

Phytochemical and pharmacological study of *Plectranthus ecklonii* Benth.

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Abstract

The use of herbal products for the treatment, prevention and cure of diseases is one of the oldest human medicinal practices. In fact, the majority of the population in developing countries depend on ancestral plant knowledge for healthcare. However, there is still a gap between progress observed in clinical pharmacy and in the field of herbal and traditional medicine, remaining many natural products with biological activity to be identified.

Plectranthus species (*Lamiaceae* family) have a widespread ethnobotanical use and are often cited by its medicinal properties and application, particularly in folk medicine. They contain many antioxidant compounds and exhibit several effects (anti-inflammatory, antimicrobial and antifungal) which suggest that *Plectranthus* may be a promising genus for the discovery of medicinal compounds.

Thus, the isolation of secondary metabolite compounds from the *Plectranthus* spp. is important to validate scientifically the popular uses of these plants and to find new sources of potentially economically important products or compounds, which can be transformed into active pharmaceutical ingredients. Besides, the cytotoxicity evaluation of the plant extracts and their active ingredients are required for their effective and safe therapeutic use.

This work enumerates the compounds isolated to date from *Plectranthus ecklonii* Benth., extracts and their biological activities. The HPLC analysis presented is part of an ongoing project at CBIOS of identification, quantification and evaluation of the bioactive components (in particular, diterpenes and hydrocinnamic acids) in different species of *Plectranthus*.

Keywords: *Plectranthus*; *Plectranthus ecklonii*; diterpenes; abietanes; parviflorons; bioactivity; antioxidant; antimicrobial; anti-inflammatory; anti-tumoral.

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