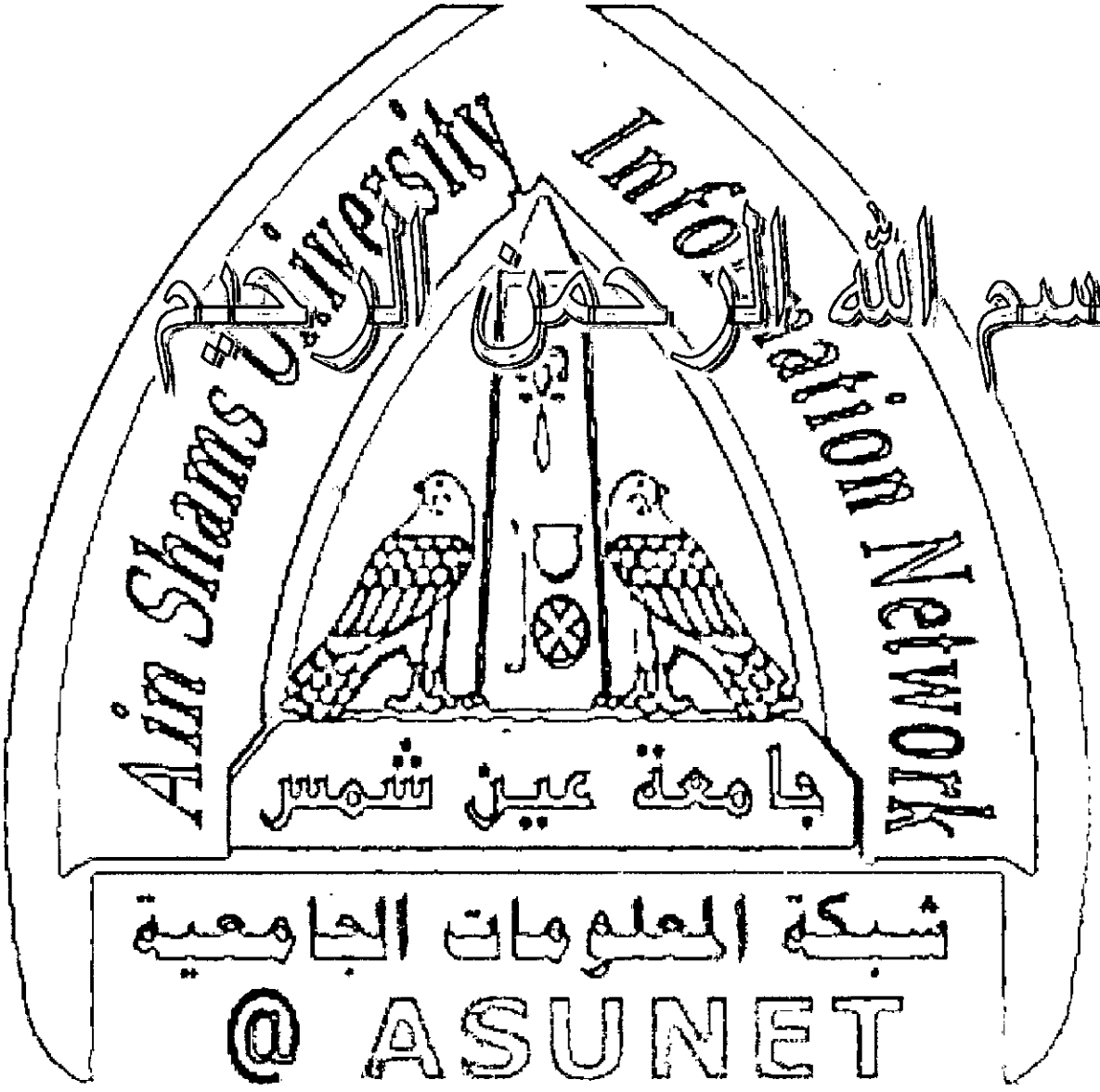
شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار
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To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

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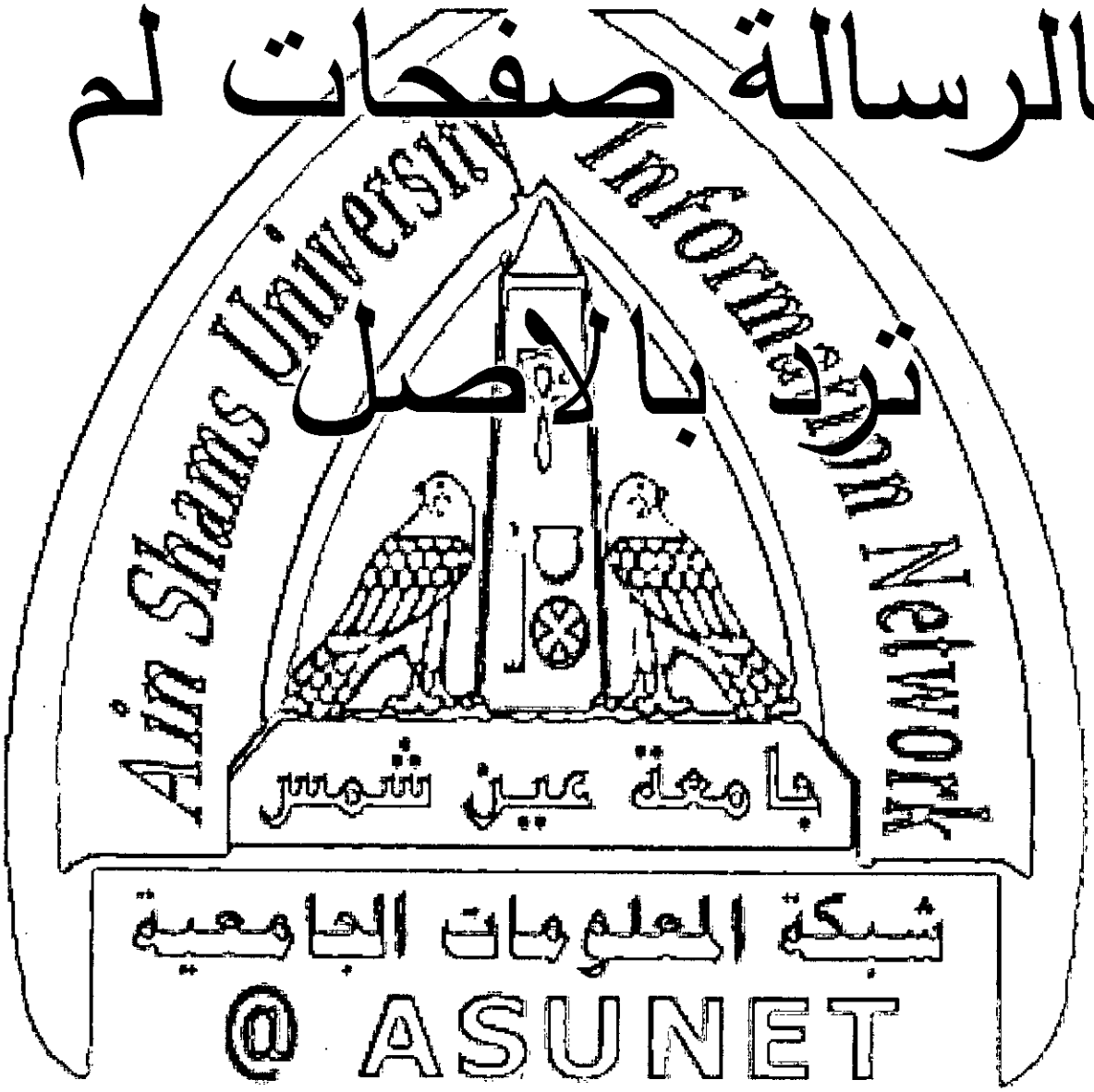

Possible Teratogenic Effects of Khat (Catha Edulis)

Thesis
Submitted in Partial Fulfillment Of The Requirement for the Master Degree In Forensic Medicine and Clinical Toxicology

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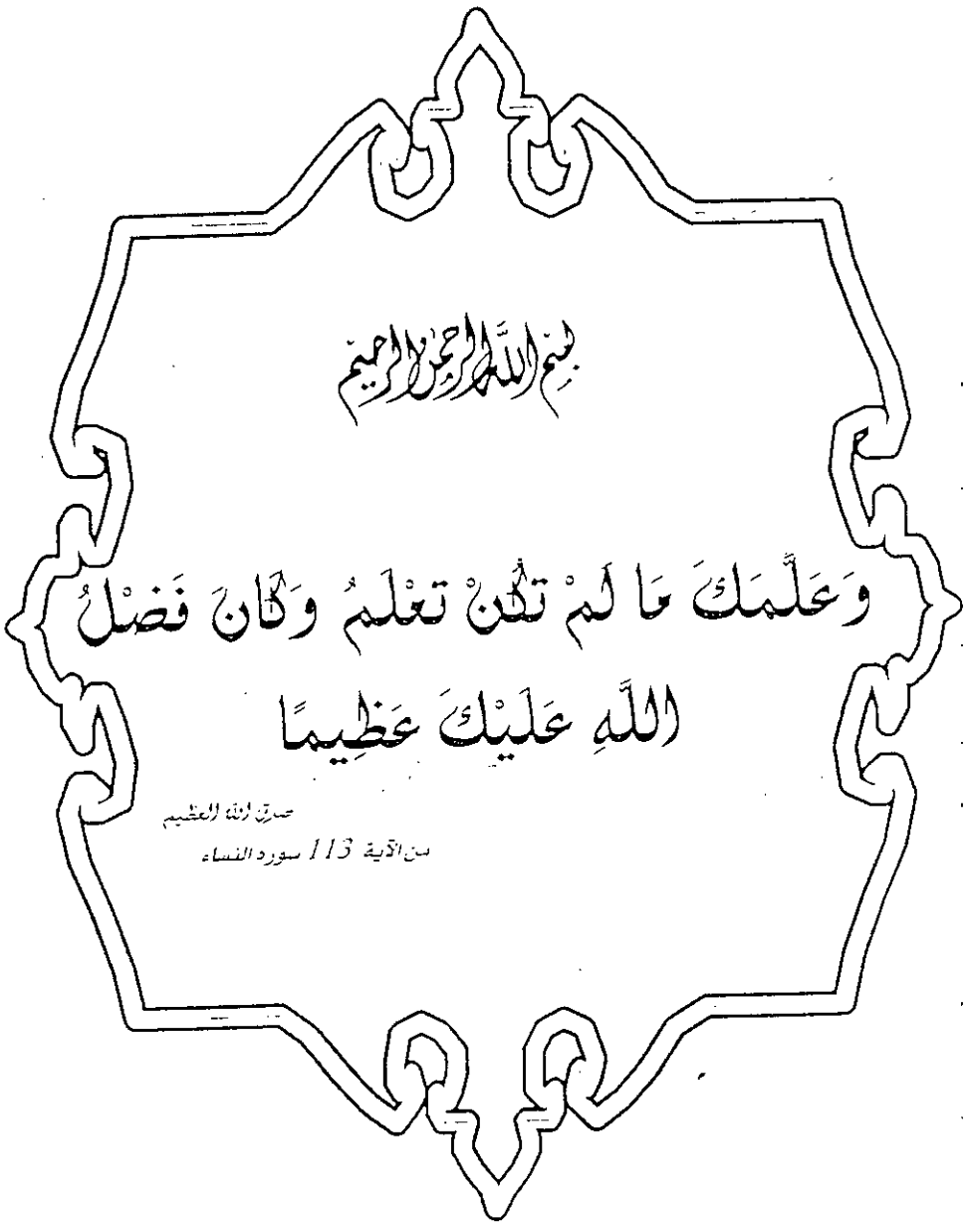
2006



بسم الله الرحمن الرحيم

وَعَلَّمَكَ مَا لَمْ تَكُنْ تَعْلَمُ وَكَانَ فَضْلُ اللَّهِ عَلَيْكَ عَظِيمًا

صدق الله العظيم

من الآية 113 سورة النساء

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Huda Abdul Wadood Mohamed Omer

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Introduction & Aim of Work

INTRODUCTION

Developmental toxicity is any structural or functional alteration, reversible or irreversible caused by insult, which interferes with homeostasis, normal growth, differentiation, development and/or behavior (Tyl, 1993). Teratogen is one of the environmental insults that effects the intrauterine life. It is an agent that induces structural malformations, metabolic or physiological dysfunction, psychological or behavioral alterations or deficits in offspring either at birth or in defined postnatal period (Robert and Hoffman, 1998).

Khat (catha edulis) is a plant from the Celastraceae family, that grows in Ethiopia, Kenya and Yemen. Fresh leaves of khat tree are chewed by large number of people in East Africa and Yemen for their pleasurable and stimulating effects (Al-Motarreb et al., 2002). Among the various compounds present in the plant (more than 40 alkaloids, glycosides, tannin, terpenoids, (Elmi, 1983), essential oils , small amount of protein and ascorbic acid (Pantelis et al., 1989).

The alkaloid cathinone, a phenylakylamine namely (-)-alpha aminopropiophenone is regarded as the main active component of khat.

Khat action are mainly due to the alkaloid cathinone, (Houghton, 2004) a substance structurally and pharmacologically related to amphetamine and that can be called natural amphetamine (Kalix, 1996 and Patel, 2000). The cathinone is a liable substance present only in fresh leaves of khat which decomposed into norpseudoephedrine and ephedrine if dried , therefore khat almost always chewed on the same day as harvested (Yamaguchi et al.,1999)

.Khat increases the levels of dopamine in the brain by acting on the catecholaminergic synapses, the psychostimulant effect of khat can be accounted for by the mechanism of cathinone (Patel, 2000).

Khat is deeply rooted in the sociocultural traditions of several countries, where it practiced by the people in a well defined and stable social setting. Recently the use of this stimulant has expanded beyond these boundaries (Dhaifalah and Santavy, 2004).

Khat chewing is an insidious habit that affects many aspects of life with its adverse social, economic and medical consequences, it has become a problem of grave national concern (Yousef et al., 1995).

The toxicological potential of khat on various organs was further confirmed by many studies on experimental animals treated with khat extract (Saleh et al., 1988 & Islam et al., 1990 & Hanaa et al., 1994 and Zaghloul and Nada, 1994) .

Khat teratogenic effect attracted little attention in the previous studies (Islam et al., 1994).

Aim of the work:

- To show the biological effects of khat chewing on different body systems.
- To show if the khat used during pregnancy lead to possible teratogenic effects .

Historical Review