INTRODUCTION

The term **wound** has been defined as a disruption of normal anatomical structure and more importantly, function. Wound may be produced by physical, chemical, thermal, microbial or immunological insult to the tissue. The process of wound healing consists of integrated cellular and biochemical events leading to reestablishment of structural and functional integrity with regain of strength of injured tissue. Therefore the aim of treating a wound is to either shorten the time required for healing or to minimize the undesired consequences. Healing is the complex and dynamic process that results in the restoration of anatomical continuity and function.

**The phases of normal wound healing include**

- Hemostasis
- Inflammation
- Proliferation or Granulation
- Remodeling or Maturation

Wound healing and tissue repair are complex processes that involve a dynamic series of events including clotting, inflammation, granulation tissue formation, epithelization, collagen synthesis and tissue remodeling.

Everyone has received minor wounds that are expected to heal in a reasonable amount of time. However, for more serious scrapes, cuts and sores the natural healing process may not sufficiently close the wound. Different factors exasperate wound healing to the extent that some wounds slowly or never heal. However, more extensive and chronic wounds can take weeks or months to heal, a process that may be further delayed by infection, vascular insufficiency, sustained pressure or other reasons.

Healing a chronic wound requires care that is patient centered, holistic, interdisciplinary, cost effective and evidence based. Following are some of the common underlying causes or factors, which may interfere with wound healing:

- Trauma (initial or repetitive)
- Scalds and burns both physical and chemical
• Animal bites or insect stings
• Pressure
• Vascular compromise, arterial, venous or mixed
• Immunodeficiency
• Malignancy
• Connective tissue disorders
• Metabolic disease, including diabetes
• Nutritional deficiencies
• Psychosocial disorders
• Adverse effects of medications

**Basic Principles of Wound Care:**

There are three basic principles which underlie wound healing.

1. *Identify and control as best as possible the underlying causes.*
2. *Support patient centered concerns*
3. *Optimize local wound care.*

There are many allopathic formulations are available in the market having the wound healing property. But they are having many side effects. Herbs play a protective role in the management of the various disorders like skin diseases, liver damages, diabetes etc. In Indian flora there are number of medicinal plants like *Hippophae rhamnoides, Azadirachta indica, Ocimum sanctum, Curcuma longa, Centella asiatica, Aloe vera, Euphorbia neriifolia* (Nivadung) etc. are available having the (antiseptic) wound healing property.

A number of secondary metabolites/active compounds isolated from plants have been demonstrated in animal models (in vivo) as *active principles responsible for facilitating healing of wounds.* Some of the most important ones include *tannins* from *Terminalia arjuna*, *oleanolic acid* from *Anredra diffusa*, *polysaccharides* from *Opuntia ficus-indica*, *Quercetin and kaempferol* from *Hippophae rhamnoides*, *curcumin* from *Curcuma longa*, *oleo-resin* from *Copaifera langsdorffi*, *Flavonoids* from *M. sapientum*. *Volatile oil* from
Plants and their extracts have immense potential for the management and treatment of wounds. The phyto-medicines for wound healing are not only cheap and affordable but are also safe as hyper sensitive reactions are rarely encountered with the use of these agents. These natural agents induce healing and regeneration of the lost tissue by multiple mechanisms. However, there is a need for scientific validation, standardization and safety evaluation of plants of the traditional medicine before these could be recommended for healing of the wounds.

In the market there are some herbal formulations like Tilvadi ghrita, Zadpola malam are available having wound healing property. But there is no any scientific data available for such products. The pharmacological effects need experimental evidence for their actions. However, there is need to develop a effective wound healing formulation which could reduces the emergence of complications caused due to allopathic drugs.

Keeping this in mind and to give scientific validity of its therapeutic value as a good wound healing formulation, an attempt has been made in this study to formulate and Evaluate the new Polyherbal formulations having excellent wound healing property.