

# Absence of CLP protein can be indicative of oral cancer

January 7 2009

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Human calmodulin-like protein (CLP) is found in many cell types including breast, thyroid, prostate, kidney, and skin. The protein can regulate many cell activities and has a highly specific expression. Gaining an understanding about the expression of CLP in oral epithelial cells and its possible downregulation (or lack of production) in cancer may be a potentially valuable marker in early detection of oral cancer. A new study in the *Journal of Prosthodontics* found that CLP is expressed in normal human oral muscosal cells and that downregulation of this protein may be an indicator of malignancy or cancer.

Michael D. Brooks, DMD, MS, Richard D. Bennett, PhD, Emanuel E. Strehler, PhD, Thomas J. Sebo, MD, PhD, Stephen E. Eckert, DDS, MS, and Alan B. Carr, DMD, MS used a method of staining oral skin cells to see if they expressed this protein. A breast tissue sample that was known to have this protein was used as a basis for comparison. Normal cells in the mouth also possessed CLP. In malignancy or cancer, the same type of skin cells no longer expressed this protein.

In the areas of cancerous cells, a decrease in CLP occurred. There was a sharp contrast in staining quality and clarity between benign and malignant tissue. In the majority of the cancerous regions, a complete lack of CLP was noted.

This may be significant because calmodulin-like protein could be a marker for normal healthy oral cavity cells and diminished or complete loss of the protein could be an indicator of oral cancer or oral cancer

development.

"Perhaps a non-invasive method could be developed to screen for oral cancer," the authors note. "Unlike other screening methods that attempt to mark actual cancer cells, this marker would show in healthy cells and would decrease only in cancer transformation."

Source: Wiley

Citation: Absence of CLP protein can be indicative of oral cancer (2009, January 7) retrieved 25 April 2024 from <https://medicalxpress.com/news/2009-01-absence-clp-protein-indicative-oral.html>

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