Level of Plasma Factor VIIa – rTF in Ischemic Heart Disease

Thesis

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بسم الله الرحمن الرحيم

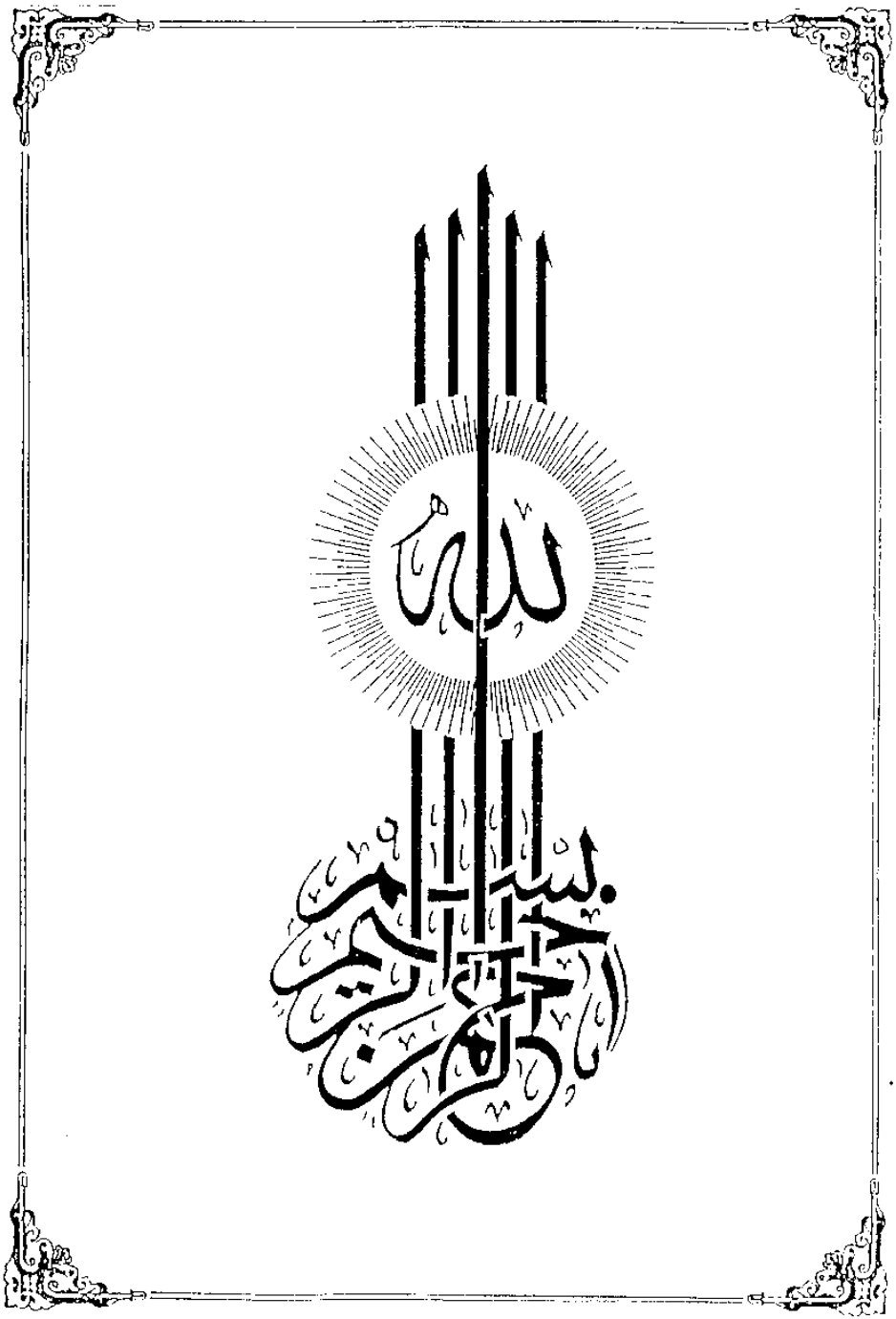
قالوا سبحانك

لا علم لنا إلا ما علمتنا

إنك أنت العليم الحكيم

صدق الله العظيم

سورة البقرة، آية ٣٢



To my parents.

& To my fiance

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LIST OF ABBREVIATIONS

CAD	Coronary artery disease
CHD	Coronary heart disease
CVD	Cardiovascular disease
DM	Diabetes mellitus
DW	Distilled water
FVIIag	FVIII antigen
FVIIchr	Chromogenic FVII
HDL	High density lipoprotein
IDDM	Insulin dependent diabetes mellitus
IHD	Ischaemic heart disease
LDH	Low density lipoprotein
KDa	kilo Dalton
LCAT	Lecithin-cholesterol acyl transferase
M.I	Myocardial infarction
NIDDM	Non-insulin dependent diabetes mellitus

TG	Triglycerides
TF	Tissue factor
TFPI	Tissue factor pathway inhibitor
TRLP	Tiglyceride rich lipoprotein particles
VLDL	Very low density lipoprotein

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INTRODUCTION

Coagulation factor VII, or more correctly, the activated form (VIIa), occupies, a unique position as the first enzyme in the blood-clotting cascade. As such, it may play an important role in hypercoagulable states.

In fact, several epidemiologic studies have found elevated plasma factor VII coagulant activity (VIIc) to be an independent risk factor for heart disease.

However, factor VII exists in at least two, and possibly more, forms in plasma, and factor VIIc assays measure an aggregate of all of them. Therefore, there has been considerable controversy concerning which plasma forms of factor VII, if any, represent actual risk factors for thrombotic disease.

Several years ago it was proposed that low levels of factor VIIa might circulate normally in the plasma and that such trace levels of pre-existing factor VIIa may be essential in priming the coagulation cascade. Accordingly elevated actual risk factor being measured in epidemiological studies employing factor VIIc assays.

New assays techniques based on genetically engineered mutants of tissue factor (TF) now permit measurement of plasma factor VIIa without interference from the large excess of zymogen factor VII.

Aim of the Work

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To evaluate the possible role of plasma factor VIIa as a risk predictor for coronary heart disease and to compare it with other risk factors.