Agomelatine: An astounding sui generis antidepressant?

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Abstract

Major depressive disorder (MDD) is one of the foremost causes of disability and premature death across the globe. Albeit available antidepressant drugs are potent but also have substantial limitations. Recent advances in the development of new drug's ultimate relations between MDD and chronobiology, which target the circadian rhythm, have directed to a renewed focus in psychiatric disorders. Agomelatine is a unique melatonin analog having MT₁/MT₂ receptors agonist and serotonin 5-HT_{2C}/5-HT_{2B} receptors antagonistic properties and antidepressant activities. Due to its kind of mechanism, agomelatine should be commonly useful in the medication of depressive disorders and lack of severe side effects. Several preclinical and clinical studies established the antidepressant effects of agomelatine with rapid onset of action in addition to an outstanding safety profile. Effects on melatonin receptors enable the resynchronization of irregular circadian rhythms with valuable effects on sleep architectures.

Moreover, agomelatine has not only antidepressant properties but also have anxiolytic outcomes associated with MDD. In summary, the agomelatine is accredited to its unique mode of action, which helps not only to exert antidepressant effects but also to resynchronize the sleep-wake cycle.

Keywords: Melatonin analog; Agomelatine; Circadian rhythm; Depression; Neuroplasticity; Serotonin.

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Conflict of interest

All authors declare no conflict of interest.

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