Healing wound as a model for the study of cell interactions

Abstract

Galectins play an important role in the processes of cell proliferation, differentiation, migration and extracellular matrix formation. Furthermore, galectins are able to transfer cellular signals and to participate in cell interaction. It has been proven that galectins play an important role in the microenvironment formation of a tumor and/or healing wound. This study demonstrated significant role of galectins, in particular Galectin-1, in wound healing and cell interactions (endothelial cells, fibroblasts and keratinocytes) forming a part of the granulation tissue and tumor stroma. We have demonstrated that the extracellular matrix rich on Galectin-1 creates a suitable environment for the cultivation of keratinocytes. Galectin-1 also induces differentiation of fibroblasts into myofibroblasts. The knowledge of above mentioned processes is important to better understand the complexity of cancer biology and its parallel to wound healing.

Key words: tissue repair, regeneration, galectin, tumor