LEAF EXTRACT OF MAQUI (*Aristotelia chilensis* (Mol.) Stunz) AS INHIBITOR OF ANGIOTENSIN CONVERTING ENZYME

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Maqui, a native plant from southern Chile, has been used in Chilean folk medicine as an anti-inflammatory and antipyretic agent. Its use has also been considered helpful for cardiac disorders. Hypertension is considered the primary cause of death in the world. One of the mechanisms that regulates blood pressure is the renin-angiotensin-aldosterone system, mainly through the action of angiotensin converting enzyme (ACE) that causes the breakdown of the decapptide angiotensin I to onctapeptide called angiotensin II. There are several commercially available ACE inhibitors (IACE), such as Captopril. However, these synthetic inhibitors have side effects. Several studies have recently shown that some foods have a therapeutic effect on hypertension because of their ACE inhibition. The aim of this study was to evaluate the *in vitro* inhibitory effect of maqui leaf extracts on ACE. First, the concentrations, temperature, and reaction time to the conversion of the Hip-His-Leu substrate to hippuric acid (reaction product) were established using the ACE. Then, the inhibitory effect of maqui leaf extracts on the ACE was evaluated by quantifying the concentration of hippuric acid produced by HPLC-DAD. As results, maqui leaf extract required 1228 mg/L to inhibit 50% of the ACE. Captopril requires 670 mg/L to inhibit the enzyme entirely. As a preliminary result, maqui leaf extract has the ability to inhibit ACE but is not as effective as Captopril. However, adverse effects in patients caused by synthetic inhibitors encourage the use of therapeutic alternatives in the treatment of hypertension.

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