



Project report on  
**Biosynthesis of Selenium Nanoparticle Using Microbe and Its Application**

SUBMITTED BY  
**Ms. AMREEN TAJ (BT200201)**

UNDER THE GUIDANCE OF  
**Dr. JAYASHREE D R, HOD**

Submitted in partial fulfilment of the requirements for the award of degree of in  
MASTER OF SCIENCE IN BIOTECHNOLOGY  
Bengaluru City University



**DEPARTMENT OF BIOTECHNOLOGY & GENETICS**  
**M S RAMAIAH COLLEGE OF ARTS, SCIENCE AND COMMERCE**  
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## CERTIFICATE

This is to certify that this dissertation entitled, "Biosynthesis of Selenium Nanoparticle Using Microbe and Its Application," submitted by **Ms. AMREEN TAJ (BT200201)**, in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bengaluru City University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 17-09-2022

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Guide and supervisor

*Prayashree*

Head of the department

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## PROJECT REPORT ON

### **"BIOSYNTHESIS OF CARBON DOTS FROM MEDICINAL PLANTS AND EVALUATION OF ITS THERAPEUTIC APPLICATIONS"**

#### **SUBMITTED BY**

Amulya M D (BT200202)

#### **Under the Guidance of**

**Dr. Muktha H**

**Submitted in partial fulfilment of the requirement for the award of degree of MASTER  
OF SCIENCE IN BIOTECHNOLOGY of BENGALURU CITY UNIVERSITY**



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## CERTIFICATE

This is to certify that this dissertation entitled, "**BIOSYNTHESIS OF CARBON DOTS FROM MEDICINAL PLANTS AND EVALUATION OF ITS THERAPEUTIC APPLICATIONS**" submitted by **Ms Amulya M D**, register number **BT200202**, in partial fulfilment of the requirements for the degree of **MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore City University is based on the work carried out by his/her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 16-09-2022

Muktha.H 16/9/22  
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**PROJECT REPORT ON**

**“BIOSYNTHESIS OF CARBON DOTS FROM MEDICINAL PLANTS AND  
EVALUATION OF ITS THERAPEUTIC APPLICATIONS”**

**SUBMITTED BY**

Annesha Roy (BT200203)

**Under the Guidance of**

**Dr. Muktha H**

**Submitted in partial fulfilment of the requirement for the award of degree of MASTER  
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## CERTIFICATE

This is to certify that this dissertation entitled, “**BIOSYNTHESIS OF CARBON DOTS FROM MEDICINAL PLANTS AND EVALUATION OF ITS THERAPEUTIC APPLICATIONS**” submitted by **Ms Annesha Roy**, register number **BT200203**, in partial fulfilment of the requirements for the degree of **MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore City University is based on the work carried out by his/her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 13/10/2022

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Project report on

**Green Synthesis of Silver Nanoparticles Using Aqueous Root Extract of *Passiflora edulis*, DNA Barcoding, and their Invitro Pharmacological Studies**

**PROJECT REPORT**

SUBMITTED BY

**Mr. ARUN KUMAR S (BT200204)**

Under the guidance of

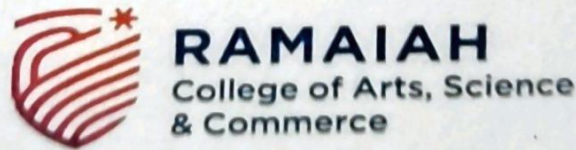
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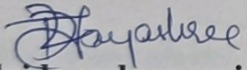
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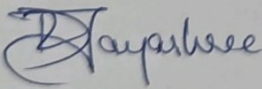
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Date: 17/09/2022

  
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## CERTIFICATE

This is to certify that this dissertation entitled, “Green synthesis of silver nanoparticles from silkworm sericin (*Antheraea mylitta Drury*) and evaluation of its antibacterial activity,” submitted by the following student **H M Aruna Sree (BT200214)** in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore City University.

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Date:

16/09/22

Place: Bangalore



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### CERTIFICATE

This is to certify that this dissertation entitled, **“Biodegradation of Monocrotophos using Phosphate solubilising Microbe,”** submitted by **Ms. Ashwini K (BT200205)** in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 16/09/2022

*L. K. R.*

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This is to certify that the dissertation titled -“**SCREENING AND CHARACTERISATION OF OLEAGINOUS FUNGI FROM OIL INDUSTRY EFFLUENTS FOR THE PRODUCTION OF BIODIESEL**” by **Ms. B AMRUTHA** register number **BT200206** in partial fulfilment of the requirement for the degree of **MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore City University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not been submitted elsewhere for any degree.

Date: 16/09/2022

Guide: *[Signature]*

Co-guide: *[Signature]*

*[Signature]*

**Head of the Department**  
**Department of Biotechnology**  
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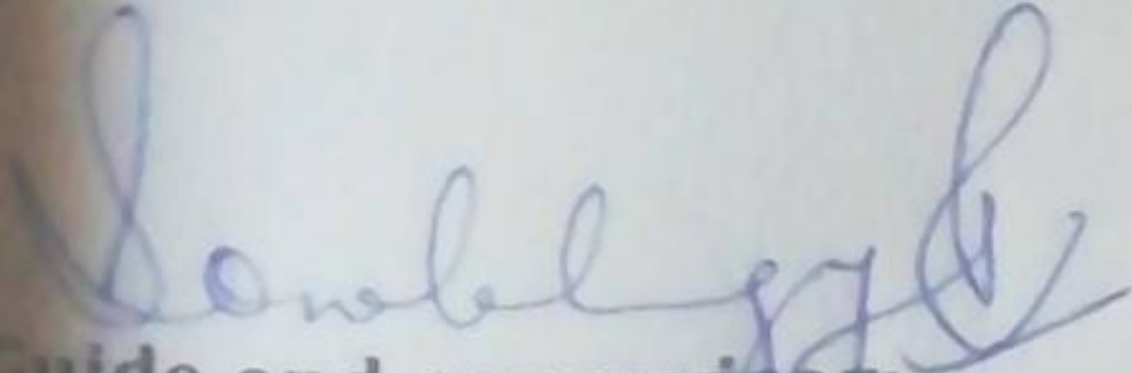
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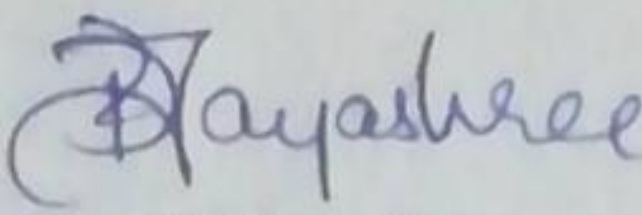
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This is to certify that this dissertation entitled "**Phytonanotechnology; Nanoformulation of *Tinospora cordifolia* using Zinc acetate and its antibacterial activity**" submitted by the following students **Chandana D (BT200207)** in partial fulfilment of the requirements for the DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY to Bengaluru City University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part of this has not been submitted elsewhere for any other degree.

Date: 15/09/2022

Place: Bengaluru

  
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This is to certify that this dissertation entitled “**PRODUCTION OF ETHANOL FROM COFFEE PULP**” Submitted by **Mr. Darshan D V**, register number **BT200208** in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore university is based on the work carried out by her under my guidance and supervision. It is also certified that this project or any part of thereof has not submitted elsewhere for any other degree.

Date: 13-10-22

*Hayashree*

Guide and supervisor

*Hayashree*

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**PROJECT REPORT ON  
MOLECULAR ANALYSIS OF LC/MS-DERIVED PHYTOCHEMICALS  
AGAINST ALZHEIMER'S DISEASE USING BIOINFORMATICS  
APPROACH**

**SUBMITTED BY  
DHANUSH P  
BT200209**

**Under the Guidance of  
Dr. Lakshmi Kanth R N  
Our Co guidance of  
Dr. Sameer Sharma  
(CSO & Director of Bionome)**

**Submitted in partial fulfilment of the requirement for the award of degree of MASTER OF  
SCIENCE IN BIOTECHNOLOGY of BENGALURU CITY UNIVERSITY**



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**SEPTEMBER**

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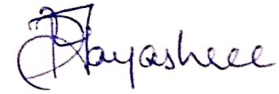
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This is to certify that the dissertation entitled “**Molecular Analysis of LC/MS derived Phytochemicals against Alzheimer’s disease using Bioinformatics approach**” is submitted by Mr **Dhanush P (BT200209)**, in partial fulfilment of the requirements for the DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY to Bengaluru City University is based on the work carried out by him under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 16/09/2022

  
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### CERTIFICATE

This is to certify that this dissertation entitled, “**Biodegradation of Monocrotophos using Phosphate solubilising Microbe,**” submitted by **Ms. Ganavi G (BT200210)** in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 16/09/2022

  
Guide and supervisor

  
16/09/22  
Head of the department

Department of Biotechnology  
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Project report on

**“In-vitro Estimation of Antioxidant, Anti-inflammatory Activities, Ocular Therapeutic Capacity and DNA Bar Coding of *Alternanthera sessilis*.”**

SUBMITTED BY  
**GOUTHAMI H R (BT200211)**

UNDER THE GUIDANCE OF  
**Prof/Dr/Mr Channarayappa**

Submitted in partial fulfilment of the requirements for the award of degree of  
**MASTER OF SCIENCE IN BIOTECHNOLOGY**  
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## CERTIFICATE

This is to certify that this dissertation entitled, "In-vitro Estimation of Antioxidant, Anti-inflammatory Activities, Ocular Therapeutic Capacity and DNA Bar Coding of *Alternanthera sessilis*," submitted by Ms. GOUTHAMI H R (BT200211) in partial fulfilment of the requirements for the DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY to Bengaluru city University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 03/10/22

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Date: 17/09/2022

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No: BES/CER/107/22-23 Sep 14<sup>th</sup>, 2022

## CERTIFICATE

This is to certify that **Mr. Govindaraju L [BT200212], MSc Biotechnology from Bengaluru City University**, has successfully completed three months project entitled "**Green Synthesis of Silver Nanoparticles using Aqueous Root Extract of *Passiflora edulis*, DNA barcoding, and their *In vitro* Pharmacological Studies**" at BioEdge Solutions, Bangalore under the guidance of Dr. SHRUTHI SD during May to July 2022. He has successfully learnt and handled Phytochemical, Pharmacological analysis and Molecular Biology techniques. I am pleased to state that he has completed the term with punctuality, hard work and as an inquisitive student.

Yours sincerely,

Place: Bangalore

Date: 14-09-2022

**For BioEdge Solutions**

**Proprietress**



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Ranked 55<sup>th</sup> in NIRF India Ranking by MHRD, New Delhi  
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## CERTIFICATE

This is to certify that this dissertation entitled, "Biosynthesis of Selenium Nanoparticle Using Microbe and Its Application," submitted by **Ms. GUNASHEELA A (BT200213)**, in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bengaluru City University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 03/10/2022

*Hayashree*  
Guide and supervisor

*Hayashree*  
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Ref. No. AB/CF/1087/22

Date: 10<sup>th</sup> Sep 2022

## CERTIFICATE



*This is to certify that Ms. Gunasheela A student of M.Sc., Biotechnology from M S Ramaiah College of Arts, Science and Commerce, Bengaluru has successfully completed Dissertation work entitled "Biosynthesis of Selenium Nanoparticle Using Microbe and its Application." For the period three months at Azyme Biosciences Pvt Ltd, Bengaluru.*

*Mahesh. M*

Mahesh. M  
CEO





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Ranked 55<sup>th</sup> in NIRF India Ranking by MHRD, New Delhi  
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## CERTIFICATE

This is to certify that this dissertation entitled “**Green synthesis of copper oxide nanoparticles and Evaluation of its antibacterial activity**” Submitted by **Ms. Harshita Kapur**, register number **BT200215** in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore university is based on the work carried out by her under my guidance and supervision. It is also certified that this project or any part of thereof has not submitted elsewhere for any other degree.

Date: 11-10-2022

*M. K. Harshita*

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Date: 11-10-2022

*M. K. Harshita*

Guide and supervisor

*[Signature]*

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**BENGALURU CITY UNIVERSITY**



**PROJECT REPORT ON**

**“BIOSYNTHESIS OF CARBON DOTS FROM MEDICINAL PLANTS AND  
EVALUATION OF ITS THERAPEUTIC APPLICATIONS”**

**SUBMITTED BY**

**Harshitha Raj I B (BT200216)**

**Under the Guidance of**

**Dr. Muktha H**

**Submitted in partial fulfilment of the requirement for the award of degree of MASTER  
OF SCIENCE IN BIOTECHNOLOGY of BENGALURU CITY UNIVERSITY**



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**SEPTEMBER 2022**



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## CERTIFICATE

This is to certify that this dissertation entitled, "**BIOSYNTHESIS OF CARBON DOTS FROM MEDICINAL PLANTS AND EVALUATION OF ITS THERAPEUTIC APPLICATIONS**" submitted by **Ms Harshitha Raj I B**, register number **BT200216**, in partial fulfilment of the requirements for the degree of **MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore City University is based on the work carried out by his/her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 13/10/2022

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## CERTIFICATE

This is to certify that this dissertation entitled, **“BIOETHANOL PRODUCTION FROM LEAFY BIOMASS OF POPULUS SPECIES (POPLAR) USING FERMENTATIVE MICROBES (*SACCHAROMYCES CEREVISIAE*)** submitted by **Ms V HILLARY SOPHIA (BT200244)** in partial fulfillment of the requirements for the degree of **MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore City University is based on the work carried out by his/her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 13/10/2022

*Dayashree*

Guide and supervisor

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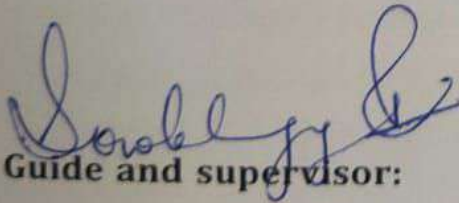
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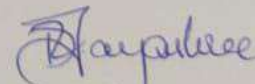
## CERTIFICATE

This is to certify that this dissertation entitled "**Phytonanofabrication and Antimicrobial activity of Zinc oxide nanoparticles using *Cissus quadrangularis* extract**" submitted by the following students **Jayashree B (BT200217)** in partial fulfilment of the requirements for the DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY to Bengaluru City University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part of this has not been submitted elsewhere for any other degree.

Date: 16/09/2022

Place: Bengaluru

  
Guide and supervisor:

  
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## CERTIFICATE

This is to certify that this dissertation entitled “Green synthesis of copper oxide nanoparticles and Evaluation of its antibacterial activity” Submitted by **Mr. Thokala Koteswara Reddy**, register number **BT200243**, in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore university is based on the work carried out under my guidance and supervision. It is also certified that this project or any part of thereof has not submitted elsewhere for any other degree.

Date: 6 11/10/2022

Mukthar H  
Guide and supervisor

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Ranked 55<sup>th</sup> in NIRF India Ranking by MHRD, New Delhi  
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## CERTIFICATE

This is to certify that this dissertation entitled, "**GREEN SYNTHESIS OF SILVER NANOPARTICLES USING AQUEOUS ROOT EXTRACT OF *Passiflora edulis*, DNA BARCODING AND THEIR INVITRO PHARMACOLOGICAL STUDIES**" submitted by **Mr. Krishnaprasad B (BT200218)** in partial fulfillment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bengaluru City University is based on the work carried out by him under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 17/09/2022

*Dayalbee*

Guide and supervisor

*Dayalbee*

Head of the department

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No: BES/CER/105/22-23 Sep 14<sup>th</sup>, 2022

## CERTIFICATE

This is to certify that **Mr. Krishnaprasad B [BT200218], MSc Biotechnology** from **Bengaluru City University**, has successfully completed three months project entitled “**Green Synthesis of Silver Nanoparticles using Aqueous Root Extract of *Passiflora edulis*, DNA barcoding, and their *In vitro* Pharmacological Studies**” at BioEdge Solutions, Bangalore under the guidance of **Dr. SHRUTHI SD** during May to July 2022. He has successfully learnt and handled Phytochemical, Pharmacological analysis and Molecular Biology techniques. I am pleased to state that he has completed the term with punctuality, hard work and as an inquisitive student.

Place: Bangalore

Date: 14-09-2022

Yours sincerely,

**For BioEdge Solutions**

**Proprietress**



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## CERTIFICATE

This is to certify that this dissertation entitled "**Phytonanofabrication and Antimicrobial activity of Zinc oxide nanoparticles using *Cissus quadrangularis* extract**" submitted by the following students **Krithika A (BT200219)** in partial fulfilment of the requirements for the DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY to Bengaluru City University is based on the work carried out by her under my guidance and supervision. It is also certified that this dissertation or any part of this has not been submitted elsewhere for any other degree.

Date: 16/09/2022

Place: Bengaluru

Guide and supervisor:

Head of the Department:  
Department of Biotechnology

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**“GREEN SYNTHESIS OF SILVER NANOPARTICLES FROM SILKWORM SERICIN  
(ANTHERAEA MYLITTA DRURY) & EVALUATION OF ITS ANTIBACTERIAL  
ACTIVITY”**

**PROJECT REPORT SUBMITTED BY**

**Ms. Kummitha Siva priya**

**(BT200220)**

**UNDER THE GUIDANCE OF**

**Dr. Geetika Pant**

Submitted in partial fulfilment of the requirements for the award of degree in

**MASTER OF SCIENCE IN BIOTECHNOLOGY**

Bengaluru city university



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**September 2022**



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## CERTIFICATE

This is to certify that this dissertation entitled, "**Green synthesis of silver nanoparticles from silkworm sericin (*Antheraea mylitta Drury*) and evaluation of its antibacterial activity,**" submitted by the following student **Kummitha Siva priya (BT200220)** in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore City University.

Date: 16-09-22

Place: Bangalore

### Guide and supervisor:

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Supervisor

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## CERTIFICATE

This is to certify that the dissertation entitled "**Molecular Analysis of LC/MS derived Phytochemicals against Alzheimer's disease using Bioinformatics approach**" is submitted by Mr **Manu J (BT200221)**, in partial fulfilment of the requirements for the **DEGREE OF MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bengaluru City University is based on the work carried out by him under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 16/09/2022

Guide and supervisor

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## DECLARATION

I hereby declare that the dissertation entitled: **MOLECULAR ANALYSIS OF LC/MS-DERIVED PHYTOCHEMICALS AGAINST ALZHEIMER'S DISEASE USING BIOINFORMATICS APPROACH** is submitted by me to the Bengaluru City University in partial fulfilment of the requirement for the award of M.Sc. Biotechnology and this work has not been submitted elsewhere for any other degree.

Place: Bengaluru

Date:



(Manu J)



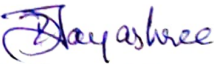
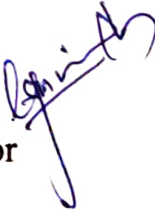
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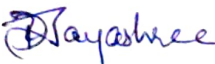
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Ranked 55<sup>th</sup> in NIRF India Ranking by MHRD, New Delhi  
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## CERTIFICATE

This is to certify that this dissertation entitled, **“SYNTHESIS OF DOCOSAHEXANOIC ACID (DHA) - AN IMPORTANT OMEGA-3 PUFA IN *SCHIZOCHYTRIUM LIMACIUM*: BY UTILIZING CRUDE GLYCEROL FROM BIODIESEL PROCESS”** submitted by **Mr. MOHAMMED SIRAJ** register number **BT200222** in partial fulfilment of the requirements for the degree of **MASTER OF SCIENCE IN BIOTECHNOLOGY** to Bangalore City University is based on the work carried out by his/her under my guidance and supervision. It is also certified that this dissertation or any part thereof has not submitted elsewhere for any other degree.

Date: 13-10-2022

  
Guide and Supervisor 

  
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