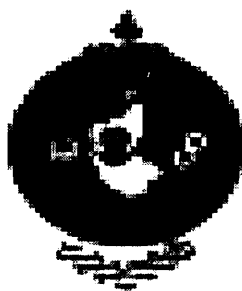


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**A PROJECT REPORT ON “COMPARATIVE WOUND HEALING
POTENCY OF *CAPPARIS DECIDUA*, *CAPPARIS SPINOSA* AND
CAPPARIS ZEYLANICA”**

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COMPARATIVE WOUND HEALING POTENCY OF *CAPPARIS DECIDUA*, *CAPPARIS SPINOSA* AND *CAPPARIS ZEYLANICA*

SYNOPSIS

Capparis is one of the important genus of the family Capparaceae, the genus is known for many medicinal property. Leaves of *C. decidua* are used as plaster for boils and swellings, to relieve tooth ache, as antidote to poison, stem bark as laxative, anthelmintic, in treating cough, asthma and inflammation, fruits in cardiac troubles, root and root bark in fever and rheumatism (Chopra, et al., 1956), fruits are also known as appetizer, stem bark is also used in the treatment of cardiac diseases, whole plant is used in debility, joint pains, pyorrhoea, rheumatism, skin disorders (Keshava Murthy, 1994), fruits and shoots are reported for hypolipidaemic (Purohit and Vyas, 2005), antistress and antidiabetic (Yadav, et al., 1997), anti-inflammatory activity (Ageel, et al., 1986). Leaves of *C. spinosa* is used as poultice in gout, in nervous disorders, stem bark is used in treating paralysis, rheumatism, tooth ache and tuberculosis (Keshava Murthy, 1994), root bark as tonic, diuretic, expectorant, anthelmintic, analgesic, in rheumatism, paralysis, enlarged spleen and tubercular glands (Chopra, et al., 1956), antihepatitis (Gadgoli and Mishra, 1999), anti-inflammatory (Al-said, et al., 1988), antifungal (Ali-shtayeh and Abu Ghdeib, 1999), antidiabetic (Yaniv, et al., 1987), in treating chondrocytes (Panico, et al., 2005), as hypolipidaemic (Eddouks, et al., 2005), as antiallergic and antihistaminic (Trombetta, et al., 2005), as antioxidant (Bonina, et al., 2002; Germano, et al., 2002). The plant contains glucoside (Callis, et al., 2002), triglucoside (Sharaf, et al., 2000), rutin, pentosans, rutic acid, pectic acid and saponin (Chopra, et al., 1956), glucosinolates, fatty acid, sterol and tocopherol (Matthaus and Ozcan, 2005). Leaves of *C. zeylanica* is used in treating cholera, fruits in treating blisters and boils, roots in treating coryza, elephantiasis, hemiplegia, neuralgia, oedema, piles, pneumonia, rheumatism, snakebite, ulcer and vomiting (Keshava Murthy, 1994), as sedative, in treating cholera and stomachic, the plant contains an alkaloid, phytosterols, water soluble acids (Chopra, et al., 1956) and E-octadec-7-en-5-ynoic acid (Haque, et al., 2004). The tribal groups of Davanagere district, Karnataka state, India use leaves of above mentioned plants in healing septic wound (Fresh leaves were ground with lime juice and mixed with one teaspoon full of honey, a thick paste so obtained is applied to septic wounds) (Manjunatha, 2002).

Critical review of the literature revealed that the wound healing potency of these plants has not been subjected to clinical evaluation. In the present we are aiming at the study of wound healing property of these medicinal plants with the following objectives

Excision, incision and dead space wound models were employed to assess the wound healing promoting activity of leaves of *Capparis decidua*, *Capparis spinosa* and *Capparis zeylanica*. For topical application 5% w/w ointment gel of ethanol extracts was prepared in 2% sodium alginate and for oral administration suspensions containing 50 mg/ml of each of the extract in 1% gum tragacanth were prepared. The parameters studied includes the rate of wound contraction, period of epithelialisation, skin breaking strength, granulation tissue breaking strength, dry granulation tissue weight, hydroxyproline estimation and histopathology of granulation tissue. Among the three species studied, *C. decidua* showed maximum activity followed by *C. spinosa* and *C. zeylanica*. However when compared with the control all the three plant extracts were found to possess significant wound healing promoting activity. The results were comparable with the standard drug framycetin sulphate cream.

Keywords: Wound healing, Ethanol leaf extract, *Capparis*, Excision, Incision, Deadspace,