**GRHL2: a pioneer factor.**

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Grainyhead-like 2 (GRHL2) is an evolutionarily conserved transcription factor that regulates a repertoire of epithelial-specific genes to guard the epithelial differentiation. *Grhl2* plays important roles in embryonic development. *Grhl2* is expressed in the villous cytotrophoblasts and syncytiotrophoblasts in the placenta. Knocking-out of *grhl2* in mice results in defects in neural tube closure and is embryonic lethal. Mutations of GRHL2 is also reported in human diseases such as Autosomal-Recessive Ectodermal Dysplasia Syndrome. GHRL2 has been shown to suppress epithelial-mesenchymal transition (EMT). The loss of GRHL2 results in sequential changes in the EMT phenotype. More recently, GRHL2 has been suggested to act as a pioneer factor. In this lecture, I will introduce the findings from the literatures to support the role of GRHL2 as a pioneer factor during epithelial differentiation.

References: