

الأبي...

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[ اقرأ باسم ربك الذي خلق & خلق  
الإنسان من علق & اقرأ وربك  
الأكرم & الذي علم بالقلم & علم  
الإنسان ما لم يعلم ]

سورة العلق الآية 1-5

**Dedication:-**

My dedication goes to:-

My beloved parent Samira Sharif and AbdelhalimOsman

My loving husband Mutasim

My brothers and sisters

All teacher and professors infaculty of applied science especially the applied chemistry department for teaching me science beside the principles .

The ideal supervisor Dr.Manal Ali Elhag for herguidance, supervision and fruitful idea throughout this study.

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## **Abstract:**

Chalcones represent an essential group of natural as well as synthetic products and some of them have wide range of pharmacological activity such as anti-inflammatory, anti-fungal, anti-bacterial and anti-oxidant agents.

The basic aim from this study is synthesis chalcones considering that contains effective functional groups and reacting with urea and thiourea which has pharmacological activity and study the antimicrobial for Pyrimidinone and pyrimidinthion wick formed.

The chalcones were prepared by Clasine-Schmidet reaction between Acetophenone with two aromatic aldehydes ( Benzaldhyde , Anisalbenzaldhyde )in the presence of alkaline media . These chalcones are used as starting material to obtain the desired heterocyclic pyrimidinthion and pyrimidinone,

The structure of the newly synthesized heterocyclic compounds were confirmed by modern analytical techniques such as IR an UV spectroscopic studies and these synthesized compounds were screened for possible antimicrobial activities against Gram negative bacteria and Gram positive bacteria , The results of antimicrobial screening, indicate all synthesized compounds derivatives shows significant activity against two type of tested bacteria stain (S.aurus E.coli). and just tow of synthesized compounds shows significant activity against in P.sodomonase bacteria, and we recommended to do further biological application such as DNA binding studies , Further studies in this field are needed and to use more analytic technical such

as TLC (Thin layer chromatography) and NMR to conform the chemical structure.

### المستخلص :

تمثل الجالكونات مجموعه أساسيه من المنتجات الطبيعية وكذلك الصناعية وبعضها لديه مجموعه واسعة من النشاط الدوائي مثل العوامل المضادة للالتهابات , المضادة للفطريات , المضادة للبكتريا والمضادة للأكسدة.

الهدف الأساسي من هذه الدراسة هو تخليق الجالكونات والتي تحتوي على مجموعات وظيفية فعالة ومن ثم مفاعلتها مع اليوريا والثاويريا التي لها نشاط دوائي ودراسة مضادات الميكروبات للبيريبيدينون والبيريبيدينثاينون التي تكونت .

تم تحضير الجالكونات بواسطة تفاعل كليزن- شميدت بين الاسيتوفينون واثنين من الالدهيدات الاروماتية ( البنزالهيد , الانيزالدهيد ) في وسط قاعدي , يتم استخدام الجالكون كمادة اوليه للحصول على المركبات الغير متجانسه المنشودة البيريبيدينون والبيريبيدينثاينون .

تم التأكد من تركيبة المركبات الغير المتجانسة الحلقية الجديدة بواسطة تقنيات تحليلية متقدمه مثل IR وUV وتم فحص هذه المركبات للتأكد من قدرتها علي العمل كمضادات بكتيرية لنوعين البكتريا سالبه الجرام والبكتريا موجبة الجرام , وأشارت نتائج فحص المضادات للميكروبات الى أن جميع مشتقات المركبات المخلفة تظهر نشاطا كبيرا ضد نوعين من البكتريا (S.aurus E.coli ) و

مركبين فقط من المركبات المخلفة أظهرت نشاطا لنوع البكتريا P.sodomonase

ونوصي بزيادة الدراسة في هذا المجال و بإجراء المزيد من التطبيقات البيولوجية مثل دراسة الربط بين الحمض النووي و باستخدام مزيد من التقنيات التحليلية مثل كروماتوغرافيا الطبقة الرقيقة والرنين النووي المغناطيسي للتأكد من تركيبة المركبات.

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