

Neuroplasticity is a fundamental characteristic of the brain that allows it to adapt to changes in the environment, learn new skills or recover from injuries. Although the majority of scientific literature on neuroplasticity has focused on neurons and synaptic changes, recent research suggests another important mechanism that is based on myelin plasticity. The goal of this bachelor thesis is to present a literature review on current research trends in the topic of myelin plasticity. The focus revolves around the function of myelin, the lipid membrane that provides insulation and support to axons, and the concept of myelination as an adaptive process. The relationship between activity-dependent myelination, its triggers, and the effect on specific brain circuits function and dysfunction are thoroughly discussed. Research in myelin plasticity has led to a change in the paradigm of brain plasticity, as there is now clear evidence that the latter cannot be fully understood without taking the former into account.