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Opinion

What is the Role of Melatonin in Human Breast Cancer?

Diriba Dereje*

Lecturer of Medical Physiology, Department of Biomedical Sciences, Jimma University, Jimma, Ethiopia

***Corresponding Author:** Diriba Dereje, Lecturer of Medical Physiology, Department of Biomedical Sciences, Jimma University, Jimma, Ethiopia.

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Melatonin is a hormone secreted from pineal gland which regulates Circadian rhythm. Additionally, it has several physiological roles in human body [1,2]. Melatonin was also indicated in regulating breast cancer progression [3]. Melatonin has the following benefit in Breast cancer patients (BCP), neuroprotective function in PCP on chemotherapy [4], inhibit hypoxia-induced vasculogenic mimicry [5] exhibit metastatic trait inhibition especially in MDA-MB-231 breast cancer cells [6], immune regulatory function [7], management of insomnia in breast cancer [8] and induce selective Apoptosis in malignant cells with its additional benefit explained above [7].

Further researches were recommended regarding the concentration of melatonin in treating human with breast cancer [9] and in vivo melatonin inclusive combined hormonal therapy with estrogen and progesterone [10]. Based on this evidence, further clinical trial and cohort study is recommended in using melatonin as anti-cancer, specifically in treating breast cancer.

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