Chemical characterization, antioxidant properties, and antimicrobial activity against intestinal pathogenic bacteria of *Achyrocline satureioides* extracts

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*Achyrocline satureioides* (Asteraceae) or “Marcela” is a native plant from Latin American countries and despite its wide use in traditional medicine, chemical and biological properties supporting its phytotherapeutic usage are still poorly characterized. Here, we show the chemical profile, antioxidant potential *in vitro*, and antimicrobial activity of Marcela against intestinal pathogenic bacteria (Gram-positive and Gram-negative), when tested in three different presentations (freeze-dried hydroalcoholic, spray-dried hydroalcoholic, and aqueous extracts). Chemical characterization was performed according to standard analytical methods (AOAC International) and metals determination by using high-resolution continuum source graphite furnace atomic absorption spectrometry. Flavonoid composition was elucidated by high-performance liquid chromatography. *In vitro* antioxidant activity was assessed by the total reactive antioxidant potential (TRAP) and total antioxidant reactivity index (TAR). Antimicrobial activity was evaluated by disc diffusion assays and MIC (minimum inhibitory concentration) determination. Our analyses showed that moisture content of the extracts ranged from 10 to 15% with concentrations from 2.5 to 17 mg kg⁻¹ of fluorine in the extracts. In addition, Marcela exhibited antioxidant activity, especially in its freeze-dried hydroalcoholic form, at concentrations of 34 μg/mL. Freeze-dried hydroalcoholic herbal extracts exhibited a wide spectrum of antimicrobial activity (100 to 200 mg/mL) against intestinal pathogenic bacteria. Of note, antibacterial effects were greater than those exerted by amoxicillin (antibiotic used as positive control) when tested against *Bacillus cereus* and *Staphylococcus aureus*. Both antioxidant and antimicrobial activities of Marcela seem to be positively correlated with the amount of flavonoids quantified for each form of extract. In conclusion, our results show evidence for antioxidant and antimicrobial activities of Marcela against intestinal pathogens and invite for further research about its potential use as co-adjuvant therapeutic agent for bacterial-derived intestinal diseases that may present high rates of antibiotic resistance. **Acknowledgements:** This study was supported by CAPES. **Key Words:** phytomedicine, flavonoids, antibiotics.