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New Developments in the Control of Autophagy by Natural Products in Cervical Cancer

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Abstract

Autophagy, a highly conserved cellular process, plays a crucial role in maintaining cellular homeostasis and promoting cell survival during stress conditions. Dysregulation of autophagy has been implicated in various diseases, including cancer. Cervical cancer, a prevalent malignancy among women, presents challenges in treatment due to its aggressive nature and resistance to conventional therapies. In recent years, there has been growing interest in exploring the potential of natural products as adjuvant therapies for cervical cancer, particularly those that can modulate autophagy. This review highlights the latest developments in understanding the interplay between autophagy and cervical cancer and discusses how natural products have emerged as promising candidates for autophagy modulation. We summarize the mechanisms by which selected natural products influence autophagy pathways in cervical cancer cells, including both autophagy inducers and inhibitors. Furthermore, we delve into the potential therapeutic implications of these findings and the challenges associated with translating preclinical results into clinical applications. By shedding light on the intricate relationship between autophagy, natural products, and cervical cancer, this review underscores the importance of further research in harnessing the therapeutic potential of autophagy modulation by natural products to enhance the efficacy of cervical cancer treatment.