

ECHAHID HAMMA LAKHDAR UNIVERSITY - EL-OUED
Under the Supervision of the DGRSDT and in collaboration with the CRTI
International Pluridisciplinary PhD Meeting (IPPM'20)
23-26, 2020 1st Edition, February
Theme: Modern Technology and Fineness Life

IPPM templat (En/Fr) – 02 pages Max

**Synthèse et étude de l'interaction des quelques hydrazides ferrocéniques avec
l'anion radical superoxyde, le DPPH et l'ADN**

MOUADA Hanane, LANEZ Touhami
Exacte Sciences, El Oued University, VTRS Laboratory

Abstract:

In the present work, we report the synthesis and characterization of N'-ferrocenylmethyl-N'-phenylalcan (or benzo) hydrazides by the treatment of the ferrocenyl methyl trimethyl ammonium iodide with N'phenylalcan (or benzo) hydrazides and the evaluation of the antioxidant and antitumor activities in a precise and modern technics.

The antioxidant activity of our synthesized derivatives (FhD) against superoxide anion and 1,1-diphenyl-2picrylhydrazyl radicals were evaluated using electrochemical (CV) and Spectrometric (Uv-visible spectroscopy) methods and binding parameters were calculated from analysis data.

While the antitumor activity of FhD was evaluated from studying their interaction with deoxyribonucleic acid and the binding parameters such as binding constant, free binding energy, diffusion coefficient, and binding site size were determined from electrochemical, spectrometric measurements and validated by molecular docking.

Key words:

Ferrocene derivatives, cyclic voltammetry, DPPH, DNA, molecular docking.

Thesis plan:

General Introduction

Chapter1: Literature Survey about the main concepts in thesis including, ferrocene, free radicals and DNA

Chapter2: Experimental Methods

Chapter3: Study of Antioxidant Activity

Chapter4: Estimation of Antitumor Power

General Conclusion

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Thesis Graphic:

Introduction		
Literature Survey		
Synthesis and characterization		
Antioxidant Activity		
Cyclic voltammetry Superoxide anion radical	Uv-visible spectroscopy DPPH radical	
Calculation of binding parameters and discussion of results		
DNA Extraction and purification		
Antitumor Activity		
Cyclic voltammetry	Uv-visible spectroscopy	Molecular docking
Calculation of binding parameters and discussion of results		
Conclusion		

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