

Antioxidant and Anticancer Activities of Ethanolic Extract from *Monascus purpureus*

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Abstract : Medicinal fungi are the new potential source of drugs to improve the treatment of diseases with association to oxidative agents such as cancers. *Monascus purpureus* contains functional components potentially effective in improving human health. In the present work, ethanolic extract of *Monascus purpureus* (EEM) was evaluated for health improving potential mainly focusing on antioxidant and anticancer activities. Ferric ion reducing power (FRAP), scavenging of DPPH radicals and determining viability of breast carcinoma MCF-7 and cervical carcinoma HeLa cells with MTT assay were evaluated. Our data showed a significant antioxidant activity of EEM with 142.45 µg/ml inhibition concentration of 50% DPPH radicals and 2112.33 µg eq.Fe²⁺/mg extract of FRAP assay. These results might be caused by antioxidant components such as pigments and phenolic compounds. Further, the results demonstrated that EEM caused significant reduction in the viability of MCF-7 with IC₅₀ of 7 µg/ml but not have good effect against viability of HeLa cells. Accordingly, *Monascus purpureus* is presented as a strong potential of breast cancer treatment. In further study, the mechanistic studies are needed to determine the mechanisms of anticancer activity of EEM.

Keywords : *Monascus purpureus*, antioxidant, cancer, ethanolic extract

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