



miR-129b suppresses cell proliferation in the human lung cancer cell lines A549 and H1299

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ABSTRACT. Lung cancer is one of the most prevalent malignant tumors, and is one of the primary causes of cancer-associated deaths. In 2002, an estimated 1.18 million lung cancer-associated deaths were recorded, accounting for 18% of cancer-related deaths and 2% of total mortality. Despite the great progress that has been made in lung cancer therapies, the mechanisms underlying lung cancer formation and development remain largely unknown. Meanwhile, the microRNA miR-129 has been shown to be involved in the formation of many types of cancer. Therefore, this study aims to investigate whether miR129b could suppress proliferation of lung cancer cell lines. NSCLC tissue samples were collected from the Department of Respiratory Medicine between April 2013 and December 2015. Ten normal health individuals were recruited as controls. Lung cancer cell lines A549 and H1299 were used to examine the suppressive effects of miR129b. Quantitative real-time PCR was used to detect miR129b expression. The MTT assay was used to analyze cell proliferation. Results indicated that miR-129b is down-regulated in lung cancer cell lines and NSCLC tissues.

Furthermore, overexpression of miR-129b inhibited proliferation of lung cancer cells. In conclusion, miR-129b suppresses lung cancer cell proliferation, and can be a potential therapeutic target for treatment of lung cancers.

Key words: Non-small cell lung carcinoma; miR-129b; Lung cancer; Cancer cell proliferation