

## **Krüppel-like Factor 4 and 5 Expression and Its Involvement in Differentiation of Oral Carcinomas**

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### **Abstract**

Proliferation-differentiation balance of epithelial cells is regulated by krüppel-like factor (KLF) 4 and 5, and the unbalanced expression relates to carcinoma progression. However, little is known about the expression and role in oral carcinomas. This study examined expression of KLF4 and 5 in the carcinomas by immunohistochemistry (n = 67) and the involvement in proliferation and differentiation of carcinoma cells. KLF4 was detected in keratinizing carcinoma cells and KLF5 in non-keratinizing cells. KLF4 staining declined in the patient with lymph node metastasis ( $P < 0.05$ ) and in parallel with the histological dedifferentiation ( $P = 0.09$ ). Exogenous overexpression of KLF4 arranged cells in a cobble-like structure with desmosomes and KLF5 elongated cells like fibroblasts without desmosomes. KLF4 suppressed fibronectin expression, and KLF5 down-regulated and degraded E-cadherin. The proliferation was not affected by KLFs. Thus, down-regulation of KLF4 and up-regulation of KLF5 may stimulate oral carcinoma progression through the dedifferentiation of carcinoma cells.