. Sadhana Joshi.



Place: Pune

(Signature of Head of the Department with seal)

Date:

[Type here]



RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

**GREEN SYNTHESIS OF NANOPARTICLES AND THEIR
APPLICATION**

REVIEW SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF I.T. AND BIOTECHNOLOGY,
BHARATI VIDYAPEETH (DEEMED TO BE UNIVERSITY), PUNE**

FOR AWARD OF DEGREE OF
MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

SUBMITTED BY
Mr. VISHWAJIT JANUGADE

UNDER THE GUIDANCE OF
Dr. VIDYA S TALE

SUBMISSION DATE:-10-07-2021

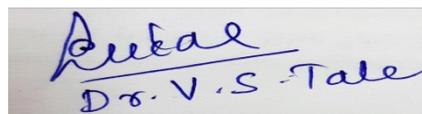
CERTIFICATE

This is to certify that the work incorporated in the Review/Disseratation entitled “Green Synthesis of nanoparticles and their application ” for the degree of 'Master of Science' in the subject Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by Mr. VISHWAJIT JANUGADE at Rajiv Gandhi Institute of IT and Biotechnology, Bharati Vidyapeeth (deemed to be) University, Dhanakwadi, Pune under my supervision and guidance.

Date:10/07/2021

Signature of the guide

Place: Pune

A rectangular box containing a handwritten signature in blue ink. The signature is written in a cursive style and reads "A. Tale" on the top line and "Dr. V. S. Tale" on the bottom line.

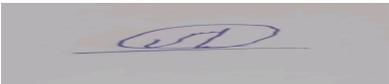
DECLARATION BY CANDIDATE

I hereby declare that the Review/Dissertation entitled “Green Synthesis of nanoparticles and their Application” submitted by me to the Bharati Vidyapeeth Deemed to be University, Pune for the degree of Master of Science (M Sc.) in Medical Biotechnology under the Faculty of Interdisciplinary Science is original piece of work carried out by me under the supervision of Dr. Vidya S Tale. I further declare that it has not been submitted to this or any other university or Institution for the award of any degree or Diploma. I also confirm that the material which I have borrowed from other sources and incorporated in this Review is duly acknowledged. If any material is not duly acknowledged and found incorporated in this review, it is entirely my responsibility. I am fully aware of the implication of any such act which might have been committed by me advertently or inadvertently.

Place: Pune

Vishwajit Janugade

Date:10/07/2021





RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY

“Antibiotic Susceptibility Pattern Of *E.Coli* isolates from urine samples of urinary tract infection patients”

A REVIEW SUBMITTED TO

**RAJIV GANDHI INSTITUTE OF IT AND BIOTECHNOLOGY, BHARATI
VIDYAPEETH DEEMED TO BE UNIVERSITY, PUNE**

FOR AWARD OF DEGREE OF

MASTER OF SCIENCE in MEDICAL BIOTECHNOLOGY

REVIEW

BY

MR. YASH A. PADALKAR

MSc. II

UNDER THE GUIDANCE OF

Dr. SEEMA PATIL

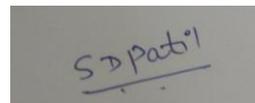
10th July, 2021

Certificate

This is to certify that the work incorporated in the Review entitled “**Antibiotic Susceptibility Pattern Of *E. Coli* isolates from urine samples of urinary tract infection patients**” for the degree of Master of Science in the subject Medical Biotechnology under the faculty of Interdisciplinary Science has been carried out by **Mr. YASH AMUL PADALKAR** at Rajiv Gandhi Institute of IT and Biotechnology, Bharati Vidyapeeth (deemed to be) University, Dhanakwadi, Pune. During the period from February to May under the guidance of **Dr. SEEMA PATIL**.

Date: 10/07/2021

Place: PUNE

A rectangular box containing a handwritten signature in blue ink that reads "S Patil".

Signature of Guide
[Dr. SEEMA PATIL]

Rajiv Gandhi Institute of IT and Biotechnology,

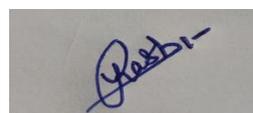
DECLARATION

I hereby declare that the review entitled “**Antibiotic Susceptibility Pattern Of *E.Coli* isolates from urine samples of urinary tract infection patients**” submitted by me to the Bharati Vidyapeeth Deemed to be university, Pune for the degree of Master of Science (M.Sc.) in Medical Biotechnology under the faculty of Interdisciplinary Science is original piece of work carried out by me under the supervision of Dr. Seema Patil. I further declare that it has not been submitted to this or any other university or institution for the award of any Degree or Diploma.

I also confirm that all the material which I have borrowed from other sources and incorporated in this dissertation is duly acknowledge. If any material is not duly acknowledge and found incorporated in this dissertation, it is entirely my responsibility. I am fully aware of the implication of any such act which might have been committed by me advertently or inadvertently.

Date: 10/07/2021

Place: Pune



Name and signature of
Research student