

Abstract

The aim of my thesis is to summarize the information about neurogenesis in the dentate gyrus of the hippocampus in the adult brain. I examine the process of maturation, migration of immature neurons and functional significance of neurogenesis in the area. In the adult brain it is very important for proper spatial perception and learning.

In the next chapter I focus on some significant neurodegenerative and neuropsychiatric diseases such as epilepsy, Alzheimer's disease or depression. During each of them leads to diverse changes and abnormalities in neurogenesis in hippocampal area.