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LC/HRMS ANALYSIS AND ANTIBACTERIAL ACTIVITY FROM EXTRACTS OF *Baccharis punctulata* (Asteraceae)

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Baccharis punctulata DC., popularly known as "Chilka saru saru", is used by rural communities in Bolivia for treatment of luxations, contusions and asthma. This species is widely distributed in South America, particularly in Brazil, in the Southeast and the South, Cerrado, Atlantic Forest and Pampa biome. Aerial parts of *B. punctulata* were collected in Itapejara D'Oeste Town, Paraná, Brazil in February 2024. Leaves were separated and dried for 3 hours in a recirculating oven under controlled temperature and subjected to hydrodistillation for 2.5 h. The essential oil was collected and stored under refrigeration. The aqueous extract obtained was then filtered and partitioned by clorofórmio, ethyl acetate at pH 8 and ethyl acetate at pH 4 (EBP). Chemical composition of extract EBP was evaluated using Liquid chromatography coupled to high-resolution mass spectrometry (LC/ESI/HRMS) and results revealed that EBP extract contain mainly phenolic acids such as caffeoylquinic acids, feruloylquinic acids, caffeoylshikimic acid and its derivatives. Were also observed as minorities classes of secondary metabolites flavonoids, coumarins and iridoids. The antibacterial activity of EBP was evaluated using the broth microdilution assay, standardized by the Institute for Clinical and Laboratory Standards. The microorganisms used in the study were *Staphylococcus aureus* N315 (MRSA), *Staphylococcus aureus* BEC9393 (MRSA), *Bacillus subtilis* INCQS 00002, *Escherichia coli* ATCC 25922 *e Salmonella entérica* ATCC13076. EBP extract was solubilized in DMSO and then diluted in an appropriate culture medium, added to a microplate at a maximum concentration of 5000 µg/mL, followed by serial dilutions to approximately 70 µg/mL. EBP showed more significant antibacterial activity with a minimum inhibitory concentration (MIC) of 1250 µg/mL against *B. subtilis* INCQS 00002, 2500 µg/mL against *S. aureus* BEC9393 (MRSA), and 5000 µg/mL against *S. aureus* N315 (MRSA). In conclusion, the data presented in this study showed, for the first time in the literature, the antibacterial activity from leaf extracts of *Baccharis punctulata* (Asteraceae) collected in Brazil.

Keywords: *Baccharis punctulata*, LS/MS, phenolic compounds, extracts