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Chapter 16

Caffeic acid phenethyl ester: A comprehensive review

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Introduction: Propolis is well established ancient herbal medicine (Wang et al., 2009). Caffeic acid phenethyl ester (CAPE), a component of propolis, is reported to possess anti-inflammatory, anti-bacterial, anti-viral, and anti-tumor activities (Tseng et al., 2014). CAPE has also been reported to inhibit the lipid peroxidation and the growth of different types of abnormal transferred cells (Turkoz et al., 2004). CAPE is a polyphenol with hydroxyl groups within the catechol ring which is responsible for its crucial role in many biological activities. The literature search showed an extensive research on the biological features of CAPE. The available studies narrate it as an effective moiety against various pathologies such as infections, oxidative stress, inflammation, cancer, diabetes, neurodegeneration, and anxiety. Thus, dietary intake of CAPE is useful for the treatment of sore throat, common cold, and wound (Murtaza et al., 2014). CAPE has many biological and pharmacological effects, including antioxidant properties and tumour cell cytotoxicity. Various investigators have demonstrated an anti-inflammatory action for CAPE both in vitro and in vivo (Abdel letif et al., 2005).

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