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بالرسالة صفحات لم ترد بالأصل



MEDICOLEGAL IMPORTANCE OF GUN-SHOT RESIDUE (GSR)

Essay

Submitted for Fulfillment of Master Degree in Forensic
Medicine and Toxicology

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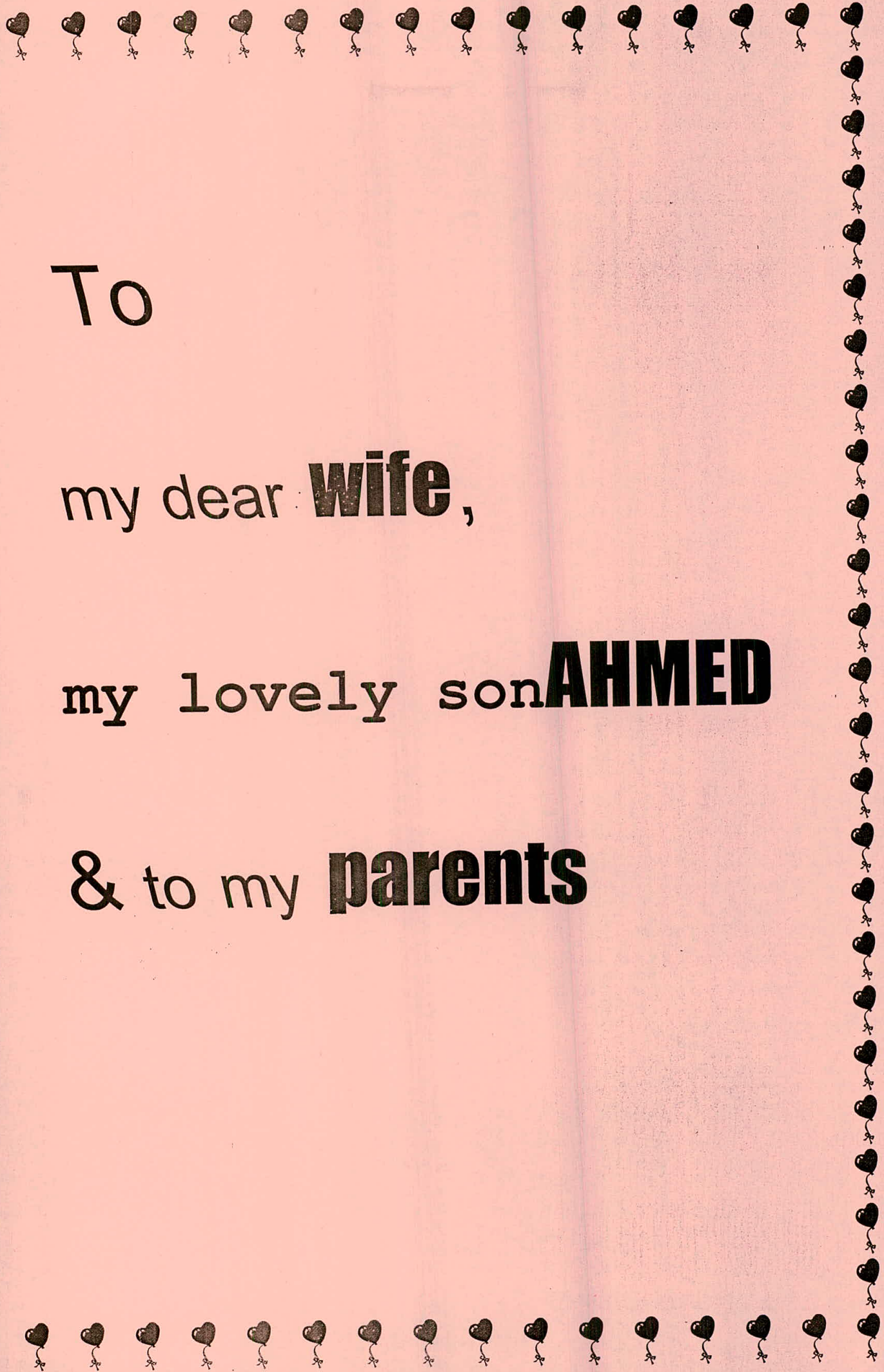
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To

my dear **wife,**

my lovely son **AHMED**

& to my **parents**

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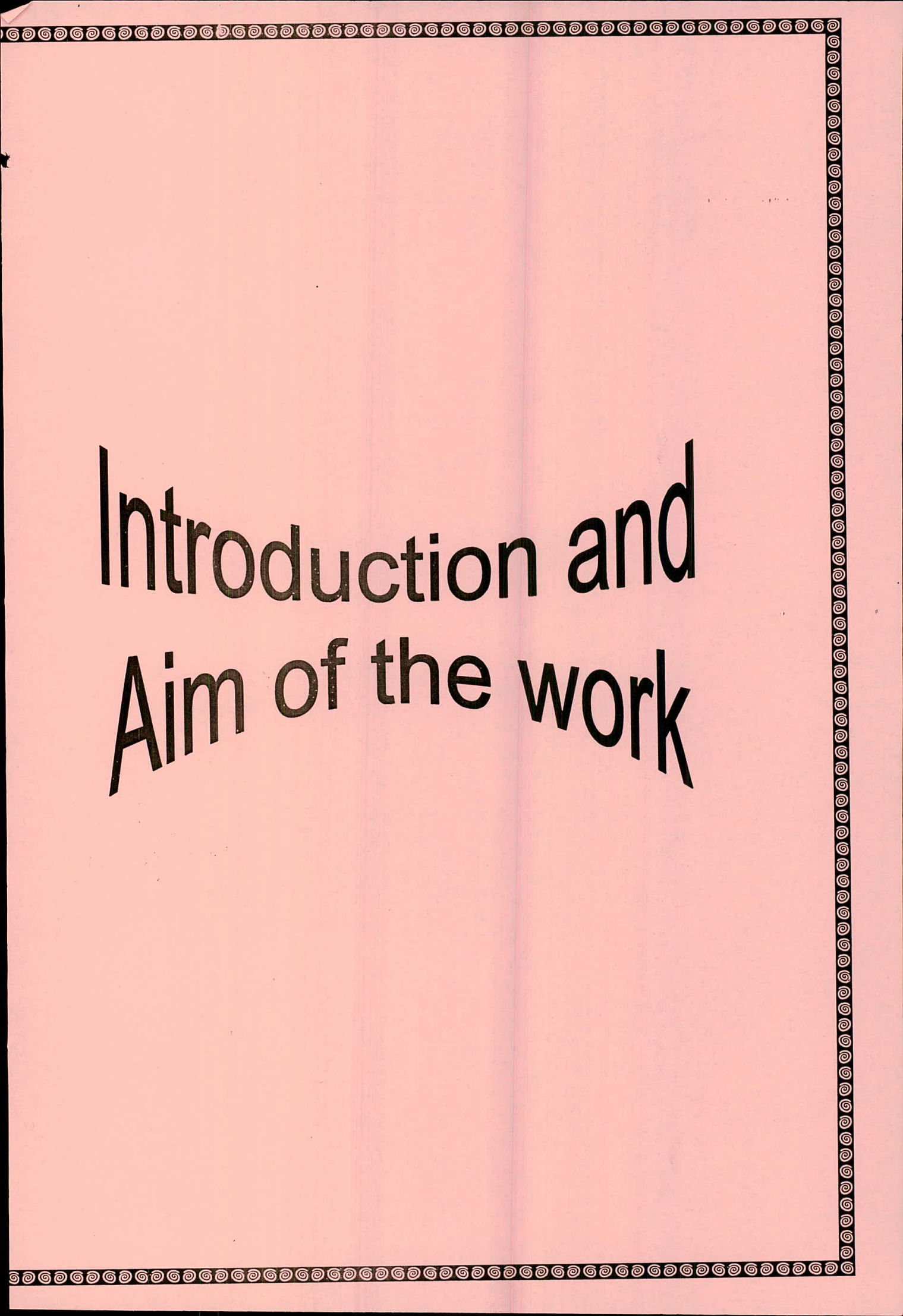
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List of abbreviations

<u>AA:</u>	<u>Atomic absorption</u>
<u>AAS:</u>	<u>Atomic absorption spectrometry</u>
<u>Ba:</u>	<u>Barium</u>
<u>BEI:</u>	<u>Backscatter image</u>
<u>FT:</u>	<u>Feet</u>
<u>GSR:</u>	<u>Gun shot residue</u>
<u>ICP- MS:</u>	<u>Inductively coupled plasma-Mass spectrometry</u>
<u>KWT:</u>	<u>Form of armor-piercing ammunition</u>
<u>MECE:</u>	<u>Micellar electrokinetic capillary electrophoresis</u>
<u>NAA:</u>	<u>Neutron activation analysis</u>
<u>ng:</u>	<u>Nanogram</u>
<u>NYCLAD:</u>	<u>Nylon coated lead bullets</u>
<u>Pb:</u>	<u>Lead</u>
<u>SEM:</u>	<u>Scanning electron microscope</u>
<u>SEM-EDS:</u>	<u>Scanning electron microscope / Energy dispersive spectrometry</u>
<u>SEM-EDX:</u>	<u>Scanning electron microscope/Energy dispersive X ray analysis</u>
<u>SP:</u>	<u>Antimony</u>
<u>TMDT:</u>	<u>Trace metal detection technique</u>
<u>um:</u>	<u>Micrometer</u>
<u>WP:</u>	<u>Wounding power</u>
<u>α:</u>	<u>Alpha</u>

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Introduction and Aim of the work

Introduction

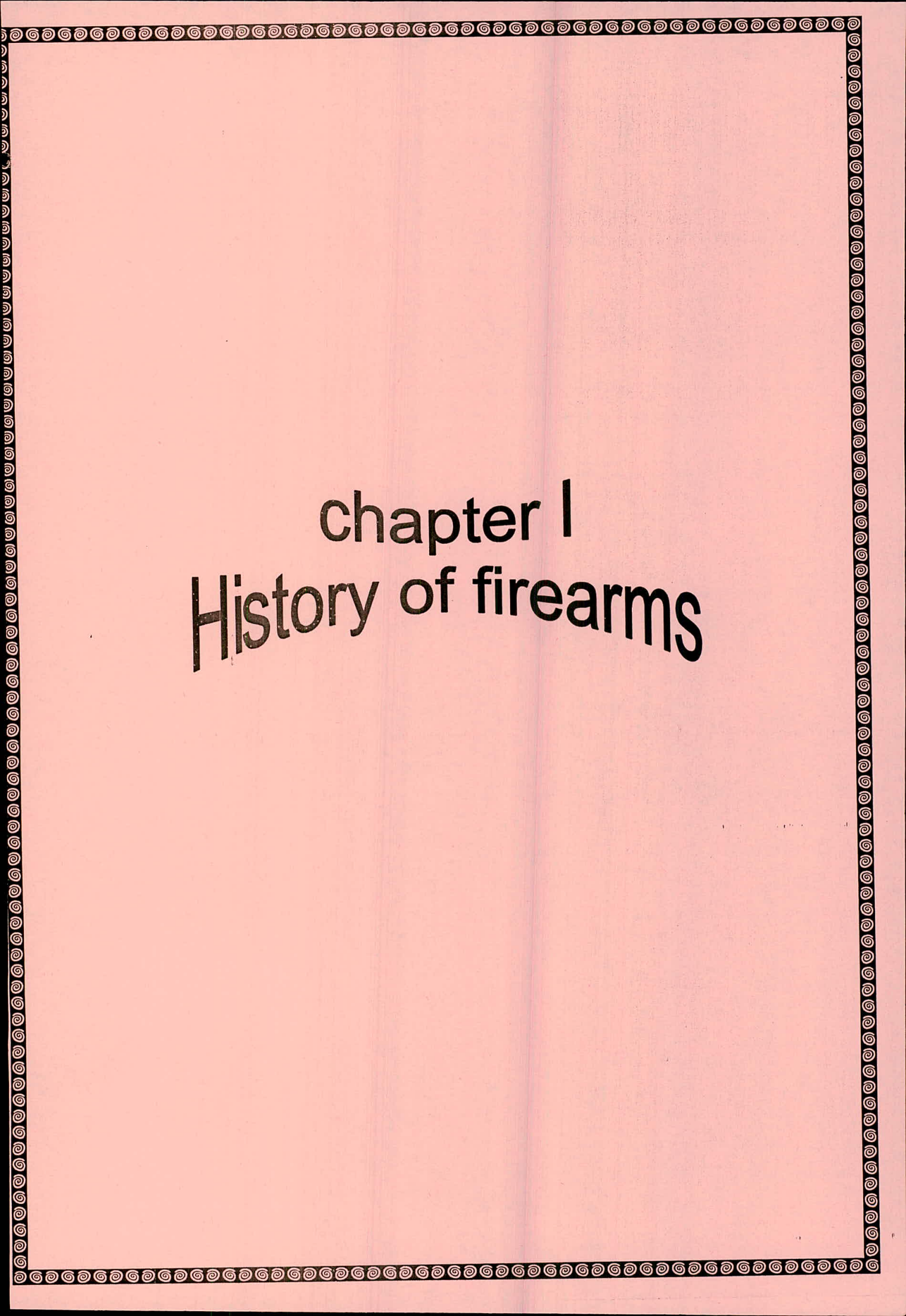
Due to the lack of informations obtained from the crime location, the investigators often ask the laboratories to do various types of analysis. Particle analysis has been fashioned into the most defenit method of identification and the most successful method of detecting the gun-shot residues to date (*Guanratnam et al., 1994*)

Gun shot residue has been dealt with as analytical evidence in suicides, homicides and other firearms related incidents for many years and has a good deal of attention (*Singer et al., 1996*)

It was important to find a method to investigate the cases which arise from firearms as during ballistic study, a weapon and a bullet may be linked or their association may be ruled out by comparison of the micro-strations on the bullet from the scene of the crime and those left on one from an experimental shot (*Dufosse et al., 1998*). The chemical analysis of a bullet found in a body or on the crime's scene, may give the investigator very important clues (*Peters et al., 1998*).

Aim of the work:

The aim of this study is to throw light on the importance of gun shot residue (GSR) in firearm injuries, methods of detection and indentification of GSR particles and to give an account on different types of ballistics, weapons and firearm wounds.



Chapter I

History of firearms