

Title The Functional Utility of Persimmon and Its Effects on Human Health
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Abstract

Soluble tannin, which is composed of epicatechin, epigallocatechin, epicatechin-3-gallate, and epigallocatechin-3-gallate, occurs at 1% in the ripening fruit of astringent persimmons. Tannins have been shown to function as inhibitors of cancer, heart disease and hypertension. They can even ameliorate the symptoms of a hangover. Therefore, they have garnered much attention as components of functional foods. In our study, purified kaki-tannin at 0, 1, 10, 100 µg/ml, respectively, were added to the liver cancer cell '40Li7HM' medium. After 5-days of incubation, cell growth was inhibited in line with kaki-tannin concentration. It has been reported that there are no significant differences among the blood FRAP (Ferri Reducing Antioxidant Power) values at 0, 2, 4 hours after oral intake of kaki-tannin. Thus, kaki-tannin is not assimilated in blood. Our present research thus aims to create a kaki-tannin oligomer of a size that is appropriate for assimilation in blood. The vacuum dried material of juice made from 'saijo' persimmon fruit will be disassembled by acids or other reagents to prepare the target kaki-tannin oligomer. It is intended that the sought after kaki-tannin oligomer with a specific antibody will be assimilated by blood and demonstrate activity at targeted cancer sites.