CHAPTER 2 NEED FOR STUDY

In India and other countries of the world, phytomedicines have been used since time immemorial to treat various ailments long before the introduction of modern medicine. Herbal medicines are still widely used in many parts of the world especially in areas where people do not have access to modern medicines. Moreover, in most Asian countries where herbal medicines are still heavily relied upon because of high cost of therapeutic drugs, there is a need for scientific research to determine the biological activities of medicinal plants. The findings obtained from such research may lead to the validation of traditionally used medicinally important plants and enable full usage of the properties of these plants.

Delivery of drugs by transdermal route is more advantageous than oral and parental route; hence it prevents the GI side effects and first pass effect, can attain extended study state concentration of drug in blood and capable to withdraw the drug on removing. Yet, stratum corneum acts as a barrier for this approach. So it is important to overcome the stratum corneum while developing the delivery systems of drug by transdermal route; several techniques are utilized to improve the drug permeation through skin. Delivery of drugs by transdermal route can be improved by various non- invasive methods by using chemical enhancers known as chemical method or by using iontophoresis, sonophoresis, electroporation and magnetophoresis known as physical methods. Delivery of drugs by transdermal route using physical methodswith better permeation through skin at required concentration is been reported in several latest studies.

Traditional indigenous knowledge reveals the immense value of almost all parts of the plant i.e. roots, leaves, fruits, seeds and gum for various medicinal uses. Buchanania lanzan, being a vulnerable medicinal plant, is included in the Red Data Book published by International Union for Conservation of Nature and Natural Resources (IUCN). A dry deciduous forest tree of family Anacardiaceae is widely used by Indian tribes for treating various diseases. Three major chemical constituents of potent medicinal value, namely celidoniol, vomicine, epinitol have been characterized from an organic extract of leaves. Such extracts mainly exhibit antidiabetic, antihyperlipidemic, antioxidant, anti-inflammatory, wound healing, antidiarrheal, antivenom activity including a host of other curative properties.

Jojoba plants have currently received exceptional attention, since, its seeds contain a unique liquid wax commonly called jojoba oil, that is very similar to that obtained from Whale sperm. Jojoba is considered a promising crop for arid and marginal areas; the plant also has

probable value in combatting desertification and soil degradation in dry areas. Although the plant is known for its high-temperature and high-salinity tolerance growth ability, jojoba considered as a new plant for arid and marginal areas. The plant is grown for its seed which contains a liquid wax with a high melting point. This oil is used in a variety of products including pharmaceuticals, cosmetics, lubricants and bio-fuel. Several aspects of the crop agronomy is reviewed including a botanical description, propagation methods from seed and cuttings, This review is intended to afford a reference to scientists and growers in the agronomy and management of jojoba.

B. lanzan and *Simmondisia chinesis* holds real promise as a enormous store house of magic chemicals that will surely benefit mankind in coming decades. Hence it can be stated that *B. lanzan* and *Simmondisia chinesis* are herbal drug which is already used by traditional vaidya and tribes in India, though there is further need of documentation and validity. We will highlight their clinical potential and/or pinpoint an overestimation. Moreover, we will sum up the planned trials in order to provide insights into the inflammatory disorders that are hypothesized to be beneficially influenced by the compound. Transdermal delivery devices and wound dressing materials are constantly improved and upgraded with the aim of enhancing their beneficial effects, biocompatibility, biodegradability, and cost effectiveness. Therefore, researchers in the field have shown an increasing interest in using natural compounds as constituents for such systems. Plants, as an important source of so-called “natural products” with an enormous variety and structural diversity that still exceeds the capacity of present-day sciences to define or even discover them, have been part of medicine since ancient times. However, their benefits are just at the beginning of being fully exploited in modern dermal and transdermal delivery systems.