

Abstract

Melatonin is a hormone that primarily functions in regulating circadian rhythms in mammals. Independently of the pineal gland, it is also synthesized in the intestines, where it can interact with the gut microbiome and thus contribute to a wide variety of diverse functions. The aim of this paper is to describe the role of melatonin and summarize its functions across different organisms, with a particular focus on mammals. The work concentrates on explaining the proven effects of melatonin in the mammalian gut, its potential interactions with the gut microbiome, and the overall impact on the homeostasis of the intestinal environment.