

Abstract

Neurogenesis in adult mammals was first discovered in the second half of the 20th century and its mechanisms, regulation and possible functions have been researched ever since. Scientists have so far been able to describe the process of neuronal development as well as some possible influences. However, the role of this phenomenon is still being discussed. This thesis is focused on neurogenesis in the dentate gyrus in hippocampus, a pair structure located in the central part of the temporal lobe. The main aim is to describe the recent findings and research models as well as the assumed functions. The most recent theories find the role of hippocampal neurogenesis in pattern separation, memory resolution, contextual memory or memory consolidation. These hypotheses are quite variable due to the broad range of research methods and their interpretations, however, none of them seems to disprove the others.

Key words: neurogenesis, functions, behavior, hippocampus, learning