



BIOACTIVITIES OF PORTUGUESE PROPOLIS

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ABSTRACT

Natural products have been traditionally used in the treatment of several diseases because they are the source of many biologically active compounds, which can bear several therapeutic actions and/or constitute models for the synthesis of new drugs.

Propolis or bee glue, one of the few natural remedies that has maintained its popularity over a long period of time, has been the focus of intense research during the last decades. Propolis is a sticky resin containing a complex mixture of substances that honeybees (*Apis mellifera* L.) collect from plants, further digest with salivary enzymes and mix with beeswax. The final product is used by bees to seal hive walls, fill eventual cracks, strengthen the combs borders, embalm dead invaders and protect the hive against microbial infections. In spite of the differences found in the chemical profiles of propolis from different world origins, which are due to botanical and climate diversity, several propolis samples have shown to possess important biological and pharmacological properties such as antimicrobial, antioxidant, anti-hepatotoxic, antitumoral, anti-inflammatory, anti-HIV-1, anti-neurodegenerative, and anti-tuberculosis, among others. Due to this vast range of properties, propolis can be an alternative, economic and safe source of natural bioactive compounds and, not surprisingly, it started to be marketed in the cosmetic and pharmaceutical industries as well as in healthy-food stores.



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Portuguese propolis has recently been the focus of some research, mainly regarding its chemical composition and antioxidant properties. In this work, we used Portuguese propolis samples of different origins to prepare ethanol extracts which were further fractionated with chloroform and hexane. The obtained fractions were analyzed in terms of total phenols and flavonoid contents and further screened for several biological properties. The results so far obtained show that Portuguese propolis has several biological activities of interest, namely antioxidant, antimicrobial and antitumor, and suggest that it can be a natural source of bioactive compounds that can be possibly used or explored in the prevention/ treatment of several diseases.

Keywords: Portuguese, propolis, biological properties.

Indicar a área temática: Produtos da Colmeia

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