

Abstract

Circadian rhythms can be found in all organisms from prokaryotes through plants to animals. They are very plastic, able to adapt to the climatic conditions of the environment and the current availability of food, such differences in conditions led to origin of intraspecific polymorphisms of circadian rhythms. This bachelor thesis summarizes the known data on the circadian rhythm plasticity, managing mechanisms of circadian rhythms and their interdependence. Circadian rhythms were studied only sporadically in the human ectoparasite a bed bug (*Cimex lectularius*), rhythm reversal can be achieved just by changing the illumination. With knowledge about plasticity of circadian rhythms it shall be possible to identify the changes in the managing mechanisms of circadian rhythms in the bed bug.

Key words: circadian rhythms, bed bug, plasticity of circadian rhythm, polymorphism of circadian rhythms