



# Decreased microRNA-143 expression and its tumor suppressive function in human oral squamous cell carcinoma

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**ABSTRACT.** MicroRNA-143 serves as a tumor suppressor in many human malignancies. However, its involvement in oral squamous cell carcinoma (OSCC) is still unclear. In this study, we investigated the effects of miR-143 in OSCC tumorigenesis and development. Using real-time quantitative reverse transcription-polymerase chain reaction, we detected miR-143 expression in 109 pairs of human OSCC and adjacent noncancerous tissues. The associations between miR-143 expression and clinicopathological factors and prognosis of OSCC patients were also statistically analyzed. Further, the effects of miR-143 on the biological behavior of OSCC cells were investigated. miR-143 expression was significantly downregulated in OSCC tissue samples and cell lines. Decreased miR-143 expression was significantly associated with advanced T classifications, positive N classification, advanced TNM stage, and shorter overall survival. In addition, upregulation of miR-143 in Tca8113 cells reduced cell proliferation, invasion, and migration, as well as promoted cell apoptosis *in vitro*. These findings

validate the clinical significance of miR-143 in OSCC and reveal that it may be an intrinsic regulator of tumor progression and a potential prognostic factor for this disease.

**Key words:** MicroRNA-143; Oral squamous cell carcinoma; Prognosis; Real-time reverse transcription-polymerase chain reaction