

Abstract:

Stem cells have huge medical potential, but they are not explored enough for the use in medicine yet. Because of that, their further research is important. One group of the stem cells are neural stem cells, which are differentiating into the neural and glial cells in the brain. Neural stem cells are present at the two areas in the adult brain, subventricular zone and subgranular zone of hippocampus. Neural stem cells are not one homogenous population of cells, but rather various subpopulations with different cell expression. In my bachelor thesis I described the methods, which are used in the research of neural stem cell subpopulations. Described methods focused mainly on the isolation and gene expression.

Keywords: neural stem cells, neurogenic zones, molecular markers