

Antioxydant and anticholinesterase activities of Algerian propolis

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Propolis, a natural resinous product collected by honeybees from the buds and exudates of various plant sources, has been used empirically as a traditional remedy in folk medicine for centuries. It is well known for potential health benefit and is reported to possess valuable biological activities. Recently, propolis has been extensively marketed by the pharmaceutical industries as an alternative medicine and as the health-food in various parts of the world. This study determines the antioxidant and anticholinesterase activities of various extracts of Algerian propolis. In addition, the total phenolic and flavonoid contents were also determined spectrophotometrically. Antioxidant activity was tested by using five complementary tests. The *in vitro* anticholinesterase activity was tested against acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) enzymes. The current study has shown that ethyl acetate extracts exhibited good lipid peroxidation inhibitory activity. The DPPH, ABTS, and CUPRAC assays supported this activity. The petroleum ether and chloroform extracts indicated good anticholinesterase activity. These results showed that the tested extracts obtained from propolis, can be considered as sources of food additives, as well as moderate anticholinesterase agents.

Keywords: Propolis, DPPH, ABTS, CUPRAC, AChE, BChE.