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Evaluation of genotoxic potentials of *Teucrium chamaedrys* and *Teucrium montanum* species in cultured human peripheral blood lymphocytes

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We evaluate genotoxic potentials of *Teucrium chamaedrys* and *Teucrium montanum* the most used species in herbal medicine, on cultured peripheral lymphocytes using cytokinesis-block micronucleus assay. Cultures were treated with 125, 250, 500 and 1000 µg/ml concentrations of plants methanol extracts separately and in combination with mitomycin C (MMC). The *T. chamaedrys* did not significantly affect micronuclei frequency (MN) and nuclear division index (NDI), and the *T. montanum* affected significantly MN in the highest tested concentration ($p < 0.01$) while NDI no significantly affected in all tested concentrations. In combined treatment both plants decreased MMC-induced MN, but significantly for *T. chamaedrys* in all tested concentrations ($p < 0.001$) and for *T. montanum* only in the lowest tested ($p < 0.05$). Both plants reduced MMC-induced NDI but significantly for *T. chamaedrys* in highest tested and for *T. montanum* in all tested concentrations. Our results suggest the safe use of *Teucrium chamaedrys*, especially in the prevention of genome instability in peripheral lymphocytes, combining it with chemotherapeutic agent.

Keywords: micronucleus, nuclear division index, human lymphocytes, *Teucrium chamaedrys*, *Teucrium montanum*