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Diploma thesis

Propolis and its effects as a supplement

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Abstract in English

Over 80% of patients worldwide are identified as relying on complementary and alternative medicinal products for at least some of their primary care, given the rapid increase in their use in recent decades. Propolis, a honeybee product rich in bioactive compounds, is one of them, as its therapeutic use dates back to ancient times and is still one of the most widely utilized natural products. Research on propolis as an alternative supplemental medicine for the possible treatment of a variety of acute and chronic disorders has increased as a result of technical breakthroughs in the pharmaceutical and medical fields, with a reported wide range of therapeutic benefits.

In addition to focusing on the main bioactive substances, including flavonoids and phenolic acids, this thesis delves further into the biological activity and therapeutic potential of propolis. Propolis exhibits considerable antibacterial, anti-inflammatory, antioxidant, and anticancer activities, as demonstrated by experimental tests. Its efficiency in combating infections, regulating inflammatory reactions, and preventing oxidative stress is demonstrated by clinical investigations and in vitro and in vivo testing. However, heterogeneity in composition due to external conditions poses a difficulty for standardization. This thesis underlines the importance of standardized extraction and formulation techniques for ensuring consistent efficacy and safety in clinical settings. Future research should look into synergistic benefits with other natural compounds as well as developing innovative delivery methods to increase propolis bioavailability