

Abstract

In the brain, there is a center regulating circadian rhythms, which is located in the SCN. Outside these nuclei, there are other structures, which contribute significantly to coordination of circadian rhythms. Most of those nuclei are located in the hypothalamus and are connected with the SCN. These areas are involved in the management of basic physiological functions such as thermoregulation, food intake, sleep/wake cycles, hormonal secretion and control of locomotor activity. Outside the hypothalamus, there are other clocks, which work according to their location, e.g., clock in the limbic system participates in the control of cognitive functions. The olfactory lobe and retina harbor autonomous clocks that operate independently of the SCN. This work is focused on summary of the information about the selected extra-SCN oscillators in the brain their regulation of physiological functions.

Key words: clock genes, circadian clocks, brain