بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــســـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

CONTRIBUTION OF CASPASE-3 IN LEAD INDUCED APOPTOSIS IN ADULTS

THESIS

Submitted for the Partial Fulfillment of the requirments of the Master Degree

In

"Clinical Pathology"

By

Amany Fathy El- Asrag

(M.B.,B. Ch.,)

Supervisors

Dr.

Mahmoud Mohamed El-Sheikh

Assistant Prof. of Clinical Pathology Department

Faculty of Medicine

Tanta University

Dr.

Mona El-Gohary

Assistant Prof. of Forinsic Medicine and Toxiology Department

Faculty of Medicine

Tanta University

Dr.

Amal Helmy Abd El-Hameed

Lecturer of Clinical Pathology

Faculty of Medicine

Tanta University

FACULTY OF MEDICINE

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بسم الله الرحمن الرحيم

تبارك الذي بيده الملك وهو على كل شئ قدير (١) الذي خلق الموت والحيوة ليبلوكم أيكم أحسن عملا وهو العزيز الغفور (٢)

صدق الله العظيم

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Introduction

INTRODUCTION

The documented toxic effects of lead in humans serve to emphasize potential health risks. Lead toxicity is known to be a subject to individual susceptibility. In the adult 10 percent of an administered dose is absorbed. However in the child, it is estimated that up to 50 percent of ingested lead may be absorbed. Major risk factors for lead toxicity include nutrition, particularly deficiencies of essential metals such as, calcium, iron, zinc, housing and socioeconomic status (Goyer, 1993).

Lead exerts its toxicity mainly on the brain, peripheral nervous system, bone marrow, kidney and liver. Up to now there has been no information concerning the exact mechanism beyond which lead exerts its toxic effects on the cells. However, the interactions of lead with proteins may be considered to be one of the mechanisms by which lead exerts its toxicity. It was proved that the inorganic lead poisoning is responsible for accumulation of delta aminolaevulinic acid (ALA), which undergoes fast auto-oxidation at slightly alkaline pH with concomitant generation of reactive oxygen species. Such oxidative stress may induce apoptosis, that may be another mechanism by which lead induced cellular toxicity Hermes-kima et al., 1991, Kominsky et al., 1993, Ratan et al., 1994, Wood & Yooule, 1994, Stoian et al., 1996).

Caspase-3 is a member of the interleukin-1β converting enzyme (ICE) family of cysteine proteases, it exists in cells as an inactive 32 KDa proenzyme, called procaspase-3. Procaspase-3 is cleaved into active 17 and 12KDa submits by upstream proteases during apoptosis. So the over-expression of caspase-3 can result in apoptosis likewise, the inhibition of caspase-3 or other caspases can prevent cells from entering the apoptotic pathway (Casciala-Rosen et al., 1996; , 1997; He et al., 2000).

Aim Of The Work

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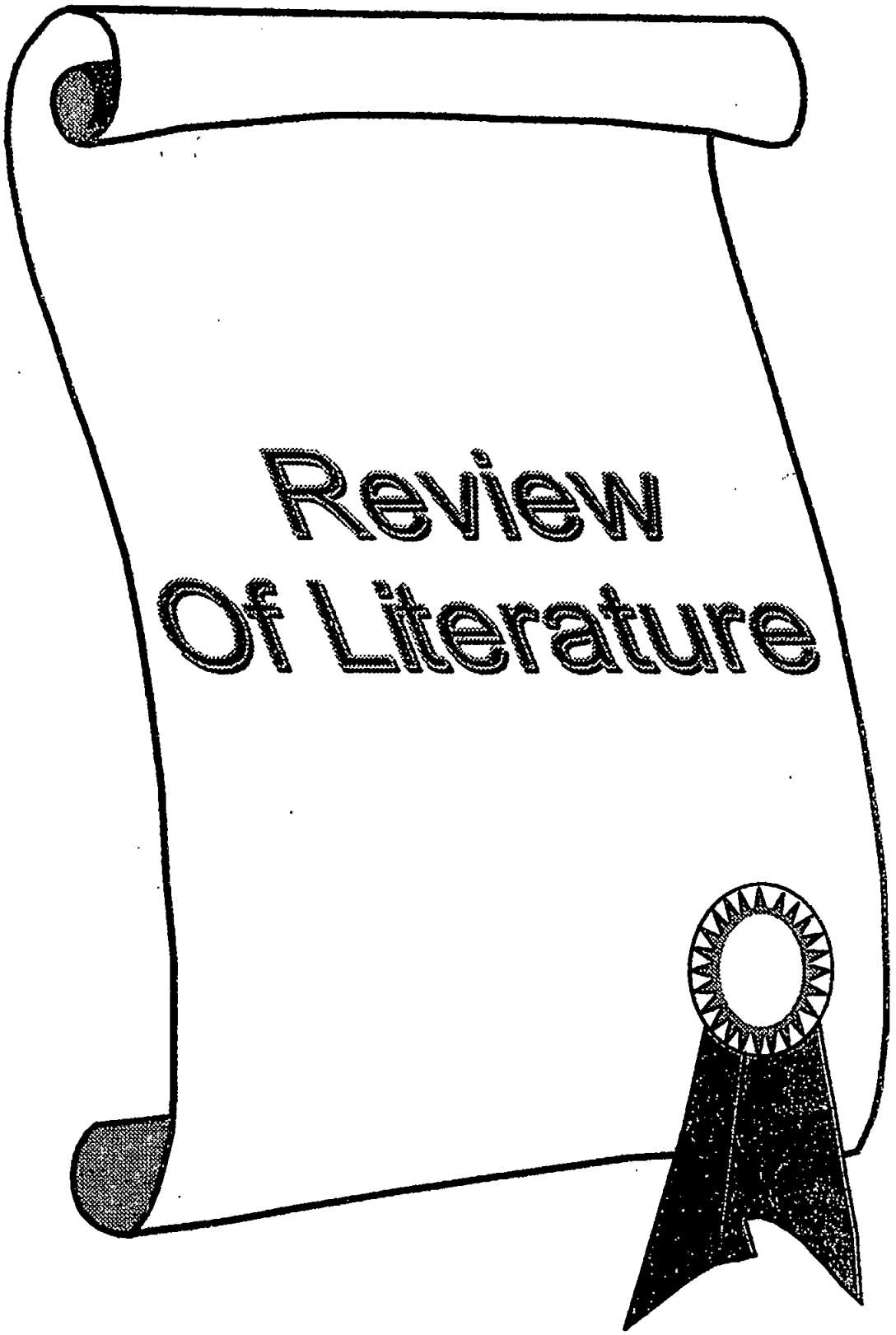
The aim of this work is to investigate the activation of caspase-3 in blood lymphocytes of adults (living in different locations) correlated with blood lead level.


Review
Of Literature