

شبكة المعلومات الجامعية







شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

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# THERAPEUTIC POTENTIAL OF STEM CELLS IN ALZEHIEMER DISEASE IN RATS

#### **Thesis**

Submitted for full fulfillment of M.Sc Degree in Medical Biochemistry and Molecular biology

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**DEDICATION** I would like to dedicate this work to my mother and father For their endless support and love

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قرار اللجنة: ١ - توفيت الربالة الدواجي الدكليلة
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الممتحن الغارجي

الممتحن الداخلي عمام المراسب

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#### **ABSTRACT**

Alzheimer's disease is the most common form of dementia. This incurable, degenerative, and terminal disease is generally diagnosed in people over 65 years of age. Stem cell therapy holds a great promise for the repair of injured tissues and organs, including the brain. Stem cells are undifferentiated cells that undergo both selfhas antioxidant, differentiation.HO-1gene renewal and inflammatory, antiapoptotic and neuroprotective role. The aim of the study is to evaluate the effect of stem cells alone or in association with heme oxygenase inducer or inhibitor on neurodegenerative lesions in Alzheimer's disease. Our results revealed that stem cells decreased the plaque lesions decreased heme oxygenase activity, increased seladin-1 expression and decreased cholesterol level. While heme oxygenase induction revealed neuronal degeneration in the brain, increased the heme oxygenase activity and decreased cholesterol level. In conclusion, stem cells with or without heme oxygenase induction may attenuate plaque formation.

#### Key Words:

Alzheimer's disease.

Stem cell.

Heme oxygenase.

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