

Special Issue

Melatonin in Disease and Health

Message from the Guest Editor

Melatonin (N-acetyl-5-methoxytryptamine)'s biosynthesis starts after the uptake of tryptophan by cells; specifically, this essential amino acid is converted to 5-hydroxytryptophan and then to 5-hydroxytryptamine (serotonin) and, ultimately, to melatonin. When it is released in the bloodstream, melatonin regulates physiological functions like circadian rhythm, sleep–wake cycle, gonadal activity, redox homeostasis, neuroprotection, immune modulation, and anticancer effects in the body. On the contrary, it is known that a decrease in melatonin secretion is related to the aging process and leads to tumorigenesis and visceral adiposity.

All these activities are carried out in two different ways: as an amphiphilic molecule, melatonin directly interacts with the intracellular components, but it also acts indirectly through the membrane receptors which are widely distributed in all eukaryotic cells.

Papers dealing with any aspects of melatonin in human health and disease, with special attention paid to new experimental therapeutic applications, will be considered for this Special Issue.

Guest Editor

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