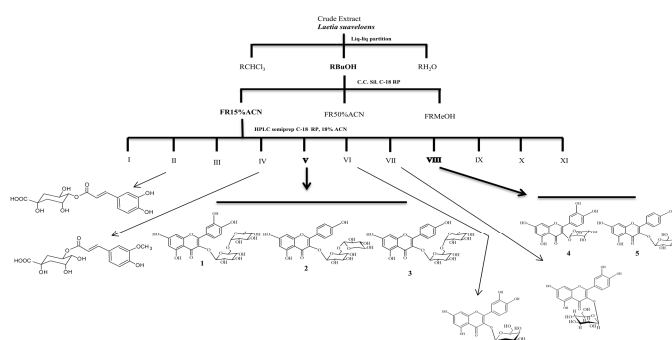


CASINGA CHEIROSA INFLUENCE OVER BEHAVIORAL PHENOTYPE AND ISOLATED FLAVONOIDS

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Abstract: *Casinga-cheirosa*, or *Laetia suaveolens* (Poepp.) Benth., is a Salicaceae family member native to Brazil. Its organic crude extract (EB719 (CGen/MMA#12A/2008; MMA/ICMBio/SISBIO#14895) showed cytotoxicity against prostate cancer cell line [1] and squamous cell carcinoma [2], as well as the first signs of its influence over behavior have been assessed [3]. **Purpose of study:** the present study aims the isolation of major compounds from EB719 and the assessment of complementary information related to its influence over behavioral phenotype. **Methods:** EB719 was obtained from the leaves and stem of *casinga-cheirosa* by maceration with CH₂Cl₂ and MeOH (1:1). These techniques were used in the isolation of chemicals: Liquid-liquid partition (LLP), analytical liquid chromatography-diode array dispositive (LC-DAD) and semi-preparative liquid chromatography coupled with ultraviolet spectrophotometer (LC-UV) analysis, as is described elsewhere [3]; nuclear magnetic resonance and liquid chromatography-mass spectrometry (LC-MS) were used in the identification of flavonoids in mixture. EB719 was evaluated over behavioral phenotype, after intraperitoneal administration, using open field and elevated-plus maze apparatuses in a two-stage experiment, so as to access 10 different behavioral parameters related to locomotion, emotionality and anxiety. **Results:** Rutin (1), leucoside (2), nicotiflorin (3), guaijaverin (4) and astragalin (5) were isolated from EB719, together with some chlorogenic acids which isolation were reported elsewhere [3]. In the first stage of experiment, the I.P. administration of EB719 led to a significant dose-dependent impairment between 30 and 120 min of analysis. A significant diminish in defecation, which is related to emotionality could also be seen. Also, no alterations in elevated-plus maze apparatus were not observed and were not performed in the next stage. In the second stage, the previously-determined non-lethal dose of 156.3 mg/mL was I.P. administered, and impairment of locomotion, rearing frequency, and improvement of immobility time. Smooth intestine hemorrhage was also observed after necropsis. **Conclusions:** Phenolic compounds are being reported to occur in *L. suaveolens* for the first time; EB719 influenced behavior phenotype by impairment of locomotion, rearing frequency and defecation, and by improvement of immobility time.



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[2] Ozi, J.M., Suffredini, I.B., Paciencia, M.L.B., Frana, S.F., Dib, L.L., 2011. *In vitro* cytotoxic effects of Brazilian plant extracts on squamous cell carcinoma of the oral cavity. *Braz. Oral Res.* 25: 519-525.

[3] Estork, D.M., Gusmão, D.F., Paciencia, M.L.B., Díaz, I.E.C., Varella, A.D., Younes, R.N., Reis, L.F.L., Montero, E.F.S., Bernardi, M.M., Suffredini, I.B., 2014. First chemical and toxicological evaluation of *Casinga-cheirosa* in Balb-c male mice. *Molecules*. 19: 3973-87.