AN EXPERIMENTAL STUDY OF THE IMMUNE RESPONSE TO THE ORGANOPHOSPHATE INSECTICIDE (DIMETHOATE) EXPOSURE IN RATS

Thesis
submitted
for partial fulfillment of
Master Degree of Clinical Toxicology

by

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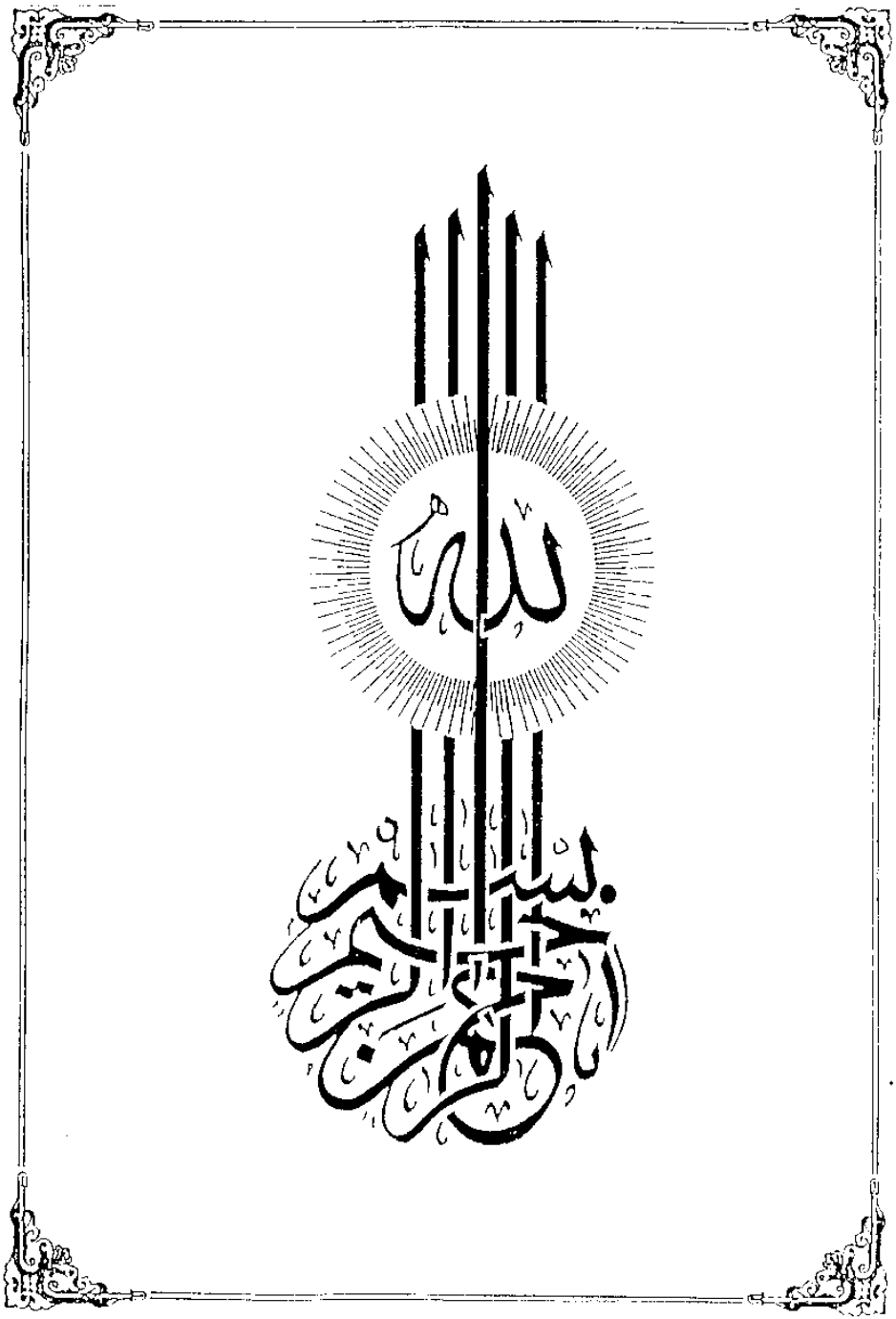

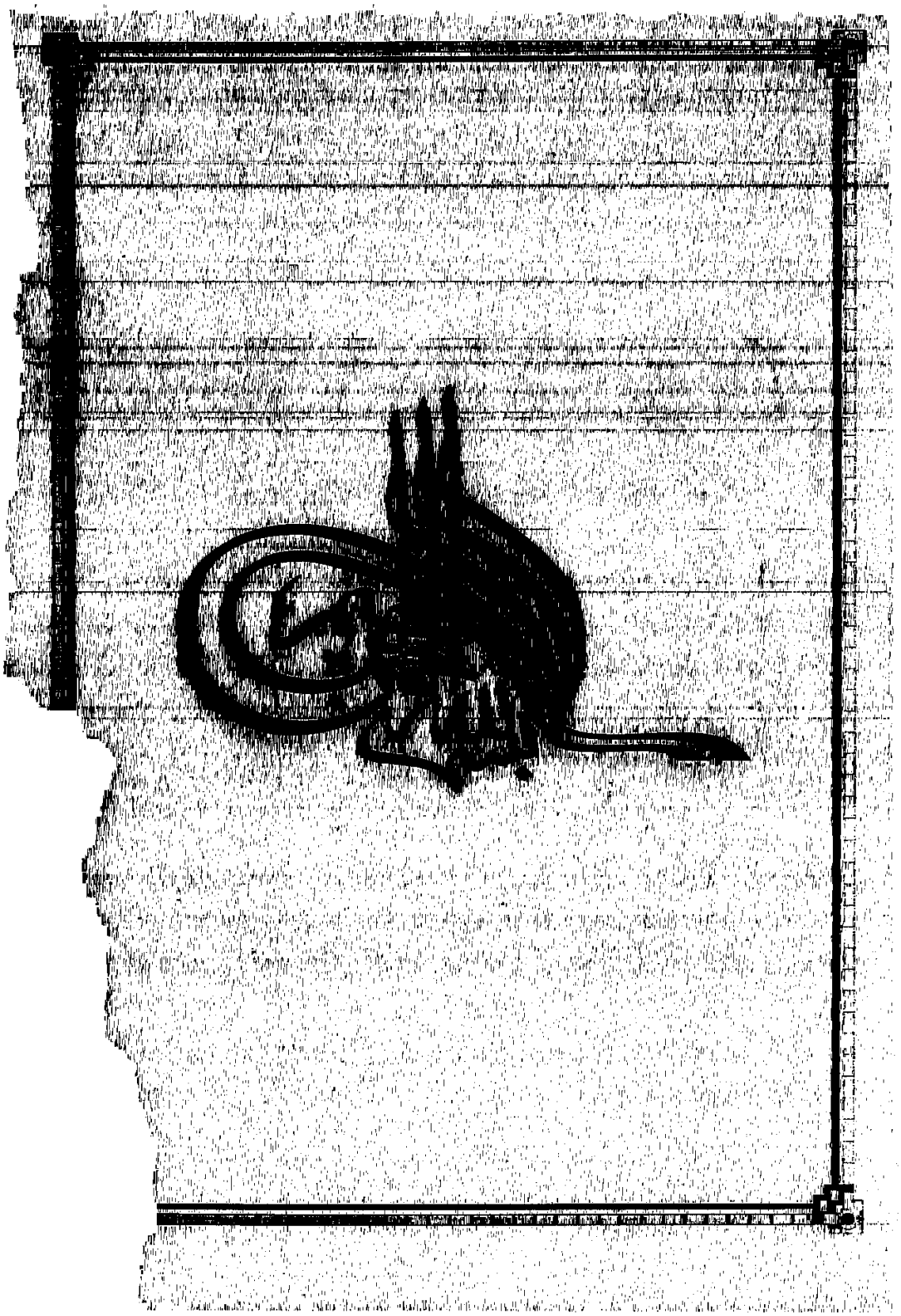

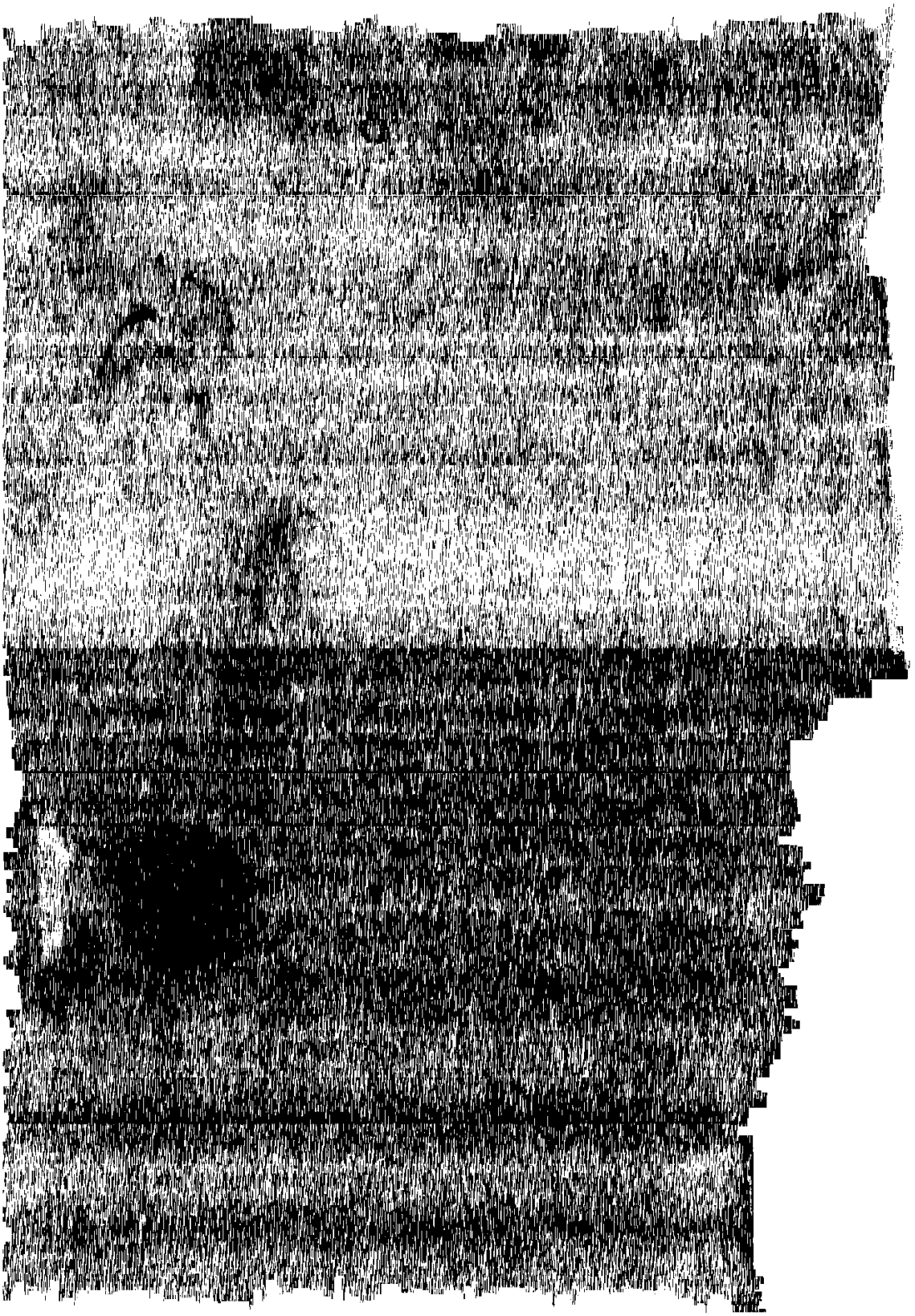

DIDECATION

- TO MY FATHER:

The Great Teacher.

- TO MY MOTHER:

The Great Heart.

- TO MY WIFE ABEER:

The Great Love.

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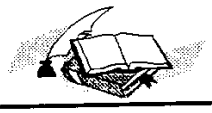

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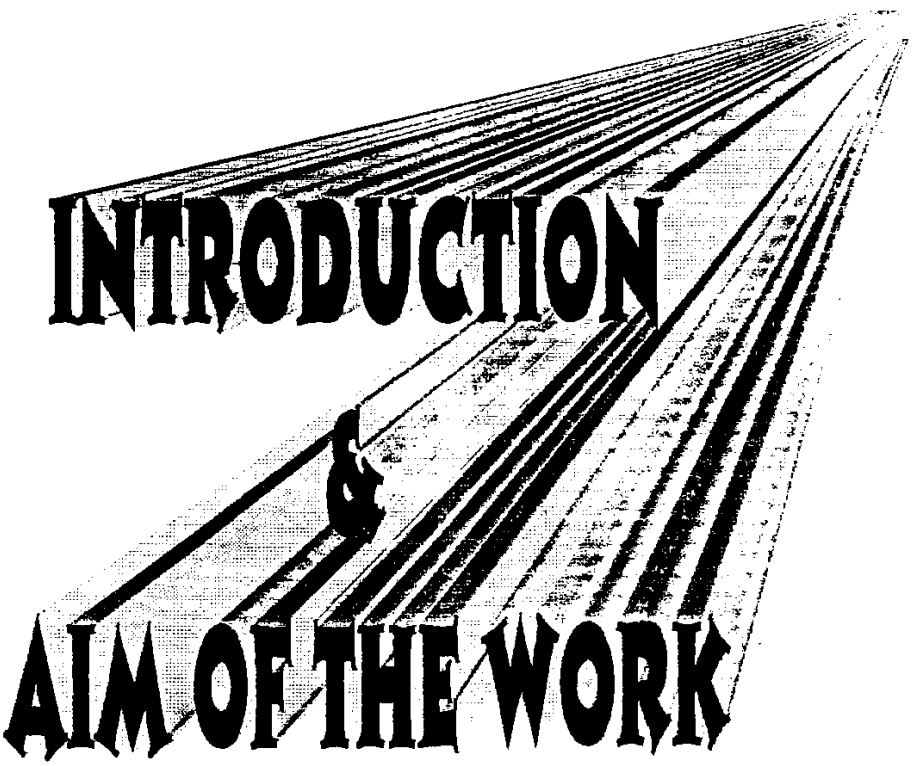

Introduction

Countries with temperate or hot climate offer favorable conditions for the development of various pests. This enforces a considerable consumption of pesticides, not only in agriculture, but also in domestic field. These products in general possess a high toxicity which gives rise to frequent acute &/or chronic toxicites in humans and animals. This poisoning affects manufacturers, industrial handlers, agricultural workers, consumers of contaminated food, and people who abuse these products at home. ***(Sarget, 1991).***

On a worldwide basis, intoxications attributed to pestcides have been estimated to be as high as 500.000 illness annually.

The Organophosphorus (O.Phs.) insecticides are involved in human poisoning more frequently than any other group. This is because these compounds are widely used for commercial, household, and industrial purposes. ***(Hayes, 1982).***

Being widely used in home and work place, organophosphorus compounds could be considered as a pollutant. Of the multitude of xenobiotic agents, few have been examined for their immunotoxic potential.

The focus on O.Ph compounds as potential immunotoxic chemicals began in the last decade when both scientists and physicians alerted the public to the potent toxic affects of pesticides especially after the suspected immunotoxicity of the organochlorine members was reported in animals.***(David, 1992).***

Studies of the action of carbamates on the immune system of rats were performed ***(Ladics, 1994)***, however few studies are available concerning the effects of O.Ph. Insecticides on the immune system.

Aim of the work

This study has been conducted to assess the effects of one of the **O.Ph.** compound, *Dimethoate*, on the immune system of rat after exposure to short term repeated doses of the compound. The immune response of the rat had been evaluated and correlated with the previous available data.