

Comparative Phytochemical Study of Certain  
*Juniperus species (Juniperus phoenicea and*  
*Juniperus horizontalis )* Growing in Egypt  
Belonging to Family Cupressaceae .

A Thesis presented by  
**Nermin Abd El Hamid Abd El Aziz Younis**  
(B.Pharm. Sci. 2005)

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Under the supervision of  
**Professor Seham S.El-Hawary**

*Professor of Pharmacognosy*  
*Faculty of Pharmacy, Cairo University*

**Professor Farouk Rasmy Melek**

*Professor of Chemistry of Natural Products*  
*National Research Center*

*Pharmacognosy Department*

*Faculty of Pharmacy*

*Cairo University*

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***Nermin abd el Hamid Abd El Aziz Younis***

*To My Family*  
*and*  
*My Husband*

# **List of abbreviations**

$^{13}\text{C}$  NMR: Carbon -13 nuclear magnetic resonance

$^1\text{H}$  NMR : Proton nuclear magnetic resonance

J : *Juniperus*

Jp : *Juniperus phoenicea*

Jh : *Juniperus horizontalis*

Alc: Alcoholic

HepG 2 : Human liver cell line

MCF 7 : Human Breast cell line

HCT 116 : Humans colon cell line

DMSO: Dimethyl sulfoxide

UV : Ultra violet

TLC: Thin layer chromatography

GC/MS : Gas chromatography / Mass spectroscopy

ESI/MS : Electron spray ionization using Mass spectroscopy

D : Dimension

MS : Mass spectroscopy

T : Temperature

RRT : Relative retention time

M<sup>+</sup> : Molecular ion peak

m.p: melting point

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# **Introduction**

## **Introduction**

People used medicinal plants for treating many diseases for decades. Later they used synthesized drugs for treatment of different diseases. However synthetic drugs showed many side effects, which forced us to go back to nature to discover more natural resources for remedies to avoid the destructive side effects of synthetic chemical drugs. Hence, the efforts turned towards the old remedies with herbs products, which help for treatment of various diseases.

Family Cupressaceae (Cypress family, conifer family) comprising approximately 30 genera and 142 species of evergreen ornamental and timber shrubs and trees distributed throughout the world ( Gadek *et al.* 2000),( Farjon 2005).

Economic importance of genus *Juniperus* attributed to its various phytochemical constituents as lignans (David, C. *et al.*, 1980), coumarins , Flavonoids (Gilles ,C. *et al.*, 1996) ,phenylpropanoid (Gilles, C. *et al.*, 1997) , volatile oils (Dzharullaeva , S. *et al.*, 2004),etc. Several species possess medicinal effect as hypoglycaemic , hypolipidemic (Jung, B. J. *et al.*, 2007), antihepatotoxic (Aboul-Ela *et al.*, 2005) , antidiarrheial (Qnais *et al.*, 2005 ), a female contraceptive (Edible and Medicinal Plants of the West ) , asthma sciatica and speed childbirth.( Culpeper's Complete Herbal, Nicholas Culpeper, ISBN 1-85007-026-1).

*Juniperus phoeniceae* L. grown in Egypt has been used in folk medicine as diuretic and for treatment of diabetes mellitus .While *Juniperus horizontalis* Moench. is reported as an ornamental plant. There is little information on phytochemical or pharmacological studies on this plant; which gave a potential to carry out this study.