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In Vitro Characterization of Oral Squamous Cell Carcinomas with Cell Migration

Abstract

As the 6th most common cancer, there are extremely high incidences of oral and pharynx cancer in Louisiana with a reoccurrence rate of 76% after two years. Metastasis is the primary cause of death for over 90% of cancer patients. Cell migration and metastasis are hallmarks of cancer progression. Metastasis is the process of tumor cells migrating from the initial site of the primary tumor to a distant site in the host's body. The mechanism that regulates metastasis are not fully elucidated, but the epithelial-mesenchymal transition (EMT) plays a major role in the early migration of tumor cells to other tissue sites. The tumor microenvironment and signaling molecules are known to modulate EMT. The current project is characterizing the effect signaling molecules has on cancer cell motility. The set experiments proposed measures the rate of motility on HPV negative squamous cell carcinoma (SCC) cell line, CAL-27, an epithelial cell line originating from a biopsy taken from the base of a human patients' tongue. A wound healing assay is used to compare the rate of SCC CAL-27 cells over 24 hours after treatment to cytokines. Measurements were taken T=0, T=6, T=24 hrs. Our findings suggest a cytokine induced change in cancer cell motility.

Special Instructions: The abstract is a summary of the project. Do not to exceed one page. Do not change margins, font style or font sizes on this page. **Use this format only- do not modify!!!**