

The Cytotoxicity and Chemosensitizing Effects of native camellia(*Camellia japonica*) and nutraceutical camellia teas

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Abstract

The present study has been undertaken to characterize availability of camellia(*Camellia japonica* L.) as a medicinal plant with antineoplastic and chemosensitizing activities. The crude extracts from fresh camellia flower, young leaves and nutraceutical tea of camellia leaf and flower buds were evaluated on their potential activities against various human cancer cells and multidrug resistance to cancer cells *in vitro*. The range of cytotoxicity displayed from 120 μ g/mL to 200 μ g/mL.

Catemix 1(CT-1) mixed with camellia and green tea showed high toxicity(respectively IC₅₀=116 μ g/mL, 129 μ g/mL) against AML-2/WT, acute myelogenous leukemia cell and MCF-7, breast adenocarcinoma pleural effusion cell. Generally camellia tea mixed with green tea showed higher cytotoxicity than the other camellia teas mixed with some herbs(CH). Methanol extract of steamed camellia tea and roasted camellia tea had a chemosensitizing effect to reverse Pgp-mediated MDR. In addition, camellia flower tea of insignificant cytotoxicity, chemosensitizing effect were increased remarkably chemosensitizing effect in mixed flower tea with some herbs.