ABSTRACT

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Title of diploma thesis: The impact of selected prenylflavonoids on the effect of anticancer therapy in cancer cell lines

Prenylflavonoids 6-prenylnaringenin and 8-prenylnaringenin and flavonoid naringenin are substances with anti-proliferative properties. Prenylflavonoids are present mostly in hop and in beer. Main source of naringenin are primarily citrus fruits. In this diploma thesis the effect of compounds was tested by neutral red uptake test in cell lines SW480 and SW620. These substances were tested individually and then in combination with cytostatic agent oxaliplatin. Oxaliplatin is used in treatment of cancer disease. 6-prenylnaringenin was the most effective compound in both cell lines. Statistical evaluation of the effect was carried out by Graphpad using the method One-way ANOVA in comparison with control. Combination index was determined by software program Compusyn using the method by Chou-Talalay.