

Since the inhibitory effect of **KNG1** on **glioma** has been proved, this study further explores the **regulation** of the **lncRNA/miRNA** axis on KNG1 in glioma.

The miRNAs that target KNG1 and the **lncRNA** that target **miR 942-5p** were predicted by **bioinformatics analysis** and verified by **experiments**. The correlations between miR-942-5p and the survival of patients and between KNG1 and miR-942-5p were analyzed. After **transfection**, **cell migration**, **invasion**, **proliferation**, and **cell cycle** were detected through **wound healing**, **Transwell**, **colony formation**, and **flow cytometry** assays. A **mouse** subcutaneous xenotransplanted **tumor model** was established. The expressions of miR-942-5p, KNG1, **LINC01018**, and related genes were evaluated by quantitative real-time reverse transcription polymerase chain reaction (RT-qPCR), **Western blot**, or **immunohistochemistry**.

MiR-942-5p targeted KNG1, and LINC01018 sponged miR-942-5p. The high survival rate of patients was related to low miR-942-5p level. MiR-942-5p was highly expressed, whereas KNG1 was lowly expressed in glioma. MiR-942-5p was negatively correlated with KNG1. Silent LINC01018 or KNG1 and miR-942-5p mimic enhanced the migration, invasion, and proliferation of glioma cells, and regulated the expressions of metastasis-related and proliferation-related genes. LINC01018 knockdown and miR-942-5p mimic promoted glioma tumor growth in mice. The levels of miR-942-5p and KNG1 were decreased by LINC01018 knockdown, and LINC01018 expression was suppressed by miR-942-5p mimic. MiR-942-5p inhibitor, KNG1, and LINC01018 had the opposite effect to miR-942-5p mimic.

Conclusion: LINC01018/miR-942-5p/KNG1 pathway regulates the development of glioma cells in vitro and in vivo ¹⁾.

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Xu J, Wang J, Zhao M, Li C, Hong S, Zhang J. LncRNA LINC01018/miR-942-5p/KNG1 axis regulates the malignant development of glioma in vitro and in vivo. CNS Neurosci Ther. 2022 Dec 22. doi: 10.1111/cns.14053. Epub ahead of print. PMID: 36550594.

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