THE INFLUENCE OF THE LIGHTING MODE ON THE ULTRADIAN RHYTHM OF TESTOSTERONE LEVEL IN THE SERUM OF MALE RABBITS

M.E. Diatroptov

Research Institute of Human Morphology, Russian Academy of Medical Sciences, Moscow, Russia

Abstract. The ultradian rhythms of the testosterone level in the serum of male rabbits are researched. Its 8-hour biorhythm with the most expressed amplitude and acrophase at 8, 16 and 24 o'clock of the local solar time is founded. Neither displacement nor inversion of lighting mode changed the period and phase of the testosterone level rhythm. After rabbits' transmeridian moving from Omsk to Moscow with saving of native lighting mode, specific for habitat of experimental animals, the ultradian rhythm's phase of testosterone level was synchronized with the local time. Therefore, the lighting mode doesn't affect the period and phase of the testosterone level rhythm. An external heliogeophysical factor depended on the local time could probably be considered as the synchronizer of this function in the organism.

Keywords: ultradian rhythms, testosterone, male rabbits.