Special Issue

Melatonin in Human Health and Diseases

Message from the Guest Editor

Melatonin is a small ubiquitous and pleiotropic molecule initially mainly recognized for its nocturne production and its role in the regulation of circadian rhythms. However, a great deal of evidence has confirmed the fundamental role of melatonin and its potential as an antioxidant agent. In vertebrates, melatonin is synthesized by the pineal gland and by a large number of organs, including but not limited to the retina, gastrointestinal tract, ovary and oocytes. Every cell in plants and animals produces melatonin in their mitochondria while, in green plants, melatonin is produced in chloroplasts. Its production starts from L-tryptophan, following a well-known enzymatic pathway. Moreover, melatonin also acts through its receptors present on the cellular membrane named MT1 and MT2, which are widely distributed in eukariotic cells. Via its receptors, and as a consequence of its receptor-independent actions, melatonin is a mutitasking molecule. It has many properties including cancer inhibition, immune stimulation and cardioprotective effects. Recently, it was also able to limit neurodegenerative diseases.

Guest Editor

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Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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