



EXPLORING THE ANTIOXIDANT AND PHENOLIC PROFILE OF *CISSUS GONGYLODES*: PERSPECTIVES FOR BIOACTIVE COMPOUNDS

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Cissus gongylodes (Baker) Planch is a liana belonging to the Vitaceae family, popularly known as "cipó-de-uvas", "uvas-do-mato", and "cura tudo". Its tea is traditionally used in treating renal diseases, such as kidney stones and pyelonephritis, in addition to being employed for its analgesic properties¹. Intending to identify new biological activities of *Cissus gongylodes* with therapeutic potential, this study evaluated the antioxidant activity of its stems and leaves, followed by quantification of phenolic compounds in each aerial part. Leaves and stems were extracted separately by decoction. 10 g of powdered material in 200 mL of water, yielding the aqueous extracts (CGGA and CGFA). The residual material of each infusion was then subjected to 80% hydroalcoholic extraction, yielding the ethanolic extracts (CGGE and CGFE). The antioxidant activity of the extracts was assessed by the DPPH• radical scavenging method (2,2-diphenyl-1-(2,4,6-trinitrophenyl)hydrazin-1-yl), with the highest activity determined for the leaf extracts. The ethanolic extract (CGFE) showed the most significant inhibitory potential ($IC_{50} = 2.79 \pm 0.92$ mg/mL), followed by the aqueous extract (CGFA, $IC_{50} = 3.42 \pm 1.19$ mg/mL). The stem extracts exhibited lower antioxidant activity, with the aqueous extract (CGGA) showing the weakest inhibitory potential, requiring higher concentrations to achieve radical inhibition ($IC_{50} = 9.52 \pm 0.82$ mg/mL). Extracts were further subjected to phenolic quantification using the Folin-Ciocalteu method. The ethanolic leaf extract (CGFE) presented the highest phenolic content, expressed as gallic acid equivalents (78.53 ± 0.81 mg GAE/g of sample), and the aqueous stem extract (CGGA) showed the lowest phenolic concentration (16.21 ± 0.70 mg GAE/g of sample). These results are consistent with its antioxidant activity, since phenolic compounds are widely reported in the literature as potent antioxidants². Based on these findings, further studies will focus on the metabolic profiling of the extracts by NMR and LC-MS to advance the understanding of this species.

Keywords: *Cissus gongylodes*, antioxidant activity, phenolic quantification.

References:

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