

Abstract

The aim of this bachelor thesis is to describe the mutual relations of mesenchymal stem cells and extracellular matrix, their communication and to point out their significance in living body. First part is focused on description of extracellular matrix, its components and characteristics. The interaction between extracellular matrix and surrounding cells is using both receptors and enzymes. Second part addresses the description of mesenchymal stem cells which are crucial producers of extracellular matrix. The matrix is also decisive part of stem cells niche which envelopes them, protects them and decides their future. The last section demonstrates possible utilizations of differentiation potential and paracrine secretion of MSC in therapy and identifies some of the risks bound to it.