

Nitric oxide (NO) is significant intercellular messenger, widely used in nervous system. It is used to modulate large number of physiological functions and participates in immunity responses; however in pathological state it can be responsible for wide variety of harmful effects. The goal of my bachelor thesis is to illustrate the topic of nitric oxide in CNS pathology in the form of literature research. First part of this thesis shows the formation of NO, physiological functions influenced by NO, describes the main signaling pathway NO-cGMP and deals with the use of produced NO. Second part of this thesis briefly shows the research methods: the use and distribution of NOS inhibitors, genetically modified mice and detection of NO and its products. The last part is dedicated to selected pathological states in CNS.