

IDENTIFICATION OF DIFFERENTIALLY EXPRESSED PROTEINS IN ORAL SQUAMOUS CELL CARCINOMAS BY PROTEOMIC ANALYSIS

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Head and neck squamous cell carcinoma (HNSCC) is an epithelial malignant disease arising from the mucosa of the upper aerodigestive tract (oral cavity, larynx, oropharynx and hypopharynx). The high recurrence, heterogeneous biological aggressiveness and low survival rates of these tumors require efforts to understand the pathogenesis of the disease and to develop better therapeutic strategies. In the present study, oral tumor samples and apparently normal surgical margins were examined by two-dimensional electrophoresis, DIGE, western blot and mass spectrometry. Qualitative and quantitative variations between tumor and normal cells were detected including upregulation of calgranulin B and galectin 7 and downregulation of myosin light chain 1 and tropomyosin beta chain in tumors. Their functions range from cell signaling and proliferation to apoptosis, cell adhesion and transcription regulation. These proteins have been shown to have altered expression in HNSCC and also in other tumors and may represent biomarkers for head and neck tumorigenesis.