Cesca, T. G. et al. (2012). "Antinociceptive, anti-inflammatory and wound healing features in animal models treated with a semisolid herbal medicine based on Aleurites moluccana L. Willd. Euforbiaceae standardized leaf extract: semisolid herbal." *J Ethnopharmacol* 143(1):355–362.

ETHNOPHARMACOLOGICAL RELEVANCE: *Aleurites moluccana* L. (Willd) Euforbiaceae is a native tree of Indonesia and India that has become acclimatized and well-adapted to the South and Southwest of Brazil. It is commonly used in traditional medicine to treat pain, fever, inflammation, asthma, hepatitis, headache, gastric ulcer, cuts, skin sores and other ailments. The oral antinociceptive effects of standardized 70:30 (v/v) ethanol:water spray dried extract of A. moluccana leaf, as well as its flavonoids 2″-*O*-rhamnosylswertisin (I) and swertisin (II), have previously been reported. AIM: The aim of this study was to develop a stable and effective semisolid herbal medicine for topical use in the treatment of pain, inflammation and wound healing, containing 0.5% and 1.0% of standardized dried extract of A. moluccana. MATERIALS AND METHODS: The chemical markers I and II were assayed by HPLC-UV analysis after extraction by matrix solid dispersion phase (MSDP) followed analytical validation as ICH Guidelines. The semisolid preparations of Hostacerin CG® vehicle containing 0.5 and 1.0% of dried extract of A. moluccana were submitted to stability studies (180 day of accelerated and long-term studies). The phytomedicine semisolid was analyzed in croton oil-induced ear oedema model in mice, in the healing process, using the excisional wound model in rats, and to prevent mechanical sensitization following plantar incision in rats in the postoperative model of pain. RESULTS: The MSDP method showed average recovery of 101.6 and 105.7% for I and II, respectively, with good precision (RSD < 2.0%) and selectivity, without interference of the excipients. The formulations were approved in the stability studies, maintaining conformity after 180 day of accelerated and long-term studies, with variation <10% in the analytical parameters. The phytomedicine reduced the ear edema in 37.6% ± 5.7% and 64.8% ± 6.2%, for 0.5 and 1.0% of dried extract, respectively. The formulation also accelerated the healing process by up to 50.8% ± 4.1% and 46.0% ± 4.0% at 0.5% and 1.0% of extract, respectively, and both amounts were capable of preventing the development of mechanical sensitization following plantar incision in rats. CONCLUSIONS: The MSDP followed by HPLC-UV analytical method was appropriate for the quality control of the topical phytomedicine based on A. moluccana. The formulation developed at 0.5% and 1.0% of A. moluccana dried extract proved to be effective as an analgesic, anti-inflammatory and wound healing in the pre-clinical studies, which is in agreement with the ethnopharmacological data.

Chouhan, N. et al. (2015). "Self emulsifying drug delivery system (SEDDS) for phytoconstituents: A review." *Curr Drug Deliv* 12(2):244–253.

The self-emulsifying drug delivery system (SEDDS) is considered to be the novel technique for the delivery of lipophilic plant actives. The self-emulsifying (SE) formulation significantly enhance the solubility and bioavailability of poorly aqueous soluble phytoconstituents. The self-emulsifying drug delivery system (SEDDS) can be developed for such plant actives to enhance the oral bioavailability using different excipients (lipid, surfactant, co solvent etc.) and their concentration is selected on the basis of pre formulation studies like phase equilibrium studies, solvent capacity of oil for drug and mutual miscibility of excipients. The present review focuses mainly on