



جمهورية العراق
وزارة التعليم العالي والبحث
العلمي

جامعة ديالى
كلية العلوم
قسم علوم الحياة

تأثير المعززات الحيوية على عزلات المكورات العنقودية الذهبية المنمطة جينياً

رسالة مقدمة الى

مجلس كلية العلوم - جامعة ديالى

وهي جزء من متطلبات نيل درجة الماجستير في علوم الحياة من

قبل الطالبة

هند محمد جاسم

بكالوريوس علوم حياة / كلية العلوم / جامعة ديالى 2006

بإشراف

أ.د. زينب محمد نصيف



Republic of Iraq
**Ministry of Higher Education
and Scientific Research**
University of Diyala
College of Science
Department of Biology



Effect of probiotics on genotyped *Staphylococcus aureus* isolates

A thesis

Submitted to the College of Science /Diyala University

In Partial Fulfillment of Requirements for the Degree of Master in Biology

By

Hind Mohammed Jasim

B.S.c Biology / College of Science/Diyala University 2006

Supervised by

Prof.Dr. Zainab Muhammed Nsaif

2022 A.D

1444 A.H

Chapter One

Introduction

1.1 Introduction

Staphylococcus aureus is a Gram-positive bacterium that is commonly found on the skin and in the nasal cavity of humans and animals. It is a facultative anaerobe and is capable of growing in a wide range of environments. *S. aureus* is a major cause of skin infections, such as abscesses, boils, and impetigo. It is also a common cause of food poisoning and is responsible for a variety of other infections, including pneumonia, osteomyelitis, and endocarditis. *S. aureus* is highly resistant to many antibiotics and disinfectants, which makes it a difficult pathogen to treat. *S. aureus* is a member of the genus *Staphylococcus* and the family *Staphylococcaceae*. It is a spherical bacterium that is typically found in clusters. *S. aureus* is a facultative anaerobe and is capable of growing in a wide range of environments. *S. aureus* is a major cause of skin infections, such as abscesses, boils, and impetigo. It is also a common cause of food poisoning and is responsible for a variety of other infections, including pneumonia, osteomyelitis, and endocarditis. *S. aureus* is highly resistant to many antibiotics and disinfectants, which makes it a difficult pathogen to treat. *S. aureus* is a member of the genus *Staphylococcus* and the family *Staphylococcaceae*.

Staphylococcus aureus is a Gram-positive bacterium that is commonly found on the skin and in the nasal cavity of humans and animals. It is a facultative anaerobe and is capable of growing in a wide range of environments. *S. aureus* is a major cause of skin infections, such as abscesses, boils, and impetigo. It is also a common cause of food poisoning and is responsible for a variety of other infections, including pneumonia, osteomyelitis, and endocarditis. *S. aureus* is highly resistant to many antibiotics and disinfectants, which makes it a difficult pathogen to treat. *S. aureus* is a member of the genus *Staphylococcus* and the family *Staphylococcaceae*.

Staphylococcus aureus is a Gram-positive bacterium that is commonly found on the skin and in the nasal cavity of humans and animals. It is a facultative anaerobe and is capable of growing in a wide range of environments. *S. aureus* is a major cause of skin infections, such as abscesses, boils, and impetigo. It is also a common cause of food poisoning and is responsible for a variety of other infections, including pneumonia, osteomyelitis, and endocarditis. *S. aureus* is highly resistant to many antibiotics and disinfectants, which makes it a difficult pathogen to treat. *S. aureus* is a member of the genus *Staphylococcus* and the family *Staphylococcaceae*.

Staphylococcus aureus is a Gram-positive bacterium that is commonly found on the skin and in the nasal cavity of humans and animals. It is a facultative anaerobe and is capable of growing in a wide range of environments. *S. aureus* is a major cause of skin infections, such as abscesses, boils, and impetigo. It is also a common cause of food poisoning and is responsible for a variety of other infections, including pneumonia, osteomyelitis, and endocarditis. *S. aureus* is highly resistant to many antibiotics and disinfectants, which makes it a difficult pathogen to treat. *S. aureus* is a member of the genus *Staphylococcus* and the family *Staphylococcaceae*.

Summary

Summary

...

... *Staphylococcus aureus* ...

...

...

... *Staphylococcus aureus* ...

Summary

Lactobacillus planturum □□□□□□ □□ □□□□□□□□□□ □□□□□□□ □□□□ □□□□ □□□□□□□□□□

Staphylococcus aureus □□□□□□□ □□□□ □□□□□ □□□□□□ □□□□ □□□□ □□□□□□□□□□ □□□□□□□□

Lactobacillus reuteri □□ □□□ □□□□□□□□□□□ □□□□□ □□ □□ □□□□□□□□□□ □□□□□ □□ □□□□ □

□□□ □□□□□□□□□□*Staphylococcus aureus* □□□□□□□ □□□□□ □□□□□□□