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Circular RNAs in glioblastoma

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Abstract

Glioblastoma multiforme (GBM) is the most malignant and common form of brain cancer in adults. The molecular mechanisms underlying GBM progression and resistance are complex and poorly understood. Circular RNAs (circRNAs) are a new class of non-coding RNAs formed by covalently closed loop structures with no free ends. Their circular structure makes them more stable than linear RNA and resistant to exonuclease degradation. In recent years, they have received significant attention due to their diverse functions in gene regulation and their association with various diseases, including cancer. Therefore, understanding the functions and applications of circRNAs is critical to developing targeted therapeutic interventions and advancing the field of glioblastoma cancer research. In this review, we summarized the main functions of circRNAs and their potential applications in the diagnosis, prognosis and targeted therapy of GBM.

Keywords: CircRNAs; Glioblastoma; Non-coding RNAs; Potential applications.

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