Determination of Antioxidants in Food and Their Anti-Cancer Activity

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Antioxidants are necessary for good health. An antioxidant is a molecule that inhibits the oxidation of other molecules. Oxidation reaction can produce free radicals. Free radicals can start chain reaction and can damage the cell which could lead to cancer and other diseases. Antioxidants terminate these chain reactions. In this project, the antioxidant potential of various spices/herbs, beverages, and fruits/vegetables was determined by oscillating reaction. Clove, instant coffee, and pomegranate were found the most antioxidants among spices/herbs, beverages, and fruits/vegetables categories. So clove, instant coffee, and pomegranate were proceeded further to check their anticancer ability against four cancer cell lines, SK-MEL (melanoma), KB (epidermal carcinoma, oral), BT-549 (ductal carcinoma, breast), and SK-OV-3 (ovary carcinoma). These samples showed less than 50% inhibition of all four human cancer cell lines.

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