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Wound-healing activity of two Brazilian species

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Wound healing after damage to the skin involves a complex interplay between many cellular players of the skin. The search for new treatments or drugs that could improve healing in diabetic patients continues to be a goal in medicine. Copaiba oil constitutes one of the most important renewable sources of natural remedy for populations of the Amazon region. Nowadays, copaiba oil can be found in drugstores and markets all over Brazil. *Tibouchina granulosa* (“quaresmeira”) is an ornamental plant used for treatment of inflammatory conditions. Our objectives were to evaluate the wound healing effects of oil resin (OR) of *Copaifera paupera* and lyophilized infusion of *T. granulosa* (ITG) in diabetic mice. Diabetes was induced by intravenous injection of alloxan. Excision wounds (10 mm diameter) were done in anesthetized mice. During 14 consecutive days mice were locally treated with ITG or OR (100, 150 or 200 mg/kg) or collagenase (100 U/kg). Photos were obtained from each lesion and areas were calculated by imageJ at days 0, 3, 7, 10 and 14. Tissue samples around the wound were collected for histological procedures (days 7 and 14) or cytokine measurements (3, 7, 10). Results indicated that OR and ITG retracts the wounds in a dose-dependent manner with almost totally retraction at 7th day. Histological images demonstrated that all treated-groups have a better resolution than positive-control group and cytokines levels were higher than collagenase-group. Our data comprobante the healing effect of copaiba oil resin and *T. granulosa* infusion offering new options for treatment of wounds in diabetic patients.

Biography

Patricia Dias Fernandes has completed her PhD at Institute of Medical Biochemistry from Federal University of Rio de Janeiro. She is the titular Professor of Pharmacology and Head of the graduate program in Pharmacology and Medicinal Chemistry from Institute of Biomedical Sciences in UFRJ. She has published more than 70 papers in reputed journals and has been serving as an Editorial Board Member of *Brazilian Journal of Pharmacognosy*.

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