

الآية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى :

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (١) خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ (٢) اقْرَأْ وَرَبُّكَ
الْأَكْرَمُ (٣) الَّذِي عَلَّمَ بِالْقَلَمِ (٤) عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ (٥)

صدق الله العظيم

سورة العلق الآيات 1-5

Dedication:

To my mother and father;

For their genuine love

To my all family members; for

Their continuous support

To all those who offered their

Kind assistance;

Acknowledgments:

First of all I would like to thank almighty AllAH for giving me health and patience to complete this work.

I am grateful to my supervisor Dr. Yousif Fadlalla Hamed ELneel for his help and encouragement throughout this study .

Best thank, for the staff of Khartoum Teaching Hospital & Omdurman Teaching Hospital for their help during samples collection.

My appreciation to all staff members of Microbiology Department for their unlimited support and their efforts to complete this study.

ABSTRACT

The aim of this work was to study the antibacterial activity of the different concentrations of methanol and chloroform extracts of the medicinal plants *Cassia senna* (*Sennaalexandrina*) leaves using agar wells diffusion method. The study was conducted in Khartoum State, Sudan, during the period from March to July 2014 . Hundred urine samples were collected , These samples are random collection showed 63 (63%) bacterial growth whereas 37 (37%) samples showed no growth .The pathogenic bacteria were isolated and identified using Gram stain and biochemical reactions. 63(100%) pathogens belong to 7 different genera were isolated , 21(33.3%) were *St.aureus*, 4(6.3%) were *E.fecales* and 5(7.9%) *C.albicans* as Gram positive, 12(19%) *E.coli*, 6 (9.5%) *K.pneumoniae*, 7 (11.1%) *Prot. mirabilis* , 5 (7.9%) *Ps.aeruginosa*, *Citrobacter* 3(4.7%) , as Gram negative, which tested for their sensitivity to antibiotics and the medicinal plant extracts . The plants used for extraction was obtained from Khartoum, Sudan and the extraction was carried out using Soxhlet extraction method. The susceptibility testing was conducted for the above mentioned bacteria against four antibiotic (ciprofloxacin, gentamicin, amoxicillin and co-trimoxazole) and the extracts from the plant. Comparisons between the results of susceptibility testing against antibiotics and plants extracts were done . The results showed that the methanol and chloroform extracts of the tested medicinal plant had moderate activity against all the tested pathogenic bacteria. But the chloroform extract activity was more active than methanolic extract.

The phytochemical screening was conducted for the most effective extract of *Sennaalexandrina*, the results showed differences in the constituents of the plant extract contained of flavonoids, glycosides, phenols, carbohydrates, saponins ,and tannins.

مستخلص الاطروحة

الهدف من هذه الدراسة كان اختبار فعالية المضادات البكتيرية لمستخلص الميثانول والكلوروفورم للنبات الطبي من اوراق السنمكه بتراكيز مختلفه باستخدام طريقه الحفر فى الاجار.

اجريت هذه الدراسة فى ولاية الخرطوم فى السودان فى الفترة من بداية مارس الى نهايه يوليو 2014. تم جمع 100 عينه من البول , هذه العينات تم زراعتها ليتم نمو وعزل 63 بكتريا, لم يظهر نمو بكتيرى فى 37 عينه بول , البكتريا المعزوله والممرضه عرفت باستخدام صبغة الجرام والتفاعلات الكيميائيه . 63 (100%) من البكتريا الممرضه المعزوله تضم عوائل مختلفه وهى 21(33.3%) *St.aureus* و4(6.3%) *E.fecales* وهى تمثل موجبة الجرام و12(19%) *E.coli* , 6(9.5%) , 5(7.9%) *Ps.aeroginosa* , 7(11.1%) *Prot. mirablis* , 3(4.7%) *Citrobacter* , 5(7.9%) *C.albicans* وهى تمثل سالبه الجرام والتي اختبرت حساسيتها مع المضادات الحيويه ومستخلص النبات.

النبات المستخلص تم الحصول عليه من الخرطوم-السودان , (*Sennaalexandrina*) , استخلاص النبات تم بطريقه سوكسيليت . اجرى اختبار الحساسيه للبكتريا المذكوره سابقا لاربعة من المضادات الحيويه هى ciprofloxacin, gentamicin, amoxicillin and co-trimoxazole ولمستخلص النبات , المقارنات بين نتائج اختبار الحساسيه ضد المضادات الحيويه ومستخلص النبات قد جمعت , اظهرت النتائج ان المستخلص الميثانول والكلوروفورم للنبات المختبر لها تأثير متوسط على البكتريا, وان الكلوروفورم له تأثير افضل من الميثانول , تم اجراء الفرز الفوتوكيميائى لمعرفة مكونات المستخلص , النتائج اظهرت وجود بعض المكونات فى النبات المستخلص يحتوى على flavonoids, glycosides, phenols, carbohydrates, saponins, and tannins.