Toxicological Profile of Glue Sniffing in Experimental Animals

Thesis Submitted for Partial Fulfilment of Master Degree of Clinical Toxicology

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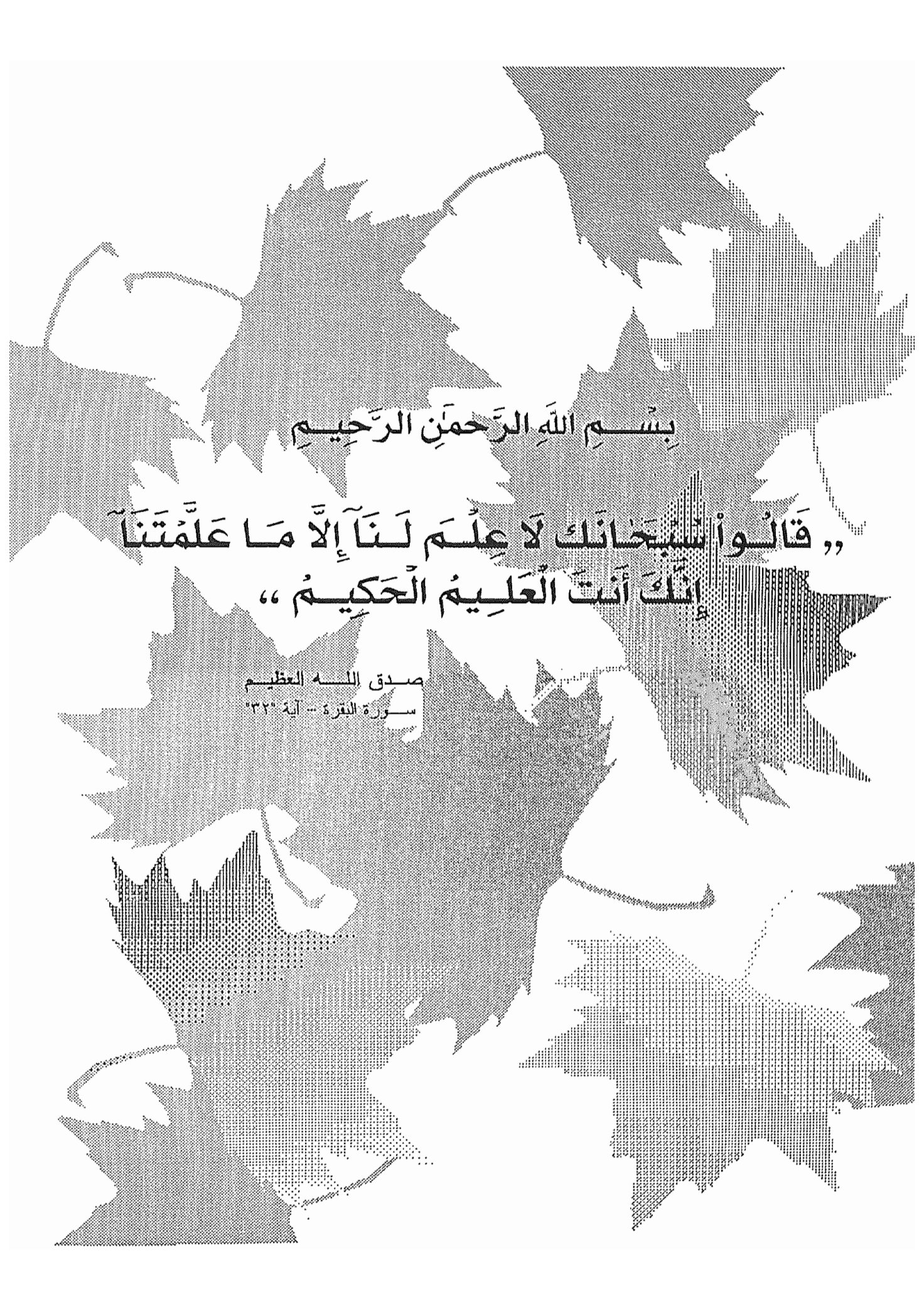

بِسْمِ اللهِ الرَّحمَنِ الرَّحِيمِ

„ قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا
إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ „

صدق الله العظيم
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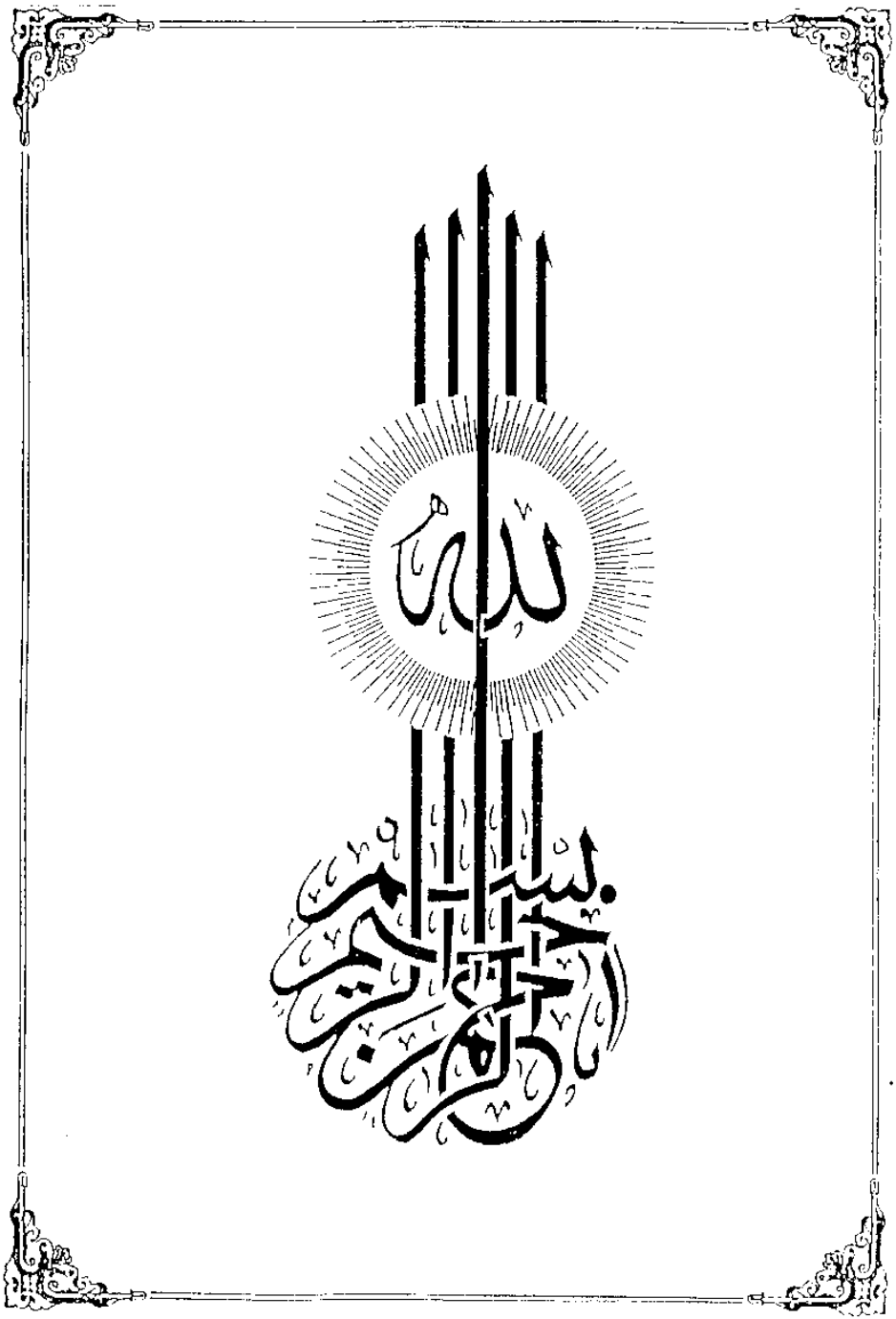

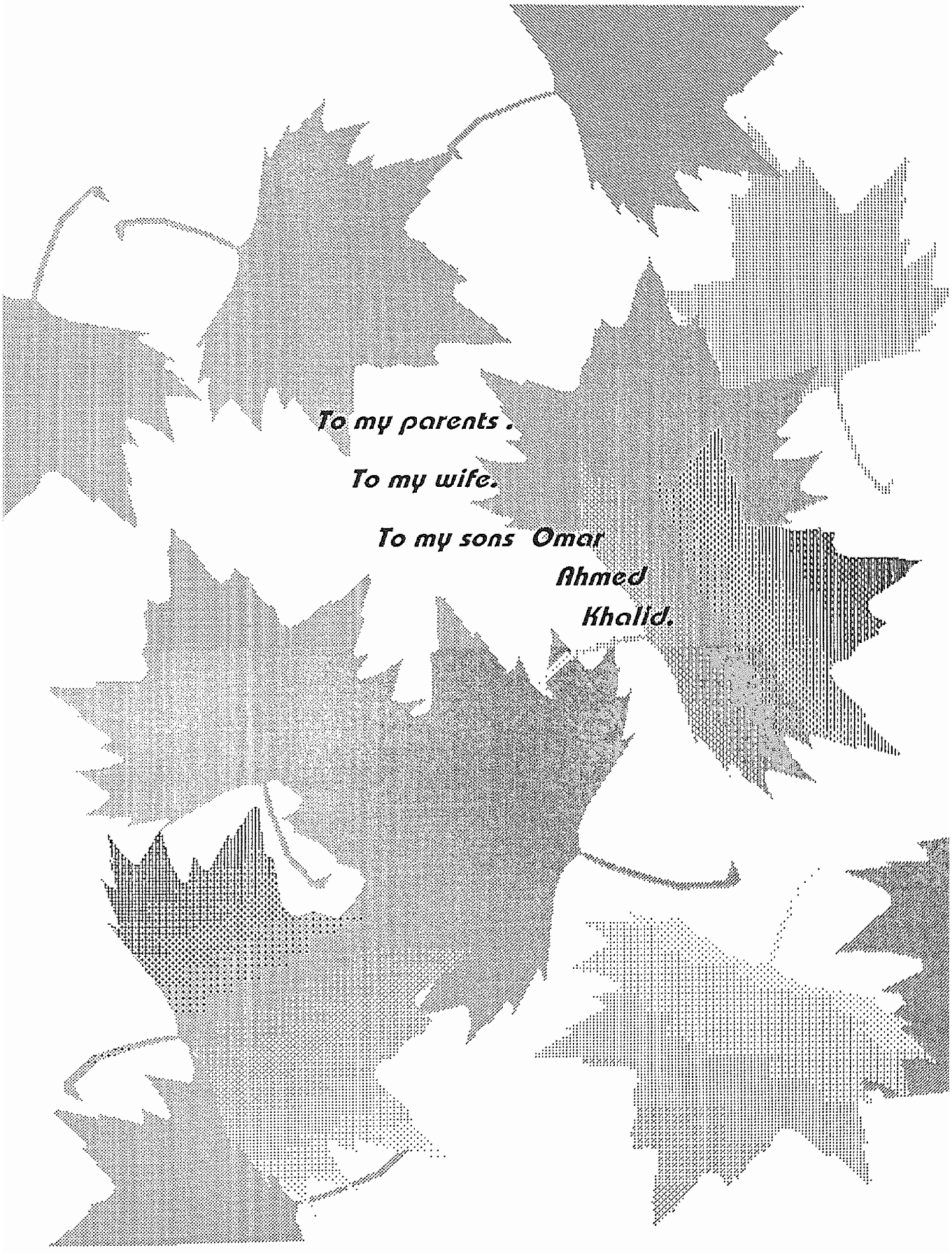
To my parents .
To my wife.
To my sons Omar
Ahmed
Khalid.

Acknowledgement

First and foremost thanks to God. I would like to express my deep gratitude and appreciation to Prof. Dr. Mostafa Abd El-Latif Kamel, Professor of Forensic Medicine and Clinical Toxicology, Faculty of Medicine, Ain Shams University for suggesting the title, establishing the protocol, his interest, patience, and for giving me much of his precious time. I feel indebted to him for his valuable advice and kind support which enabled me to overcome the various difficulties during this work.

I am also extremely grateful to Prof. Dr. Ahmed Ebrahim El-Siggini, Assistant Professor of Forensic Medicine and Clinical Toxicology, Faculty of Medicine, Ain Shams University, for his help and encouragement throughout the work.

My sincere thanks and respect are due to Dr. Saad Ahmed Nagieb, Lecturer of Forensic Medicine and Clinical Toxicology, Faculty of Medicine Ain Shams University, for the tips and guidance that he gave me through my work.

Many thanks to my intimate colleagues in the Laboratory of the Poison Control Centre, for their diligent assistance in the practical part of this study.

Words will never be enough to describe the support and encouragement that I had from my Mother and my Father to whom I will be always grateful.

Finally, I would like to dedicate this work to My Wife and My Sons, my source of delight and inspiration.

Taymour Mohammed.

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LIST OF ABBREVIATIONS

ACGH	American Conference of Government Industrial Hygiene.
CESARS	Chemical Evaluation Search and Retrieval System.
HSDB	Hazardous Substances Data Bank.
NIOSH	National Institute for Occupational Safety and Health.
RTECS	Registry of Toxic Effects of Chemical Substances.
mEq/L	Milliequivalent per litre.
mg%	Milligram percent.
u/l	unit per litre.
AST	Aspartate Transaminase.
ALT	Alanine Transaminase.
PEEP	Positive End Expiratory Pressure.
CT	Computed Tomography.
MRI	Magnetic Resonance Imaging.
RTA	Renal Tubular Acidosis.

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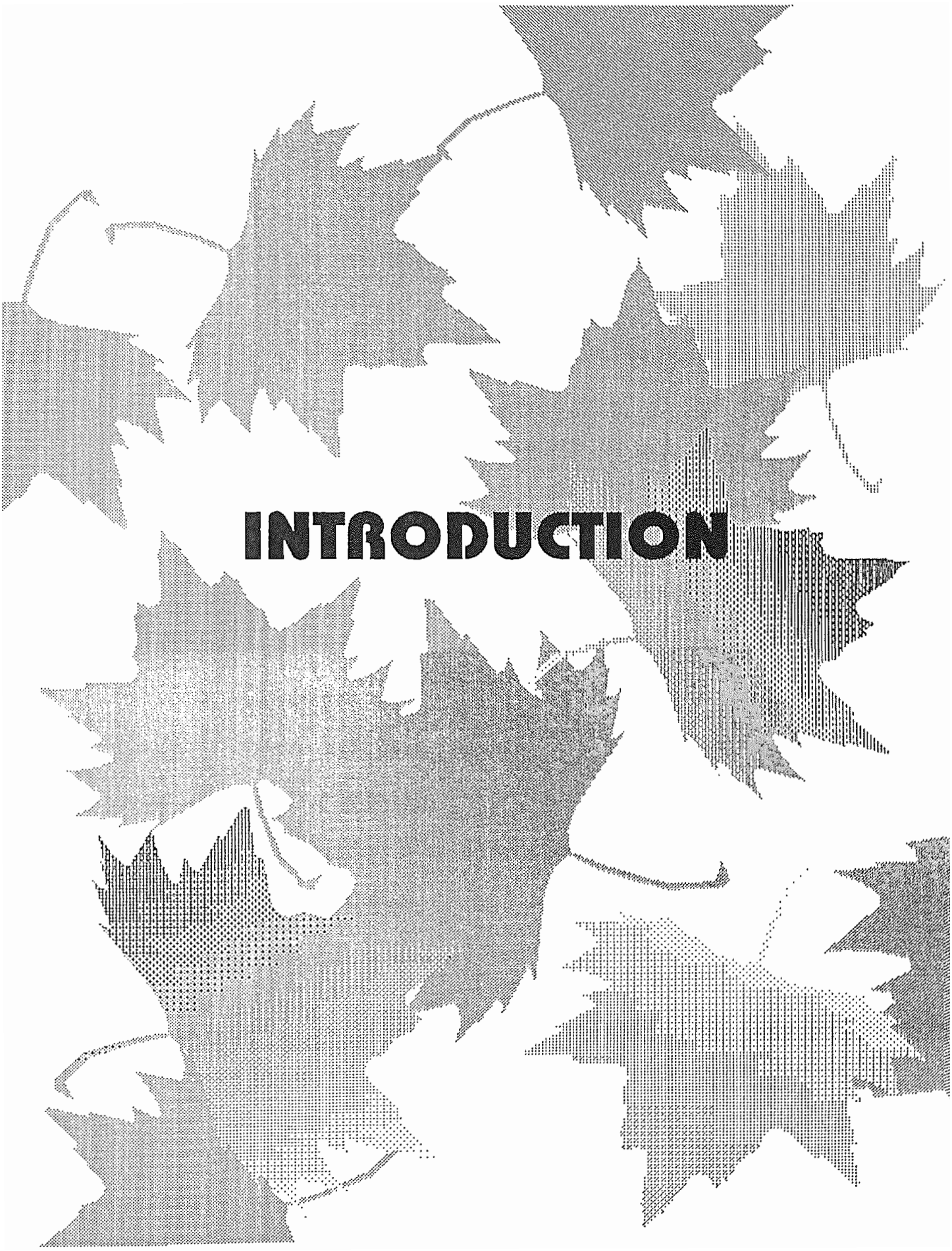

INTRODUCTION

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Solvent abuse is a potentially lethal practice that involves a wide range of volatile, fat soluble substances which easily cross from gaseous phase in the lungs to the blood and subsequently to the lipids of the brain, organs and body fat. Once within the brain, these compounds can disrupt it's function by affecting neuronal membrane ion channels and may cause changes in consciousness ranging from mild intoxication through hallucinatory states to coma with cardio-respiratory depression.

True dependence may occur, and the development of isolated, solitary sniffing practices may be indicative of increasing dependence. The management of this problem depends on the recognition and treatment of underlying psychological problems. Solvent abuse is generally a habit of young teens, but may be persist into the mid-twenties. Peer group pressure may be an important factor

Legislation seems unlikely to affect the prevalence of solvent abuse due to the large number of chemicals involved and their widespread use in the home and industry. Perhaps the most useful