

Abstract

Mesenchymal stem cells (MSCs), or multipotent stromal cell are non-hematopoietic cells from mesoderm germline. They can be isolated from various types of tissues like bone marrow, adipose tissue, umbilical cord blood, chorionic villi, amniotic fluid, placenta and fetal liver or lung. Due to their self-renewal ability, targeted migration and their potential to differentiate, MSCs hold a great potential to be employed in clinical medicine. They have a capacity of differentiation into a variety cell lineages like osteocytes, chondrocytes, adipocytes and other cell types. Recovery of damage tissue is taking place in a treatment of fractures, cardiovascular and neurological disorders. Furthermore, MSCs exhibit significant affinity for tumor cells, so they can be used as carriers of anti-tumor drugs. In this bachelor thesis I discuss the current knowledge in the field of targeted therapy.

Key words: targeted therapy, tumor, mesenchymal stem cells