

Isolation and identification of Gram positive bacteria from different clinical sources by using manual methods including morphological, cultural and biochemical tests, then confirmed by Molecular study by using polymerase chain reaction and by using 16srRNA gen and sequencing. Studying the effect of different antimicrobials against isolated bacteria. Studying the relationships between bacterial infection sex, age, type of specimen and treatment . Studying some virulence enzyme of isolated bacteria such as DNase , lipase, gelatinase, urease, protease, beta lactamase, Extended Spectrum β -Lactamase (ESBL) ...etc. Also detection of biofilm in isolated bacteria by using different methods. Biosynthesis of some nanoparticles and then studying the effect of these nanoparticles on the Gram positive bacterial growth in vitro and in vivo by using the rats and also studying some immunologically .

4. Introduction

پیشہ کی

To be completed by the primary supervisor: an overview of the proposed research project, focusing on the background of the project and rationale for the research.

لیبرہدا سہر پھر شتیاری سہرہ کی پوختہ یک دہر بارہی پروژہی توئیژینہو کہ دہنووسیت، تیایدا باکگراوندی پروژہ کہ باس دہکات و پروونی دہکاتہو کہ بچی ناراستہ کردنی ئەم توئیژینہو ہیہ گرنگہ.

Injuries are causing considerable morbidity and mortality in many parts of the world, particularly in the low and middle income countries, even in developed countries, more than 2 million individuals annually are require medical treatment. However, the structure of the etiologic agents of wound infection in each hospital varies considerably and cannot be predicted exactly. One of the most disconcerting facts about the bacteria is their increasing antimicrobial resistance . The Gram-positive such as bacteria like Streptococcus species, Enterococci species and Staphylococcus species being the most common pathogen

Nanoscience and nanotechnology has attracted a great interest over the last few years due to its potential impact on many scientific areas such as energy, medicine, pharmaceutical industries, electronics, and space industries. This technology deals with small structures and small-sized materials of dimensions in the range of few nanometers to less than 100 nanometers. Nanoparticles (NPs) show unique and considerably changed chemical, physical, and biological properties compared to bulk of the same chemical composition, due to their high surface-to-volume ratio. NPs exhibit size and shape-dependent properties which are of interest for applications ranging from biosensing and catalysts to optics, antimicrobial activity .These particles also have many applications in different fields such as medical imaging, nanocomposites, filters, drug delivery, and hyperthermia of tumors .

5. Research objectives

Clarify the research objectives and planned methodology to meet the challenges of the project. Include details of the research plan and relate to the previous work carried out by others.

Protease assay: Protease activity are perform by spreading isolates on nutrient agar containing 10% skim milk, after incubation for up to 24 h at 37°C, protease production are shown by the formation of a clear zone cause by casein degradation .

DNase assay: extracellular nucleases (DNases) are determine on DNase agar plates .

Phospholipase assay: overnight cultures of isolated bacteria screen for their extracellular phospholipase activity by growing them on egg yolk agar .

Haemolysin assay: Haemolysin production are determine using blood agar plates and also cell free haemolytic method .

Slime test: brain heart infusion agar plates are prepare containing 0.8 g/l Congo red, isolates are inoculate onto the surface of the medium and the plates are incubate at 30°C for 24 h. Bacteria producing slime appear as black colonies, whereas, non-slime producers remain non pigmented .

Biofilm formation detection

All bacteria will be test by for the detection of biofilm formation by using different method such as microtiter plate and congo red agar.

Polymerase Chain Reaction (PCR) and sequencing

DNA extraction is perform as recommend by the manufacturer of . PCR reaction mixtures , PCR condition , program ,agaros gel preparation and gel electrophoresis and then sequenced.

Biosynthesis of Nanoparticles

Biosynthesis of some natural nanoparticles and then studding the effect of these nanoparticles on Gram positive bacterial growth in vitro and then in vivo by using the experimental animals such as rats.

Immunologically parameters

Finally studding of some immunologically parameters depending on isolated Gram positive bacteria.

<p>7. Scope and limit to the research Details of anticipated problems and proposed resolutions</p> <p>لێره دا باس لهو بهر بهستانه دهكریت كه دهشیت بینه ریگای ئهجامدانی توژیینهوهكه، ههروهها باس له چارهسهری ئهو بهر بهستانهش دهكریت.</p>
<p>8. Duration and timeline</p> <p>لێره دا باس له كاتی پێویست بو ئهجامدانی توژیینهوهكه دهكریت</p> <p>1 year</p>
<p>9. Conclusions The project supervisor summaries the research objectives and clarify their expected findings; include why the research has scientific value.</p> <p>لێره دا سههر پهرشتیار باس له گرنگی ئامانج و دهر ئهجامه چاوهروانكراوهكانی توژیینهوهكه دهكات، ههروهها پروونی دهكاتوه كه بوچی ئاكامهكانی ئهم توژیینهوهیه بههای زانستی هیه.</p> <p>In Kurdistan region there is little is known about the Gram negative bacteria which isolated from different types of injuries and effect of natural nanoparticles to control the infections caused by these multi drug Gram negative bacteria.</p>
<p>10. References</p> <p>سههر چاوهكان</p> <p>1. Bhattacharya D. and R. K. Gupta, “Nanotechnology and potential of microorganisms,” <i>Critical Reviews in Biotechnology</i>, vol. 25, no. 4, pp. 199–204, 2005.</p>

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11. General notes : هر زانیارییهکی گشتی دیکه که سهر پهرشتیار به گرنگی بزانتیت

12.

پهسه ندردنی پروپوزهل له لایهن لیژنه‌ی زانستی بهش

ژماره‌ی کۆنوووسی کۆبوونهوه:

ریکهوتی کۆبوونهوه:

پهسه ندره

پهسه ندره
بریار:

ناوی سیانی و واژووی لیژنه‌ی زانستی بهش

واژوو:

مۆری بهش

ناوی سهروکی لیژنه‌ی زانستی بهش

واژوو:

ناوی سهروکی بهش:

13.

پهسه ندردنی پروپوزهل له لایهن نه‌نجومه‌نی کۆلیژ/فاکهلته‌ی

ژماره ی کۆنوسی کۆبوونهوه:

ریکهوتی کۆبوونهوه:

بریار:

پهسهند کر

پهسهند نه

واژوو:

ناو راگری کۆلیژ:

مۆری کۆلیژ

تییینی: تکایه فۆرمهکه تهنها به یهك زمان (زمانی توژیینهوه) پر بکریتهوه.