

## ***Abstract***

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Title of diploma thesis: **Effect of mebendazole on proliferation, migration and adhesion of oral carcinoma cells *in vitro***

Mebendazole is one of commonly used anthelmintics in both human and veterinary medicine. The mechanism of its action is based on microtubule synthesis inhibition. This thesis is focused on mebendazole effect on cancer cells. Especially, we studied the effect of mebendazole on proliferation, migration and adhesion of squamous-cell carcinoma (SCC) cells, very aggressive and highly invasive cancerous disease. Our experiments ran on two cancerous cell lines (DOK, PE/CA-PJ15) and on non-cancerous gingival fibroblasts. We used WST-1 method for proliferation change assessment and xCELLigence RTCA DP Analyzer for measuring the effect on migration and adhesion of SCC cells. In our experiments, mebendazole caused decrease of SCC proliferation, migration and it also had effect on adhesion, in clinically achievable concentrations.