

ORAL PRESENTATIONS

PREPARATION AND IN VITRO EVALUATION OF CYTOTOXIC ACTIVITY OF *Seseli condensatum* L. ROOT EXTRACT

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Herbal remedies represent a valuable source of pharmacologically active substances used to treat a wide range of diseases; approximately 30% of currently marketed drugs are derived from plant materials [1]. However, traditional galenic preparations have several disadvantages, including low stability, inconvenient dosing, and a short shelf life. Solid dosage forms offer an attractive alternative, providing improved stability, accurate dosing, and ease of administration [2]. A promising source of biologically active compounds for the development of such dosage forms is the genus *Seseli* L., which is traditionally used as an anti-inflammatory, analgesic, and wound-healing agent. The biological activity of this genus is attributed to the presence of polyphenolic compounds and coumarins [3]. Given the pharmacological potential of this genus, the development of a dry extract from the roots of *S. condensatum* represents a promising task.

A dry extract was obtained from the underground parts of *S. condensatum* by fractional maceration. The resulting dry root extract was a dark brown powder with a characteristic odour. Its yield was 9.5 g, corresponding to 17.8% of the initial sample weight.

To evaluate the biological activity of the obtained extract, its cytotoxicity was assessed against HaCaT, 1608ht, and HeLa cell lines. A nonlinear dose-dependent relationship was observed for all tested cell lines.

At concentrations of 1000 and 500 µg/mL, the dry root extract exhibited pronounced cytotoxicity against all cell lines: HaCaT viability decreased to 21.91% and 21.72%, respectively; 1608ht viability to 47.44% and 36.75%; and HeLa viability to 46.58% (comparable to the negative control level). In contrast, a stimulating effect was observed at low concentrations: for HaCaT, in the range of 125–2.01 µg/mL with a maximum of 138.13% at 16.125 µg/mL; for 1608ht, at 62.5–16.125 µg/mL (97.10–102.89%); and for HeLa, at 16.125–2.01 µg/mL.

High concentrations of the *S. condensatum* dry extract exhibited a cytotoxic effect on all tested cell lines. These findings indicate the potential of this extract as a promising source of biologically active compounds for further investigation.

References:

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3. Onder A., Nahar L., Cinar A.S., Sarker S.D. The genus *Seseli* L.: A comprehensive review on traditional uses, phytochemistry, and pharmacological properties. *J Herb Med*. 2023; 38:100625.