

# **SYNERGISTIC EFFECT OF *Annona muricata* PLANT EXTRACT WITH ANTIBIOTICS AGAINST PATHOGENS CAUSING URINARY TRACT INFECTIONS**

*Project work submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the requirements for the award of degree of*

## **MASTER OF SCIENCE IN MICROBIOLOGY**

**Submitted by**

**MOHAMMED AZHAR**

**(Register No: EMAWMMB020)**

**Under the guidance of  
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This is to certify that the dissertation entitled **BIOPRESERVATIVE EFFECT OF BACTERIOCIN IN YOGHURT PRESERVATION** is a bonafide research work done by **Ms. NIHILA CHUKKAN** (Register no: **EMAWMMB011**) at **AMPLICON BIOLABS, KAKKANCHERY**, during the year of 2022-2024 in a partial fulfillment for the award of the degree of Master of Science in Microbiology.

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**PHYTOCHEMICAL AND NUTRITIONAL ANALYSIS OF  
TEA AND COFFEE EXTRACTS WITH FOCUS ON  
CAFFEINE, ANTI-OXIDANT, ANTI-INFLAMMATORY  
AND ANTI-BIOFILM ACTIVITIES**

*Project work submitted to the UNIVERSITY OF CALICUT*

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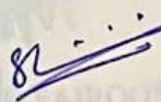
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**ISOLATION AND CHARACTERIZATION OF PLASTIC  
DEGRADING BACTERIA FROM SOIL COLLECTED  
FROM DUMPING GROUND OF AN INDUSTRIAL  
AREA**

*Project work submitted to the UNIVERSITY OF CALICUT*

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# **PREPARATION AND CHARACTERISATION OF CHITOSAN NANOPARTICLE FROM SHRIMP SHELLS WASTE**

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# **SCREENING AND CHARACTERIZATION OF LACCASE PRODUCING BACTERIA FROM SOIL AND IT'S APPLICATION IN DYE DEGRADATION**

*Project work submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the  
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**BIOACTIVE COLLAGEN FROM FISH SKIN:  
EXTRACTION, PATHOGEN INHIBITION AND  
HEMOLYTIC ANALYSIS**

*Project work submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the  
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**MASTER OF SCIENCE IN MICROBIOLOGY**

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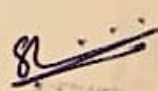
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This is to certify that the dissertation entitled '**SYNTHESIS AND CHARACTERIZATION OF BROMELAIN INCORPORATED BIOPLASTIC AND ANALYSIS OF ITS ANTIBACTERIAL ACTIVITY AGAINST FOOD BORNE PATHOGEN ISOLATED FROM SPOILED VEGETABLE**' is a bonafide research work done by **Ms. FATHIMA INAS AP (Register No: EMAWMMB009)** at PVT Merit Biolabs, Cochin, during the year of 2022-2024 in partial fulfillment for the award of the degree of Master of Science in Microbiology

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# **SCREENING AND CHARACTERIZATION OF LACCASE PRODUCING FUNGI FROM SOIL AND IT'S APPLICATION IN DYE DEGRADATION**

*Project work submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the  
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**Submitted by**

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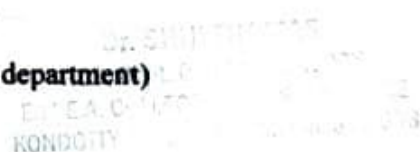
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**ISOLATION OF BIOSURFACTANT PRODUCING  
BACTERIA FROM OIL CONTAMINATED SOIL. AND  
CHARACTERIZATION OF BIOSURFACTANT PRODUCED  
DURING DEGRADATION OF HYDROCARBONS**

*Project work submitted to the UNIVERSITY OF CALICUT*

*In partial fulfilment of the requirement of the award of degree of*

**MASTER OF SCIENCE IN MICROBIOLOGY**

**Submitted by**

**HANNATH T K**

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This is to certify that the dissertation entitled **INVITRO EVALUATION OF ANTIOXIDANT, ANTIMICROBIAL AND PHYTOCHEMICAL PROPERTIES OF OCIMUM SANCTUM, PLECTRANTHUS BARBATUS AND ALOE BARBADENSIS** is a bonafide research work done by Ms. ANSHIFA JASMIN K(Register no: EMAWMMBO03) at **AMPLICON BIOLABS, KAKKANCHERY**, during the year of 2022-2024 in a partial fulfillment for the award of the degree of Master of Science in Microbiology

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**INVITRO EVALUATION OF ANTIOXIDANT,  
ANTIMICROBIAL AND PHYTOCHEMICAL PROPERTIES  
OF *OCIMUM SANCTUM*,  
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*Project work submitted to the UNIVERSITY OF CALICUT*

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# **CHARACTERIZATION OF PLANT GROWTH PROMOTING BACTERIA FROM RHIZHOSPHERE OF PLANTS AND BIOFERTILIZER DEVELOPMENT**

*Project work submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the  
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# **CHARACTERIZATION OF PECTINASE PRODUCING BACTERIAL STRAINS SOURCED FROM FRUIT PEEL WASTE AND ITS APPLICATION IN FRUIT JUICE CLARIFICATION**

*Project work submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the  
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**ISOLATION AND CHARACTERIZATION OF PLANT  
GROWTH PROMOTING ENDOPHYTIC BACTERIA FROM  
THE RHIZOME OF *MIMOSA PUDICA***

*Project work submitted to the UNIVERSITY OF CALICUT in partial fulfilment of the  
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## *CERTIFICATE*

This is to certify that the dissertation entitled '**ISOLATION AND CHARACTERISATION OF PLANT GROWTH PROMOTING ENDOPHYTIC BACTERIA FROM THE RHIZOME OF *MIMOSA PUDICA***' is a bonafide research work done by Ms. AMINA ABDULLA CA (Register no: EMAWMMBO02) at PVT MERIT LABS, COCHIN ,during the year of 2022-2024 in a partial fulfilment for the award of the degree of Master of Science in Microbiology

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**SYNTHESIS OF ZnO NANOPARTICLE INCORPORATED  
BIOPLASTIC AND ITS USAGE IN FOOD PACKAGING**

*Project work submitted to the UNIVERSITY OF CALICUT*

*In partial fulfilment of the requirement of the award of degree of*

**MASTER OF SCIENCE IN MICROBIOLOGY**

**Submitted by**

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This is to certify that the dissertation entitled '**INVITRO EVALUATION OF ANTIOXIDANT, ANTIMICROBIAL AND PHYTOCHEMICAL PROPERTIES OF METHANOLIC EXTRACT OF DIFFERENT MELON SPECIES**' is a bonafide research work done by **Ms. SHABEEHA** (Register no: **EMAWMMBO14**) at **AMPLICON BIOLABS, KAKKANCHERY**, during the year of **2022-2024** in a partial fulfilment for the award of the degree of **Master of Science in Microbiology**

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**Galaxy F62**

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ANTIMICROBIAL AND PHYTOCHEMICAL PROPERTIES  
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*Project work submitted to the UNIVERSITY OF CALICUT*

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**2024**

**ANTIBIOFILM ACTIVITY OF COPPER OXIDE NANOPARTICLE  
AGAINST MULTIDRUG RESISTANT BIOFILM FORMING  
BACTERIA ISOLATED FROM KITCHEN SPONGES**

*Project work submitted to the UNIVERSITY OF CALICUT*

*In partial fulfilment of the requirement of the award of degree of*

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