of croton oil in mice. Then, a polaxamer-based gel containing J. gossypiifolia extract was developed, physicochemically characterized and evaluated in the same model of inflammation to assess whether the extract incorporation in gel would affect its anti-inflammatory potential. The best formulation was then assayed in ear edema induced by multiple applications of croton oil in mice, to evaluate its chronic anti-inflammatory potential. Inflammatory parameters evaluated included edema, nitrite concentration, mieloperoxidase (MPO) activity and oxidative damage in lipids and proteins. Finally, dermal irritation/corrosion test in mice was performed to access the safeness of the developed gel. Phytochemical characterization of J. gossypiifolia extract was performed by high performance liquid chromatography with diode array detector (HPLC-DAD) analysis. RESULTS: J. gossypiifolia showed significant acute anti-inflammatory activity in ear edema model, and this activity was significantly increased when equivalent amounts of extract was applied incorporated in the developed polaxamer gels. The gels containing different amounts of extract reduced significantly the levels of edema, nitrite and MPO enzyme in mice ears, with intensity similar to the anti-inflammatory standard drug dexamethasone. The gel containing 1.0% of extract was further evaluated and also showed significant anti-inflammatory activity in chronic inflammation test, reducing significantly ear edema, lipid peroxidation and depletion of reduced glutathione, similarly to dexamethasone. Placebo formulation as well as gel containing extract showed pH compatible to that of human skin and exhibited absence of signs of toxicity in mice, indicating the safeness of the developed product for topical use. HPLC analysis confirmed the presence of C-glycosylflavonoids (orientin, isoorientin, vitexin, and isovitexin) as the major compounds of J. gossypiifolia aqueous leaf extract. CONCLUSIONS: The results demonstrate the potentiality of J. gossypiifolia gel as a promising safe and effective topical anti-inflammatory agent for treatment of cutaneous inflammatory diseases.

Xu, F. F. et al. (2018). "Applying risk management to analytical methods for the desorbing process of ginkgo diterpene lactone meglumine injection." *Chin J Nat Med* 16(5):366–374.

Analysis errors can occur in the desorbing process of ginkgo diterpene lactone meglumine injection (GDMI) by a conventional analysis method, due to several factors, such as easily crystallized samples, solvent volatility, time-consuming sample pre-processing, fixed method, and offline analysis. Based on risk management, near-infrared (NIR) and mid-infrared (MIR) spectroscopy techniques were introduced to solve the above problems with the advantage of timely analysis and non-destructive nature towards samples. The objective of the present study was to identify the feasibility of using NIR or MIR spectroscopy techniques to increase the analysis accuracy of samples from the desorbing process of GDMI. Quantitative models of NIR and MIR were established based on partial least square method and the performances were calculated. Compared to NIR model, MIR model showed greater accuracy and applicability for the analysis of the GDMI desorbing solutions. The relative errors of the concentrations of Ginkgolide A (GA) and Ginkgolide B (GB) were 2.40% and 2.89%, respectively, which were less than 5.00%. The research demonstrated the potential of the MIR spectroscopy technique for the rapid and non-destructive quantitative analysis of the concentrations of GA and GB.