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ORIGINAL PAPERS

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Valorification of Grape Marc by Obtain ing Bioactive Complexes Tested Through *In Vitro* Experimental Models

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Abstract

The most complete valorisation of plant raw materials as renewable natural resources is a current study direction involving a diversification of the identified and isolated active compounds from certain sources (parts of the plant, by-products, etc.), the efficiency of extractive technologies and the definition of a spectrum of relevant biological action. Starting from a widely spread raw material, wine-making waste (TES complex), the paper highlights the anti-inflammatory effect by monitoring the release into the growth medium of pro-inflammatory cytokines (IL6 and IL8). The study was performed on normal fibroblast and normal human keratinocyte cell lines, preceded by a cytotoxicity screening on the two cell lines. Induction of the inflammatory process in the in vitro experimental model was accomplished by simultaneous stimulation with TNFalpha and PMA and determination of extracellular release of pro-inflammatory cytokines. The results confirm an anti-inflammatory effect for the TES complex by inhibiting the major mediators of inflammation, suggesting multiple pharmaceutical and cosmetic applications of these compounds.

Keywords*:* grape marc, cytotoxicity, cytokines, inflamation