The influence of luteolin on expression of epithelial MUC1 mucin in human skin fibroblasts

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ABSTRACT

Purpose: The membrane-anchored MUC1 mucin is typically expressed on normal and cancerous epithelial cells. Non-epithelial localization of this mucin is rare. However, the presence of MUC1 in human skin fibroblasts has been recently unexpectedly revealed. The aim of the study was to prove the expression of MUC1 mucin in human skin fibroblasts and the examine of the influence of luteolin on its expression.

Materials and methods: ELISA tests and real-time PCR analysis were used to assess the expression of MUC1 mucin in fibroblast cells cocultured with 30 μM concentration of luteolin.

Results: The expression of MUC1 was revealed in human skin fibroblasts. Luteolin decreased the relative level of mucin in cell lysates and media. Statistically significant decreased expression of *MUC1* gene after luteolin treatment of fibroblasts cells was also revealed.

Conclusion: Our results prove non-epithelial localization of MUC1 mucin. Luteolin inhibits the expression of MUC1 mucin in healthy human skin fibroblasts.

Key words: fibroblasts, luteolin, MUC1

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