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Bioactives profiling of Australian native *Cordycep gunnii*

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Cordyceps gunnii, caterpillar fungi growing on insect larvae, has long been known as exotic medicinal fungi. Commercially available Chinese *Cordyceps* species are very expensive and known to treat cancer, asthma, TB, diabetes, erectile dysfunction and hepatitis. However, the Australian native *Cordyceps* species, especially *Cordyceps gunnii*, have not been investigated in detail. Recent investigations of biologically active metabolites of Australian native *Cordyceps gunnii* fungi have indicated their tremendous potential as a source of new medicines and nutraceuticals. LC-ESI-MS analysis of *Cordyceps gunnii* has demonstrated the presence of pharmacologically active nucleosides which are known to be responsible for the regulation and modulation of various physiological and pharmacological actions .They elevate cAMP which results in increase energy levels and protect the body from cardio and neuropathies. Fatty acid methyl ester (FAME) derivatization followed by GC MS analysis has showed that stearic acid, linoleic acid, oleic acid, ergosterol and its derivatives, lanosterol and squalene are the main components of natural *Cordyceps gunnii*. Ergosterol is a provitamin form of vitamin D_2 and squalene has superior antioxidant activity which plays a preventive role against several types of carcinogenesis. A reaction flow-post column derivatization (RF-PCD) FRAP assay has indicated the presence of strong antioxidant peaks, which will be further investigated for the characterization of bioactive compounds. Hence, current studies have demonstrated that Australian native *Cordyceps gunnii* is a promising source of nutraceuticals and pharmaceuticals.

Biography

Rashida Bashir is currently pursuing her PhD in the area of natural products and bioanalytical chemistry. She has previously completed Master's degree of Biotechnology and Bachelor's degree of Pharmaceutical Sciences.

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