Isolation of eugenyl b-primeveroside from Camellia sasanqua and its anticancer activity in PC3 prostate cancer cells

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ABSTRACT

Most studies of tea trees have focused on their ornamental properties, there are fewer published studies on their medical values. The purpose of this study was to compare the chemical constituents and the biological potential of the water extract of leaves in eight species of Camellia including Camellia sinensis. Among eight Camellia species, Camellia sasanqua showed potent anticancer activities in prostate cancer PC3 cells. In addition to catechins, the major component, eugenyl b-primeveroside was detected in C. sasanqua. Eugenyl b-primeveroside blocked the progression of cell cycle at G1 phase by inducing p53 expression and further upregulating p21 expression. Moreover, eugenyl b-primeveroside induced apoptosis in PC3 prostate cancer cells. Our results suggest that C. sasanqua may have anticancer potential.

Keywords: apoptosis, Camellia sasanqua, eugenyl b-primeveroside, G1 arrest, prostate cancer

REFERENCES

[6] Pan MH, Chiou YS, Wang YJ, Ho CT, Lin JK. Multistage carcinogenesis process as molecular targets in cancer chemoprevention by epicat...