Study of chemical composition and antioxidant activity of *Aristolochia anguicida* and *Hyptis colombiana* essential oils collected in Santander (Colombia)

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Keywords: *Aristolochia anguicida, Hyptis colombiana*, essential oil, GC-MS.

Aristolochia anguicida is an herbaceous species of the Aristolochiaceae family. It is an herbaceous liana, with triangular leaves, solitary flowers, axillary, purple, green and yellow. It is used in the traditional medicine as an antidote to snake venom (1). *Hyptis colombiana* belongs to the Lamiaceae family. The plants of *Hyptis* genus are from South America and comprise about 400 species (2). Plants were collected in the municipalities of Los Santos and Zapatoca, Santander, Colombia. These were identified at the National Herbarium of Colombia, with voucher numbers COL558352 and COL578972. The essential oils (EO) were obtained by microwave-assisted hydrodistillation (MWHD). Characterization of the essential oils constituents was performed on an Agilent Technologies 6890 gas chromatograph coupled to an Agilent Technologies 5973 Plus Network mass selective detector (EI, 70 eV). Polar (DB-WAX, 60m X 0.25mm X 0.25µm, with stationary phase of polyethyleneglycol) and nonpolar (DB-5MS, 60m X 0.25mm X 0.25µm, with stationary phase of 5% phenyl methylsiloxane) capillary columns were employed. Oven temperature was programmed from 45 to 150 °C at 4 °C min^{-1}, maintained for 7 min, then 150 to 230 °C at 4 °C min^{-1} and held for 40 min. The ORAC method was performed in a Turner Biosystems multiplate reader. Several dilutions per sample were tested to establish the time required to quench the fluorescence to 5 % of its initial value. Compounds identification was based on their mass spectra and retention indices. The major components found in *A. anguicida* oil were *trans*-β-caryophyllene (27 %), α-ylangene (10 %) and caryophyllene oxide (8 %). The major components for *H. colombiana* oil were *trans*-β-caryophyllene (34 %), germacrene D (22 %) and caryophyllene oxide (14 %). The antioxidant activity values by the ORAC method for essential oils were higher than those of reference substances, α-tocopherol and BHT. The main compound in those essential oils was β-caryophyllene, a sesquiterpene widely distributed in essential oils of various plants. Several biological activities are attributed to β-caryophyllene, such as anti-inflammatory, antibiotic, antioxidant, anticarcinogenic and local anaesthetic activities.

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Acknowledgements: Colciencias - Patrimonio Autónomo Fondo Nacional de Financiamiento para la Ciencia, la Tecnología y la Innovación, Francisco José de Caldas, Contract RC-0572-2012. Contract No. 101 for access to genetic resources and derivatives for scientific research with bioprospecting aims, between Ministerio del Medio Ambiente y Desarrollo Sostenible and Unión Temporal Bio-Red-CO-CENIVAM.

ISBN: 978-85-66836-11-0