CHAPTER 1
INTRODUCTION
Atherothrombotic diseases such as myocardial, cerebral infarctions are serious consequences of the thrombus formed in blood vessels which are the most common causes of death world wide [1]. Thrombolytic agents are used to dissolve the already formed clots in the blood vessels. However, these drugs (thrombolytic agents) have certain limitations like serious and sometimes fatal consequences [2]. Venous thromboembolism (VTE) is the third most common type of vascular disease. VTE causes over 500000 deaths in Europe every year. An estimated 300000 VTE related deaths occur in the US each year [3]. About 1 in 10 deaths that occur in the hospitals is caused by pulmonary embolism. In the UK, PE kills more people than breast cancer, AIDS and traffic accidents combined [4]. A blood clot (thrombus) developed in the circulatory system causes vascular blockage and while recovering leads to serious consequences in atherothrombotic diseases such as myocardial or cerebral infarction, at times leading to death. Thrombolytic agents that include tissue plasminogen activator (t-PA), Urokinase (UK), streptokinase (SK) etc. are used all over the world for the treatment of these diseases [5]. In India, though SK and UK are widely used due to lower cost, but as compared to other thrombolytic drug (tPA), their use is associated with increased risk of hemorrhage, severe anaphylactic reaction and lack of specificity. Moreover, as a result of immunogenicity multiple treatments with SK in a given patient are restricted. Because of the shortcomings of the available thrombolytic drugs, attempts are underway to develop
improved recombinant variants of these drugs. Many antithrombotic drugs may have a deleterious effect on normal haemostasis leading to bleeding complications. Therefore it is necessary to find out a new drug with less adverse effect.

Considerable efforts have been directed towards the discovery and development of natural products from various plant and animal sources which have antiplatelet, anticoagulant, antithrombotic, and thrombolytic activity [6].

The present study was undertaken to evaluate the antiplatelet, antithrombotic and thrombolytic activity of *Nepeta hindostana*, *Terminalia belerica* and *Nigella sativa*.

Epidemiologic studies have provided evidence that foods with experimentally proved antithrombotic effect could reduce risk of thrombosis. Herbs showing thrombolytic activity have been studied and some significant observations have been reported [6].
REFERENCES:


