

BACTERIA, ORAL CANCER CONNECTION REPORTED

Elevated levels of three bacteria in saliva indicate the presence of oral squamous cell carcinoma (OSCC), according to an article in the July 7 issue of *Journal of Translational Medicine*.

Researchers at The Forsyth Institute in Boston compared bacterial samples from the saliva of 229 healthy subjects with samples from 45 patients who had been diagnosed with oral cancer. The team found elevated levels of *Capnocytophaga gingivalis*, *Prevotella melaninogenica* and *Streptococcus mitis* in the samples from the patients with oral cancer. They obtained similar findings when they controlled for sex, age and smoking history.

“Those results led us to hypothesize that the three species could serve as diagnostic indicators for OSCC,” said principal investigator Dr. Donna Mager, assistant member of the staff in Forsyth’s Department of Periodontology and Molecular Genetics. “In fact, we found that elevated salivary counts of the three bacteria correctly identified 80 percent of individuals with oral cancer and 83 percent of controls.”

The team is planning on conducting more research to reproduce their results and evaluate how well saliva tests predict the progression of precancerous conditions toward oral cancer. The team also plans to study the relationship of oral bacteria to a variety of cancers and diseases.

The study was funded by the National Institutes of Health’s National Institute of Dental and Craniofacial Research and

was conducted in collaboration with the Dana Farber Cancer Institute, Boston, and Massachusetts General Hospital, Boston.

BITTER, SWEET MAY SHARE TASTE BUDS

The tongue’s ability to differentiate between sweet and bitter tastes may reside in the same taste bud cells, a study in the Aug. 2 issue of *Proceedings of the National Academy of Sciences* reports.

In a study funded by a grant from the National Institutes of Health, researchers conducted experiments on taste bud cells taken from the rear of rats’ tongues, the area that has the highest concentration of taste buds. They isolated single cells from individual taste buds and attached small, fine electrodes to the cells in Petri dishes to record their electrical activity. Researchers also applied a chemical messenger called neuropeptide Y (NPY) to these cells.

They compared the resulting electrical signals given off by NPY to those found in an earlier study they conducted using a peptide called cholecystokinin (CCK).

“NPY activated a completely different signal than CCK did, suggesting that the peptides trigger completely different responses in individual cells,” said lead author M. Scott Herness, Ph.D., a professor of oral biology and neuroscience at The Ohio State University.

Researchers also stained some of the cells and viewed them under fluorescent lights using a microscope to see whether both peptides were present. They initially found that NPY is expressed in only a

subset of taste bud cells. And every cell that expressed NPY also expressed CCK.

“That surprised us, too,” Dr. Herness said. “It may be that these cells release both peptides when something sweet or bitter is on the tongue. CCK might excite the bitter taste and at the same time inhibit the sweet taste, so the bitter message gets to the brain.”

Researchers plan on examining how either taste affects individual cells. They think that CCK may override NPY during a bitter sensation, while NPY may override CCK during a sweet sensation. Their next step is to apply bitter and sweet stimuli to taste bud cells that contain both NPY and CCK and see how each peptide reacts.

PERIODONTAL DISEASE LINKED TO TOOTH LOSS IN POSTMENOPAUSAL WOMEN

Periodontal disease is a strong and independent predictor for tooth loss in postmenopausal women, according to a study in the July issue of *Journal of Periodontology*.

Researchers from the University at Buffalo, School of Dental Medicine, did a follow-up evaluation on 106 dentate white postmenopausal women who had participated in a cross-sectional study between 1989 and 1991. At baseline, clinicians performed full-mouth assessments of periodontal status clinically and radiographically. During the follow-up evaluation, a periodontist clinically assessed tooth loss.

The research team led by Dr. Mine Tezal found that 57.5 percent of subjects had lost at least one tooth during the follow-up period. They also found that

each millimeter of alveolar bone loss from baseline increased the risk of tooth loss threefold. The risk of tooth loss also increased 2.5 times for each millimeter of clinical attachment loss from baseline. Researchers found that probing depth, gingival bleeding, calculus and plaque were not significantly associated with tooth loss.

"The long follow-up period is an advantage of this study since researchers were able to evaluate the same people more than 10 years later," said Dr. Vincent J. Iacono, president of the American Academy of Periodontology. "Since alveolar bone loss has been shown to be a significant factor for tooth loss in postmenopausal women, studies will be needed to determine possible aggravating effects of postmenopause on the severity of periodontal disease. Until we know more, postmenopausal women will want to control periodontal disease to significantly reduce their risk of alveolar bone loss and tooth loss."

CORRECTION

In the July JADA article "The Prevalence of Alcohol, Cigarette and Illicit Drug Use and Problems Among Dentists" by George A. Kenna, Ph.D., R.Ph.; and Mark D. Wood, Ph.D., some copy is missing.

The sentence at the end of page 1027 and the beginning of 1028 should read as follows: "On the other hand, a greater number of dentists than physicians reported that at least once, alcohol use had caused them to 'call in sick or late for work.' In total, while twice as many dentists as physicians reported having major dysfunctions, this finding was

not significant. However, a significantly greater proportion of dentists than physicians reported having combined minor and major alcohol-related dysfunctions ($\chi^2 = 8.26_1, P \leq .01$)."

MEETINGS

■ The Academy of Microscope Dentistry Annual Scientific Session will be held Nov. 3-5 in Scottsdale, Ariz. For more information, contact Ms. Tanya Sigafos by phone at 1-805-687-4747, by fax at 1-805-687-0014 or by e-mail at "tanya@microscopdentistry.com" or by visiting "www.academyofmicrodentistry.com".

■ The Icelandic Dental Association Annual Conference will be held in Reykjavik Nov. 4-5. For more information, contact Mrs. Anny Antonsdottir by phone at 011-354-575-0500 or by fax 011-354-575-0501 or by e-mail at "tanski@tanski.is".

■ The 13th International Congress of International College of Cranio-Mandibular Orthopedics will be held Nov. 4-6 in Kona, Hawaii. For more information, contact Ms. Hallie J. Truswell by phone at 1-800-446-1763, by fax at 1-206-633-4352 or by e-mail at "hallie.truswell@tmj-iccmo.org" or visit "www.tmj-iccmo.org".

■ The 62nd Annual Meeting of the American Institute of Oral Biology will be held Nov. 11-14 in Palm Springs, Calif. For more information, contact Ms. June Barrientos by phone at 1-909-558-4671 or by fax at 1-909-558-0285 or by visiting "www.aiob.org".

■ The 56th Annual Session of the American Academy of Oral and Maxillofacial Radiology will be held Nov. 16-20 in Charleston, S.C. For more information, contact Dr.

Michael ShROUT by phone at 1-706-721-2607, by fax at 1-706-721-6276 or by e-mail at "mshROUT@mail.mcg.edu" or visit "www.aaomr.org".

Compiled by Amy E. Lund, senior editor.

APPOINTMENTS/ ELECTIONS/AWARDS

■ **Dr. Lawrence B. Caplin**, Chalfont, Pa.; **Dr. Daniel B. Green**, Boston; **Dr. Louis F. Rose**, Philadelphia; **Dr. Carl L. Tinkelman**, Philadelphia; and **Dr. Robert J. Tisot**, Moorestown, N.J.; received the University of Pennsylvania School of Dental Medicine Alumni Society's Alumni Awards of Merit.

■ **Dr. Eleanor Gill**, Olive Branch, Miss., was the first woman elected president of the Mississippi Dental Association. Other officers are **Dr. A. Roddy Scarbrough**, Richton, president-elect; **Dr. Joseph S. Young**, Jackson, first vice president; **Dr. Walter Diaz**, Maben, second vice president; **Dr. Robert Rives**, Jackson, secretary/treasurer; and **Dr. David Lee**, Greenville, editor.

■ **Dr. Jacqueline Plemons**, Dallas, was recognized by the Texas/Oklahoma AIDS Education and Training Center with its My Brother's Keeper Award.

■ **Dr. William D. Powell**, Knoxville, Tenn., received the Dr. Jack Wells Memorial Dedication to Dentistry Award from the Tennessee Dental Association.

■ **Dr. Pollene Speed**, Seattle, was appointed chair of the University of Washington School of Dentistry Admissions Committee.

■ **Dr. Roy Thompson**, Murfreesboro, Tenn., was elected president of the Tennessee

Dental Association. Other officers are Dr. Tom Underwood, Nashville, president-elect; **Dr. Ray Fossick**, Nashville, secretary; **Dr. Fred Heros**, Memphis, treasurer; and **Dr. Carl Sebelius**, Memphis, speaker of the house of delegates.

Compiled by Karen Fox, senior editor, ADA News.

CALENDAR OF EVENTS

ADA ANNUAL SESSIONS

2005 Oct. 6-9, Philadelphia
2006 Oct. 16-19, Las Vegas
2007 Sept. 27-Oct. 2, San Francisco

2005 CONSTITUENT DENTAL SOCIETY ANNUAL MEETINGS

Meeting dates are subject to change. Dentists interested in attending any of the listed meetings should contact the sponsoring organization for more information.

- **Maryland State Dental Association**, 6410 Dobbin Road, Suite F, Columbia 21045, 1-410-964-2880, Chesapeake Dental Conference, Sept. 23-25, Ocean City.
- **North Dakota Dental Association**, P.O. Box 1332, Bismarck 58502, 1-701-223-8870, Annual Session, Sept. 15-18, Fargo.
- **Ohio Dental Association**, 1370 Dublin Road, Columbus

43215, 1-614-486-2700, Sept. 15-18, Columbus.

- **Vermont State Dental Society**, 100 Dorset St., Suite 18, South Burlington 05403, 1-802-864-0115, Sept. 22-23, Burlington.
- **Virginia Dental Association**, 7525 Staples Mill Road, Richmond 23228, 1-804-261-1610, Sept. 14-18, Richmond.

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