The drug addiction can be considered the disease of the brain reward system. This system closely related to the system of emotions and is located mainly in the limbic structures of the brain. Drug of abuse activate this system and increase release of dopamin in nucleus accumbens, thereby acting as a natural source of reward and their seeking is supported. Drug abuse leads to long-term changes in the structure and function of neurons involved in the process of reward.

This thesis summarizes knowlege about particular regions of the reward systém which participate on developing of addiction. Reward system is described in terms of behavioral, structural and a part is devoded to changes at the molecular level.