

**“GREEN SYNTHESIS AND CHARACTERIZATION OF SILVER NANOPARTICLES
USING EXTRACT OF BEE POLLEN AND EVALUATION OF ITS ANTIBACTERIAL
AND ANTIOXIDANT ACTIVITIES”**

DISSERTATION THESIS

**SUBMITTED IN THE PARTIAL FULFILMENT FOR THE AWARD OF THE DEGREE OF
MASTER OF SCIENCE IN BIOTECHNOLOGY
(M.Sc. BIOTECHNOLOGY)**



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Session: 2021-2022

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BIOREMEDIATION OF METHYLENE BLUE AND WASTEWATER WITH THE HELP OF WHITE FUNGUS EXTRACTED FROM THE SOIL

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Targeting Altered Cancer Metabolism using Alkaloids

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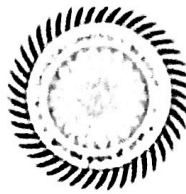
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Anaerobic Fermentation of Rice Straw for The Production of Bio-ethanol as Green Energy Using Bacteria

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**PRODUCTION AND CHARACTERIZATION OF BIODEGRADABLE BIOPLASTIC
USING KINNOW PEELS**

Dissertation Thesis

Submitted in the partial fulfillment for the award of the degree of

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**‘Study on preparation of a portable water purification system based
on multipronged approach’**

Dissertation Thesis

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Studies on the Effects of Different Tea Processing on their Polyphenol Contents and Selected Biological Activities

Dissertation Thesis

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ASSESSMENT OF PHYTOCHEMICALS AND ANTIOXIDANT ACTIVITY ON THE LOCALLY FOUND LEAFY VEGETABLES

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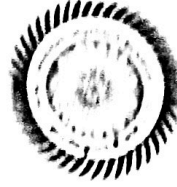
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**"GREEN SYNTHESIS OF SILVER NANOPARTICLES BY *Helicteres isora* FRUIT
EXTRACT AND EVALUATION OF ITS ANTIBACTERIAL AND ANTIOXIDANT
ACTIVITIES"**

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**ISOLATION AND IDENTIFICATION OF BACTERIAL SPECIES
DEGRADING PLASTIC WASTE FROM DUMPYARD WASTE
MATERIAL**

Dissertation Thesis

Submitted in the partial fulfillment for the award of the degree of

Master of Science in Biotechnology

(M.Sc. Biotechnology)



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***In Vivo* effects of rhizospheric bacteria isolated from rhizosphere of
Congress grass (*Parthenium hysterophorous* L.) on germination and
growth of rice and chickpea**

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“Cell-based and cell-free investigation of the anti-diabetic effect and anti-oxidant activities of different orthodox black tea extracts”

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**"Antimicrobial efficacy of *Andrographis paniculata*, *Bacopa monnieri*
& *Azadirachta indica* against oral microbes in toothpaste
formulations"**

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"Isolation and Identification of Entomopathogen *Aspergillus* species"

DESSERTATION REPORT

SUBMITTED TO

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IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE AWARD OF THE DEGREE OF

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**DEVELOPMENT OF MAHUA FLOWER FLOUR BASED COOKIES WITH
IMPROVED FUNCTIONAL AND SENSORIAL ATTRIBUTES**

Dissertation Thesis Submitted in the partial fulfilment for the award of the degree of

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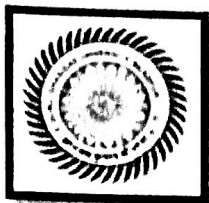
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Effect of pH and temperature on growth of fungus, on the production of the antifungal compound through OSMAC approach

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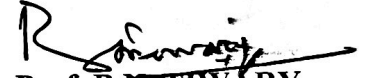


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A

Dissertation Thesis

On

**COMPARATIVE ANALYSIS OF NUTRITIONAL VALUE ON
DIFFERENT TYPES OF MUSHROOMS**

Submitted in the partial fulfillment for the award of the degree of

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Cloning of CLAVATA gene from *Brassica oleracea* cultivar

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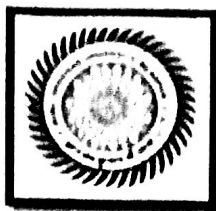
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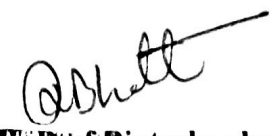

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Decolorization of azo dye Orange II by bacteria isolated from red ant (*Oecophylla smaragdina*) and termites

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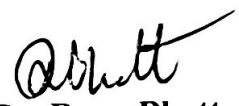
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REMEDIATION OF HEAVY METALS FROM POLLUTED SOIL USING EXTRACELLULAR POLYMERIC SUBSTANCES

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**Production and Extraction of Extracellular Polymeric Substances Released by
Pseudomonas Species**

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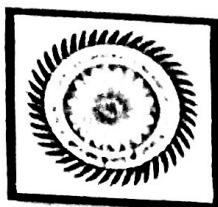
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Green Synthesis of Zinc oxide nanoparticles using *Lantana camara* leaf and their antibacterial activity
Dissertation Thesis

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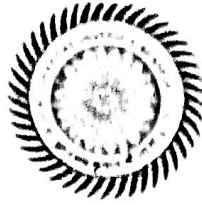
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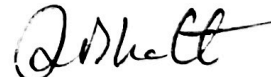
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**Isolation and Identification of Bacterial Isolates from Arpa River Bilaspur(C.G.) and their
Potential for Wastewater Treatment.**

A

M.SC. DISSERTATION THESIS

Submitted in the partial fulfillment for the award of the degree of

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Bioprospecting drought and salinity alleviating bacteria from the Himalayan region for plant growth promotion

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Phytochemical analyses and antimicrobial activity of some medicinal plants

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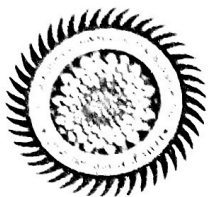
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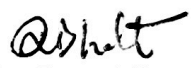
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DISSERTATION REPORT ON
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FROM SOIL"

SUBMITTED TO
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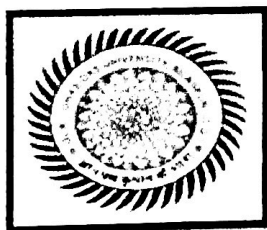
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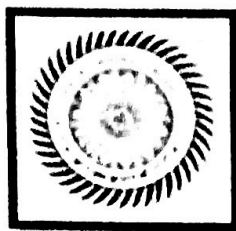
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**PRIMARY SCREENING OF COMPOUNDS AGAINST NON-
TUBERCULOUS MYCOBACTERIA**

A DISSERTATION THESIS

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A

Dissertation Report

On

**MICROBIAL PROFILE AND SAFETY OF FRESH JUICE SOLD IN
POLLUTED AREA AT BILASPUR CITY**

Submitted

In partial fulfillment of the requirement for the award of the degree of
Master of Science in Biotechnology

By

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Screening And Study Of Amylase Activity Of Halophilic Bacteria
Dissertation Thesis

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**Association of Socioeconomic Status with Obesity Measures in Adult
Population of Chhattisgarh State**

Dissertation Thesis

Submitted in the partial fulfillment for the award of the degree of

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Role of Ascorbic Acid in Host-*Rhizoctonia solani* Interaction

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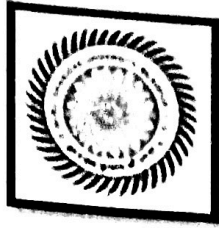
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Geographical Indications of Chhattisgarh: An Aspect of Bioeconomy

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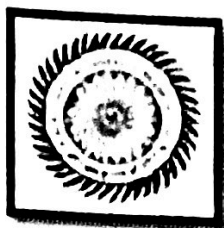
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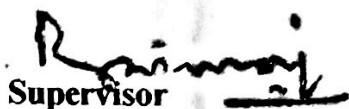
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Associations of Physical Activity with Obesity Measures in the Adult population of Bilaspur, Chhattisgarh

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"DECOLORIZATION OF TRYPAN BLUE DYE BY FUNGI"

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"ROLE OF TGF- β EXPRESSION IN HUMAN COLON CANCER"

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ISOLATION OF ASPERGILLUS FLAVUS FROM THE SOIL SAMPLE & TO CHECK THE
PATHOGENCITY OF ASPERGILLUS FLAVUS

**DISSERTATION REPORT SUBMITTED TO
GURU GHASIDAS UNIVERSITY
IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE OF
MASTER OF SCIENCE IN BIOTECHNOLOGY**

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Study of Antibiotic Resistance Pattern among Bacteria

Isolated from fish

Dissertation Thesis

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

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“Use of Potent Bacterial Isolate to treat the Sewage Wastewater Pollutant”
Dissertation Thesis

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

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Cancer Metabolism Modulation using COX Inhibitors

Dissertation Thesis

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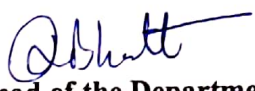

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**A modified antimicrobial ceramic filter based on water
microfiltration and purification system for obtaining potable water**

Dissertation Thesis

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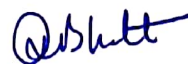
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**“Identifying Metabolic Targets of Anti-diabetic Drugs in
Cancer and their In-Vitro Validation”**

Dissertation Thesis

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“Cloning of *IFNL3* gene in mammalian expression vector”

Dissertation Thesis

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**“Phytochemical Analysis and Antioxidant Activities of
Bryophyllum Pinnatum Leaves Extracts”**

Dissertation Thesis

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**Isolation and characterization of antifungal metabolites produced by
bacterial endophytes against *Sclerotium rolfsii*, a soil-borne fungal
pathogen**

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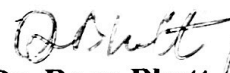
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**Identification and Validation of Metabolic Targets of Cancer through
Anti-Cardiac Drugs**

Dissertation Thesis

Submitted in the partial fulfillment for the award of the degree of

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"ANTIOXIDANT ACTIVITY OF BACTERIAL EXOPOLYSACCHARIDE"

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**Phytochemical screening and antioxidant activity of *Zingiber
purpureum* extract using fenton reaction**

Dissertation Thesis

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

Master of Science in Biotechnology

(M.Sc. Biotechnology)



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**“The Propitious Advancement of Flavored Wine Fermentation Using
Fruit Juice Along with Herbal Extracts for The Production of Wine
with Medicinal Potential”**

Dissertation Thesis

Submitted in the partial fulfillment for the award of the degree of

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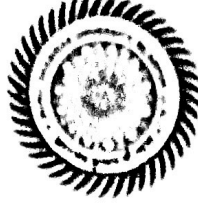
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**Phytochemical screening and antimicrobial activity of *Dioscorea bulbifera*
rhizome**

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

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Exploration of phylloplane and rhizosphere microbial diversity of rice plants for its plant growth promotion (PGP) and biocontrol potential

Dissertation Thesis

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

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"Bio-fertilizer at home"

Dissertation Thesis

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

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**DEVELOPMENT OF EUGENOL INFUSED CHOCOLATE
FLAVOURED PEA BASED MILK ALTERNATIVE**

Dissertation Thesis

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

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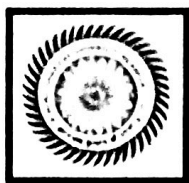
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Exploring Metabolic Modulatory Potential of Fluoroquinolone Antibiotics against Cancer

Dissertation Thesis

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

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**Effect of salt and minerals on growth of fungi isolated from soil on
production of antifungal through OSMAC approach**

Dissertation Thesis

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

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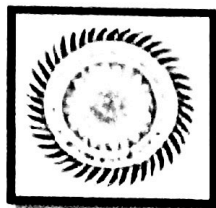
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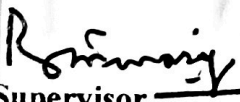
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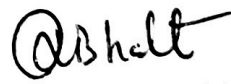
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Investigation on Antimalarial Drugs to Target Cancer Metabolism

Dissertation Thesis

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Characterization of Tamoxifen Resistant MCF7 Cells

Dissertation Thesis

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

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(M.Sc. Biotechnology)



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Phytochemical screening and antibacterial activity of *Curcuma caesia* rhizome extract

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**"ENDOPHYTIC DIVERSITY OF TWO GENERA OF LAMICEAE AND THEIR
VOC PRODUCING ABILITY"**

**DISSERTATION REPORT SUBMITTED TO
GURU GHASIDAS UNIVERSITY
IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE OF
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ENDOPHYTIC DIVERSITY OF TWO GENERA OF LAMIACEAE AND THEIR VOC PRODUCING ABILITY

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**Biological Activities of Neem Leaf Collected from different areas of
Chhattisgarh**

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“Evaluation of Anti-Cancer Activity of Flavouring Agents by In-Silico and In-Vitro Studies”

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Study of Plastic Degradation Using Novel Bacterial Isolate

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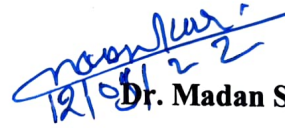
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**Enhancement of organic farming and rice crop production by using azolla as a
bio fertilizer**

A

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Screening and Characterization of laccase producing fungus isolated from waste disposal site and its application in Degradation of Polythene

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A

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On

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**“VERMICOMPOSTING OF ORGANIC WASTE BY USING
EPIGENIC EARTHWORMS
Eisenia fetida”**

Dissertation Thesis

Submitted in the partial fulfillment for the award of the degree of

Master of Science in Biotechnology

(M.Sc. IV Semester Biotechnology)



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**Green synthesis of silver nanoparticles from *Coccinia grandis* and evaluating it
for diabetes treatment**

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Investigating diet-induced obesity in the adult population of Chhattisgarh

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STUDY ON ANTIBACTERIAL ACTIVITY OF THERMOPHILES FROM HOT SPRING OF VASHISHT TEMPLE, MANALI

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Synthesis And Characterization Of Starch Based Bioplastic

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“Green synthesis and characterization of silver nanoparticles using leaf extract of *Azadirachta indica* and *Peltophorum pterocarpum* and their pharmacological activities, & importances”

**DISSERTATION REPORT SUBMITTED TO
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**“ISOLATION OF ENTAMOPATHOGENIC FUNGI FROM SOIL SAMPLE
OF BILASPUR DISTRICT AND STORAGE VIABILITY OF
VERTICILLUM SP.”**

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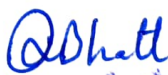

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Amelioration of D-Galactose Induced Aging by Triphenylphosphonium Conjugated Oleanolic Acid in HepG2 Cells

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Candidate's Declaration

I, **Vinit Singh Baghel**, declare that the work embodied in this M.Sc. Dissertation Thesis entitled '**Amelioration of D-galactose induced aging by triphenylphosphonium conjugated oleanolic acid in HepG2 cells**' is my own bonafide work. This work was carried out by me under the supervision of **Dr. Dhananjay Shukla**, Assistant professor, Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Bilaspur, C.G. and **Dr. K.G. Raghu (External supervisor)**, Chief Scientist, CSIR-NIIST, Trivandrum, in academic session **2021-2022**. The matter embodied in this M.Sc. Dissertation Thesis has not been submitted for the award of any other degree/diploma.

I declare that I have faithfully acknowledged, given credit to and referred to the research workers wherever their works have been cited in the text and the body of the thesis. I further certify that I have not willfully lifted up some other's work para, text, data, results etc., reported in the journals, books, magazines, reports, dissertations, theses, etc., or available at websites and included them in this M.Sc. Dissertation Thesis and cited as my own work. If any discrepancy, mistake or plagiarism is found in the report, the responsibility for the same will be solely mine.

Date: 05/09/2022


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The declaration and certificate mentioned above regarding M.Sc. Dissertation Thesis are hereby endorsed by Department of Biotechnology, Guru Ghasidas Vishwavidyalaya (Bilaspur, Chhattisgarh).


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EFFECT OF EDIBLE COATING ON SHELF LIFE AND BIOCHEMICAL QUALITY OF MANGO (*Mangifera indica*)

DISSERTATION THESIS

Submitted in the partial fulfilment for the award of the degree of
Master of Science in biotechnology
(M.Sc. Biotechnology)



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**A
DISSERTATION
ON
PRODUCTION OF OYSTER MUSHROOM BY ADDING CALCIUM
CARBONATE (CaCO_3) TO AGRICULTURE WASTE AS CARBON
SOURCE MEDIA**

Submitted in the partial fulfilment for the award of the degree of
Master of Science in Biotechnology
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