



BOOK OF ABSTRACTS

**First International Conference
on Medical, Pharmaceutical and Cosmetic Chemistry,
Household and Industrial Chemistry,
Forensic and Analytical Chemistry
Belgrade, Serbia 5 May 2026**

ChemInno ²⁰²⁶
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65 YEARS OF EXCELLENCE
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on Medical, Pharmaceutical and Cosmetic Chemistry,
Household and Industrial Chemistry, Forensic and Analytical Chemistry
ChemInno 2026**

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8 plenary lectures
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Bioactivity of wine concentrates from European Merlot grape varieties in human keratinocytes

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Due to high polyphenol content, red wines and extracts derived from their by-products have demonstrated promising potential in skin care applications. Key benefits include the reduction of reactive oxygen species (ROS), which are known to contribute to skin aging [1]. In addition, polyphenols that are present in red wines have been shown to enhance wound healing in skin models [2,3].

This study investigated the antioxidative and wound healing potential of red wine concentrates derived from three Merlot wines of Serbian, North Macedonian, and Italian origin. The cytotoxicity of the concentrates was assessed in a range of concentrations (12.5, 25, 50, 100, 200, and 400 µg/mL) using MTT viability assay in human keratinocyte (HaCaT) cell line, while intracellular antioxidative activity was assessed by 2',7'-dichlorofluorescein diacetate (H2DCFDA) assay. The wound healing potential was evaluated using a cell scratch assay.

All examined concentrates showed no significant decrease in cell viability up to the concentration of 50 µg/mL after 24 h of exposure. The antioxidant potential of the concentrates at non-cytotoxic concentrations (12.5, 25, and 50 µg/mL) was further evaluated by their ability to reduce ROS levels in HaCaT cells co-incubated with 30 mM 2,2'-azobisisobutyramidinium chloride (AAPH). All concentrates significantly reduced oxidative stress at a concentration of 50 µg/mL. Furthermore, the cell scratch assay showed that all concentrates stimulate cell migration, with statistically significant wound area reduction obtained by North Macedonian and Serbian wines.

These findings suggest that the concentrates of European Merlot wines possess skin-beneficial antioxidant and wound healing properties, with no observed toxicity to skin cells up to high concentrations. They show significant potential as natural ingredients for cosmetic formulations aimed at preventing oxidative stress-induced skin damage. Evaluating the effects on more complex skin models will give deeper perspective on the potential use of these concentrates in treating skin conditions.

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References

1. Sittek, L.-M., Schmidts, T. M., & Schlupp, P. (2023). Potential application of a wine extract in skin care: how to benefit from the antibacterial, antioxidant and elastase inhibiting properties. *Journal of Cosmetics, Dermatological Sciences and Applications*, 13(02), 136–155.
2. Hecker, A., Schellnegger, M., Hofmann, E., Luze, H., Nischwitz, S. P., Kamolz, L., & Kotzbeck, P. (2021). The impact of resveratrol on skin wound healing, scarring, and aging. *International Wound Journal*, 19(1), 9–28.
3. Yang, D., Moh, S., Son, D., You, S., Kinyua, A., Ko, C., Song, M., Yeo, J., Choi, Y.-H., & Kim, K. (2016). Gallic acid promotes wound healing in normal and hyperglucidic conditions. *Molecules*, 21(7), 899.