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Some aspects of the neurotropic action of Melatonin (MLT)

The biological activity of MLT reveals itself well beyond the contraction of melanosomes of the melanocytes. MLT exerts, indeed a more or less clear effect on central and/or peripheral nervous tissue. Some lung, heart and vascular receptors become less responsive to chemical stimuli after MLT treatment. The metamorphosis of *Rana esculenta* tadpoles is accelerated by MLT, and the degeneration and/or migration of neural tube cellular elements is intensified. In some, but not in all patients sleep or a state of relative alertness are induced by MLT; this effect can change according to the health conditions of the patients.

These effects, along with the influence of MLT on the synthesis of some releasing factors, are evidence that MLT is ubiquitously active, particularly on the nervous system, but probably also on every tissue where HIOMT, COMT and methyl donors reciprocally interfere, as well as on the substrates where NTA and ACh-esterase, MLT and ACh interact. According to this view MLT may play a very important role, by modulating synaptic transmission.