

ESP-027: Phytochemical analysis and in vitro evaluation of antioxidant, cytotoxic, and thrombolytic activities of *Ampelocissus barbata* (Wall.) leaves.

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Objectives: To investigate the antioxidant, cytotoxic, thrombolytic, and phytochemical properties of the methanolic extracts of *Ampelocissus barbata* (Wall.) leaves for the exploration of potential components that effectively counteract the oxidative stress in living organisms.

Methods: The antioxidant activity of the extract was measured *in vitro* using the DPPH radical scavenging assay, reducing power capacity and total phenolic content. The thrombolytic activity was determined through clot disintegration and qualitative examination of potential phytochemical activities. GraphPad Prism and Microsoft Excel were used for the statistical analysis.

Results: *A. barbata* contained significant amounts of polyphenols, reflected in the value of gallic acid equivalent to 277.397±0.419 mg/ml as well as appreciable quantities of phytochemicals such as alkaloids, flavonoids, tannins, and glycosides. The extract was found to possess potent DPPH radical scavenging action with an IC₅₀ value of 107.47±1.46 µg/ml, while the reducing power experiment demonstrated a substantial connection between the standard ascorbic acid (AA) & the plant extracts at p<0.05; where the highest absorbance values were 3.025±0.15 and 1.826±0.006 for the AA and the extracts, respectively. There was an increment in the activity with extract concentration in both cases.

Here, the percentage (%) of clot lysis for the thrombolytic activity of water (negative control), extract, and standard Streptokinase was found to be 7.031±0.697, 35.297±1.307, and 75.083±0.599, respectively.

Conclusion: The assessment of *Ampelocissus barbata* for *in vitro* antioxidant and thrombolytic activities revealed promising attributes with significant phytoconstituents, demanding further research to isolate and assess the active components.

Keywords: *Ampelocissus barbata*, Antioxidant, Thrombolytic, Phytochemical Assay