



# American Association for Cancer Research



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## News

### Saliva Proteins Could Help Detection of Oral Cancer

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PHILADELPHIA - Clinicians could detect oral squamous cell carcinoma, a form of oral cancer, using a simple test that detects proteins in saliva, according to a report in the October 1, 2008, issue of *Clinical Cancer Research*, a journal of the American Association for Cancer Research. This work was led by David T. Wong, D.M.D., D.M.Sc., professor and associate dean for research, at the University of California, Los Angeles School of Dentistry.

Previous studies have shown that saliva can be a useful diagnostic tool, but this is the first study to globally evaluate saliva protein levels from oral cancer patients. Since it is very simple to collect and process saliva fluids, the discovery of these biomarkers may lead to a useful clinical tool for noninvasive diagnosis of oral cancer in the future.

"This test is currently not available, but we are developing point-of-care microfluidic devices to detect these markers that we can use in clinical trials," said Shen Hu, Ph.D., assistant professor of Oral Biology and Proteomics at the University of California, Los Angeles School of Dentistry.

Wong, Hu and colleagues have been working as part of the National Institute of Dental and Craniofacial Research (NIDCR)'s Human Saliva Proteome Project, which focuses on identifying and cataloguing the proteomic components of saliva in healthy subjects. This work, also supported by NIDCR, demonstrates the first translational utility of the salivary proteome for oral cancer detection.

Researchers collected saliva samples from 64 patients with oral squamous cell carcinoma and 64 healthy patients.

Five candidate biomarkers were successfully validated using immunoassays: M2BP, MRP14, CD59, profilin and catalase.

The presence of these biomarkers confirmed the presence of oral cancer 93 percent of the time.

"I believe a test measuring these biomarkers will come to a point of regular use in the future," Hu said. "We have demonstrated a new approach for cancer biomarker discovery using saliva proteomics."

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The mission of the American Association for Cancer Research is to prevent and cure cancer. Founded in 1907, AACR is the world's oldest and largest professional organization dedicated to advancing cancer research. The membership includes more than 28,000 basic, translational and clinical researchers; health care professionals; and cancer survivors and advocates in the United States and 80 other countries. AACR marshals the full spectrum of expertise from the cancer community to accelerate progress in the prevention, diagnosis and treatment of cancer through high-quality scientific and educational programs. It funds innovative, meritorious research grants. The AACR Annual Meeting attracts more than 17,000 participants who share the latest discoveries and developments in the field. Special conferences throughout the year present novel data across a wide variety of topics in cancer research, treatment and patient care. AACR publishes five major peer-reviewed journals: *Cancer Research*; *Clinical Cancer Research*; *Molecular Cancer Therapeutics*; *Molecular Cancer Research*; and *Cancer Epidemiology, Biomarkers & Prevention*. Its most

recent publication and its sixth major journal, *Cancer Prevention Research*, is dedicated exclusively to cancer prevention, from preclinical research to clinical trials. The AACR also publishes *CR*, a magazine for cancer survivors and their families, patient advocates, physicians and scientists. *CR* provides a forum for sharing essential, evidence-based information and perspectives on progress in cancer research, survivorship and advocacy.

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