



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم

# بسم الله الرحمن الرحيم



**MONA MAGHRABY**



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكرو فيلم



# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكرو فيلم



**MONA MAGHRABY**



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم

# جامعة عين شمس

## التوثيق الإلكتروني والميكروفيلم

### قسم

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تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



**MONA MAGHRABY**



Ain Shams University  
Faculty of Education  
Department of Chemistry

# **"Synthesis and Biological Evaluation of Some New Heterocyclic Compounds Using 3-Formylchromone"**

A Thesis Submitted  
By

**Aya Ahmed Hamed**

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In Partial Fulfillment for  
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in Science (Organic Chemistry)

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**Cairo**  
**2021**



Ain Shams University  
Faculty of Education  
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Approval date    /    / 2021

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*Aya Ahmed Hamed*





**This work is dedicated**

**to**

**my father, my mother**

**and my brothers**



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قُلْ إِنِّي طَلَيْتُ وَنُسُكِي وَمَعْنِيَ  
وَمَعَاتِي لِلَّهِ رَبِّ الْعَالَمِينَ (١٦٣) لَا شَرِيكَ لَهُ  
وَبِذَلِكَ أُمِرْتُ وَأَنَا أَوَّلُ الْمُسْلِمِينَ (١٦٣)

سورة الأنعام  
صدق الله العظيم



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## **Aim of the work**

The present work aims to:

1. Synthesize of the condensation product from reaction of 3-formylchromone with 4-hydroxycoumarin.
  2. Study the chemical reactivity of condensation product towards a variety of nucleophiles.
  3. Characterize of the newly synthesized compounds using elemental analysis and different spectroscopic techniques.
  4. Study the biological evaluation of the newly synthesized compounds.
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