

**Changes of plasma melatonin level and testis weight in mice in
the seasonal light-period**

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Plasma melatonin in the seasonal light-period is circadian rhythmically secreted. Maximal secretion showed at 14 o'clock in summer- and winter-like period, but minimal secretion showed at 5 o'clock in summer-like period and at 8 in winter-like period. These times of minimal secretions were at the beginning of light period. Plasma melatonin in the light period is secreted 62.5% more than in the dark period in summer-like period and 45.9% more in winter-like period. Total plasma melatonin in winter-like period is secreted 56.5% more than in summer-like period. The weights of testis(-20.8%) and body(-7.1%) were reduced in the winter-like period. By the increase of plasma melatonin in mice, body- and testis-weights are decreased, on the contrary by the decrease of plasma melatonin in mice, body and testis weights are increased. In view of the results so far achieved melatonin changes on the body weight and reproductive organ in mice. It is presumed that melatonin effects on the metabolism and sex hormone.

Key words : Plasma melatonin, Testis, Seasonal light-period