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Laboratoř Metalomiky a Nanotechnologií

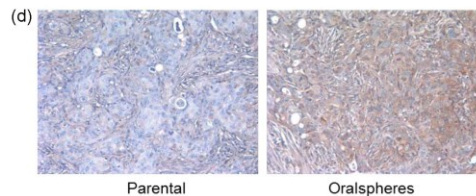
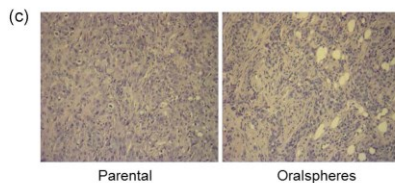
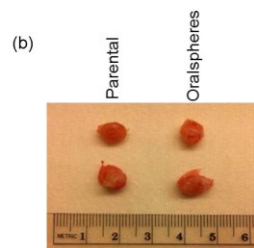
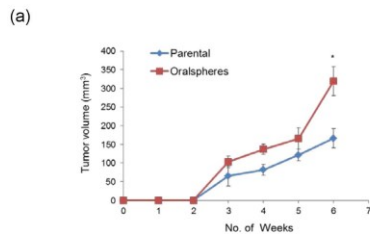
Vás zve na seminář:

Identification of molecular signature of head and neck cancer stem-like cells

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Abstrakt

Head and neck squamous cell carcinoma (HNSCC) is the sixth most prevalent cancer in the world. HNSCC remains difficult to treat, and despite advances in treatment, overall survival rate has modestly improved over the past several years. Poor survival rate is attributed to high frequency of



local recurrence and distant metastasis. Cancer stem-like cells (CSCs) have been implicated in tumor recurrence and confer resistance to anti-cancer therapy treatment. In this study, we have characterized genes that are modulated in HNSCC-CSCs and can be

targeted in future as potential therapeutics. CSCs were isolated from HNSCC cells (oralspheres) and examined for tumorigenicity in immunodeficient mice. We observed aggressive tumor growth with oralspheres as compared to parental cells. The CSC-derived tumors were grossly extremely vascularized and expressed VEGFR1. We next analyzed the molecular determinant of oralspheres. In addition to CD133 and Nanog, we observed significant higher expression of Notch1 protein in the oralspheres. There was differential expression of angiogenesis and invasive marker genes such as angiopoietin1, integrin b3, MMP9 and THBS1. Interestingly, c-Fos was upregulated in oralspheres as compared to parental cells. Our observations suggest that understanding the molecular determinant of oralspheres will help in developing future therapeutic modalities against treatment resistant HNSCC.

22. 04. 2015, od 15:00

Laboratoř metalomiky a nanotechnologií, Zemědělská 1, 613 00 Brno

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 Studium a charakterizace primárních nádorových buněčných linií
 spinocelulárních karcinomů v oblasti hlavy a krku a jejich maligní potenciál

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