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Detailed pathological role of non-coding RNAs (ncRNAs) in regulating drug resistance of glioblastoma, and update

Foad Rahmanpour Leili ¹, Niloofar Shali ², Mehrnaz Sheibani ³, Mohammad Javad Jafarian ⁴, Fatemeh Pashizeh ⁵, Reza Gerami ⁶, Farideh Iraj ⁷, Afshin Aliporan Lashkarshekan ⁸

Affiliations

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Abstract

Glioma is a kind of brain tumor that develops in the central nervous system and is classified based on its histology and molecular genetic features. The lifespan of patients does not exceed 22 months. One of the motives for the low effectiveness of glioma treatment is its radioresistance and chemoresistance. Noncoding RNAs (ncRNAs) are a diverse set of transcripts that do not undergo translation to become proteins in glioma. The ncRNAs have been identified as significant regulators of several biological processes in different cell types and tissues, and their abnormal function has been linked to glioma. They are known to impact important occurrences, including carcinogenesis, progression, and enhanced treatment resistance in glioma cells. The ncRNAs control cell proliferation, migration, epithelial-to-mesenchymal transition (EMT), invasion, and drug resistance in glioma cells. The main focus of this study is to inspect the involvement of ncRNAs in the drug resistance of glioma.

Keywords: Drug resistance; Glioma; Metastasis; lncRNA; miRNA; ncRNA.

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