Evaluation of *Parkia pendula* Seed Lectin to Treat Mice Cutaneous Wounds

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An immunocompromised animal has difficulty to recover after any injury. *Parkia pendula* seed lectin, PpeL, was used to treat cutaneous wounds of normal and immunocompromised mice, with minor collateral effect and cicatrization potential. Methotrexate (0.8 mg/kg/week) was the immunosuppressive drug. Wounds were produced in the dorsal region (1 cm^2) of female albino Swiss mice (*Mus musculus*), health and immunocompromised. Wounds were daily topically treated with 100 µl of the following solutions: Group (1) 0.15 M NaCl; Group (2) 0.15 M NaCl Immunocompromised; Group (3) PpeL (100 µg/mL); Group (4) Immunocompromised PpeL (100 µg/mL). Clinical evaluation during 12 days included the parameters edema, hiperemy, scab, granulation and cicatricial tissues as well as contraction of wounds. Microbiological examinations were carried out in the 2nd, 7th and 12th days. The presence of edema and hiperemy was observed in all groups during inflammatory period. The first crust was observed from the 2nd day, only in PpeL treated groups. Microbiological analysis of wounds revealed *Staphylococcus sp* growth. Day 0 and 2nd day did not reveal the bacterium in group 3, however it was detected in other groups every day. The lectin markedly reduced area of lesion, inducing a total closing on groups 3 and 4 in 11th day of evolution. Control groups had wounds closed in 12th day. The results suggest that PpeL is a biomaterial with potential use to treat cutaneous wounds.

Keywords: Lectin, *Parkia pendula*, cutaneous wound, immunocompromised mice.

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