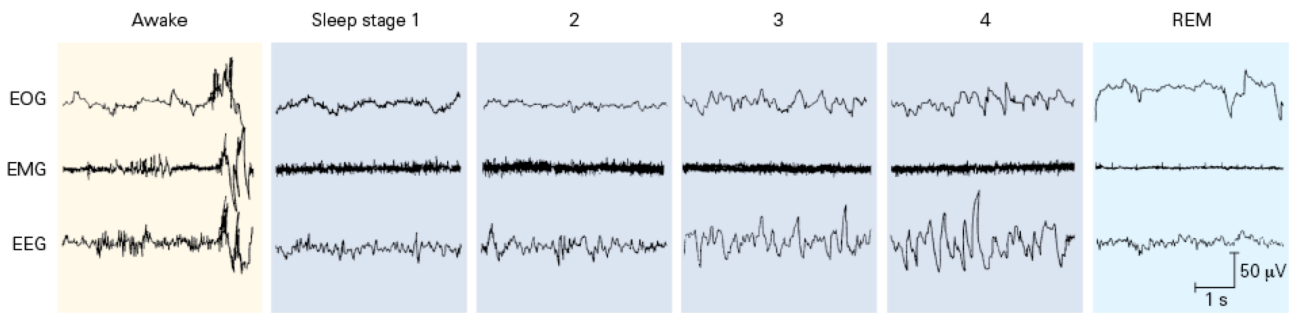


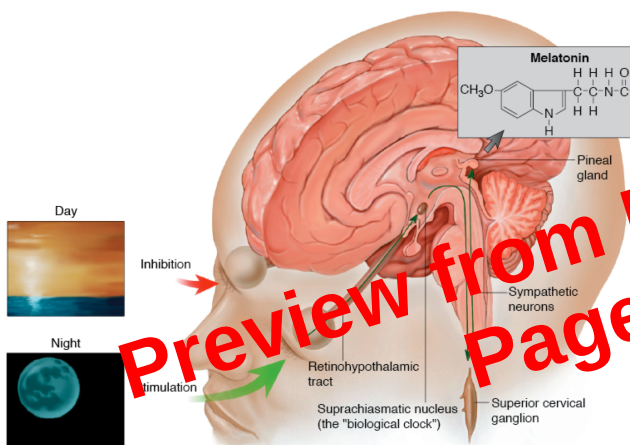


EMG: Electromyogram (Skeletal muscle activity); EOG: Electro-oculogram (Eye movements)

## CIRCARDIAN RHYTHM

Most, if not all, living cells in plants and animals have rhythmic fluctuations in their function on a circadian cycle. Normally they become entrained, that is, synchronized to the day—night light cycle in the environment.

If they are not entrained, they become progressively more out of phase with the light—dark cycle because they are longer or shorter than 24 h.



The entrainment process is dependent on the suprachiasmatic nuclei (SCN) located bilaterally above the optic chiasm. It receives information about the light-dark cycle via the retinohypothalamic fibers. Efferents from the SCN initiate neural and humoral signals that entrain the circadian rhythms including the sleep-wake cycle and the secretion of the pineal hormone melatonin.

