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## Synergistic effect of honey and propolis on cutaneous wound healing in rats

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Accelerating wound healing is now considered as a principle clinical treatment and increasing the quality and speed of healing which has always been emphasized by the scientists. Propolis and honey are natural bee products with wide range of biological and medicinal properties. This study was aimed to determine the synergistic effect of honey and propolis in wound healing of rat skin. 75 Wistar rats weighing 200-250 gr were placed under general anesthesia and sterile conditions. Then a square shape wound with 1.5×1.5 mm dimension was made on the back of the neck. Animals were randomly divided into control, honey, propolis, combined honey propolis and phenytoin 1% groups, respectively. Rats were randomly divided into the following groups: 4th, 7th and, 14th days of treatment in each period of study. Wound area in the experimental group were covered once daily with a fixed amount of thyme honey, propolis, propolis and honey and phenytoin cream (1%), control group did not receive any treatment. For histological studies, during the fourth, seventh and fourteenth day's rats were sacrificed and samples were taken from the wound and adjacent skin. After histological staining fibroblast, neutrophils, macrophages and vascular sections were counted in wound bed. The macroscopic and microscopic evaluations showed that the percentage of wound healing on different days in the experimental and control groups were significant ( $p < 0.05$ ). The macroscopic and microscopic evaluation showed that the percentage of wound healing on different days in combined propolis and honey experimental group was significantly different with the control group (Multivariate ANOVA test) ( $p < 0.05$ ). Combined application of propolis and honey on the open wound healing in rats has a synergistic effect.

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## A comparative pharmacognostic study of two anti-diabetic herbal drugs: *Gymnema sylvestre* and *Costus igneus*

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Diabetes mellitus is interminable metabolic issue that influence human body as far as physical, mental and social wellbeing. It is characterized as a gathering of clutters lipids, starches and proteins. It is turning into the third "executioner" of the soundness of humanity alongside malignancy, cardiovascular and cerebrovascular ailments. As we travel through life, the extent of each of the three doshas continually varies as indicated by your surroundings, our eating regimen, the seasons, the atmosphere, our age and numerous different elements. As they move into and out of parity, the doshas can influence your wellbeing, vitality level, and general temperament. *Gymnema sylvestre* is a woody, climbing plant of tropical backwoods of focal and southern India and in parts of Africa. *Costus igneus* normally known as blazing Costus, Step stepping stool or Spiral banner or Insulin plant, is local to South and Central America. Both the arrangement is utilized as a part of to diabetes. This research separate both the anti-diabetic plant by their pharmacognostic mean. Both the plants were studied for Morphological, Microscopically evaluation for leaf and stem part showed their inner cellular structure differed from each other. Physical evaluation includes ash value, extractive value, pH, Moisture content showed the quality of both the drug were up to the standard. Preliminary phytochemical examination through the chemical tests explains about the chemical nature of the plants and also explains the correlation between the chemical moiety and their pharmacological activity. TLC and HPTLC showed the quality and the quantity of the active compounds which are actively involved into the activity. Oxidation is also one of the causes for the diabetes. Antioxidant activity of both the plants was studied through the in-vitro models; DPPH model, Ferric reducing model and  $H_2O_2$  which showed the good oxygen scavenging activity of both plants said *Gymnema sylvestre* and *Costus igneus*.

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