



Illustration: Polly Powell

UCSF Awarded Contract to Study Sjögren's Syndrome

UCSF School of Dentistry recently received an \$11.9 million contract to study Sjögren's Syndrome, an immunologic disease that affects the lacrimal and salivary glands.

The National Institute of Dental and Craniofacial Research and the National Eye

Institute is funding the five-year study which also establishes the Sjögren's International Clinical Collaborative Alliance, a worldwide registry for the disease.

"Sjögren's Syndrome affects as many as four million Americans, approximately one in every 100 members of the adult population. Nine out of 10 affected by SS are women," said Troy Daniels, DDS, MS. He

and John Greenspan, DDS, PhD, are the two principal investigators.

Daniels added the alliance will benefit a significant number of Americans and others around the world suffering from the complications of Sjögren's and its associated chronic symptoms which include dry mouth and eyes.

In patients with primary Sjögren's, progressive damage to the glands can lead to the development of auto-antibodies in the bloodstream, oral or ocular infections as well as other complications. The systemic disease also may strike many organs such as the lungs, liver, kidneys, and in rare cases, advance to malignant lymphoma.

The immune mechanisms that cause Sjögren's are comparable to those that cause systemic lupus and rheumatoid arthritis. What's more, a secondary form of Sjögren's may develop in some patients already affected by those or related diseases.

The Sjögren's international alliance will create standardized diagnostic criteria for the disease, gather clinical data and biospecimens from patients and their families to establish a data and tissue bank to aid future research projects on the causation, mechanisms, prevention, and treatment of this disease.

Daniels and Greenspan have worked together for many years. The Sjögren's international alliance builds on more than three decades of work in UCSF's Sjögren's Syndrome Clinic, which Daniels co-founded in 1972, and on more than 20 years of specimen-banking work by Greenspan and his team, who established in 1982 the UCSF AIDS Specimen Bank.

Sjögren's patients will be admitted to the registry at five participating clinical centers throughout the world. These clinics will collect data and specimens and transfer them to the UCSF project coordinating center.

"With this approach, groups of scientists across the world will end up using the same ways of approaching this surprisingly common disease," Greenspan said.

"The patient benefits from SICCA (Sjögren's international alliance) will come from having improved diagnostic criteria to better identify this disease, and from research projects that will be supported by the availability of this clinical data and biospecimens," said Greenspan.

Joining Greenspan and Daniels on this project are Judy Borland; Yvonne De Souza, MSc; Deborah Greenspan, BDS, DSc; Richard Jordan, DDS, PhD; Caroline Shiboski, DDS, PhD; and Dr. Ava Wu, DDS of the UCSF School of Dentistry. Additional participants from the UCSF School of Medicine are

Esteban Burchard, MD; Lindsey Criswell, MD, MPH; Kenneth Sack, MD; Stephen Shiboski, PhD; and Jack Whitcher, MD, MPH.

Lead collaborators from the participating international clinics are Hector Lanfranchi, DDS, PhD, University of Buenos Aires; Yi Dong, MD, Peking Union Medical College; Morten Schiødt, DDS, PhD, Copenhagen County University Hospital; and Susumu Sugai, MD, PhD, Kanazawa Medical University, Japan.

Stephen Pflugfelder, MD, Baylor University; Austin Mircheff, PhD, University of Southern California; Kathy Moser, PhD, University of Minnesota are external consultants.

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Impaired Recovery Linked to Smoking

Smokers have reduced body defense mechanisms that affect their recovery following dental procedures, said Swedish researchers in the *Journal of Periodontology*. Even recovery from non-surgical periodontal therapy may be impaired if the patient continues to puff away.

"In this study we investigated the relationship between tobacco smoking and the inflammatory response in smokers who consumed 10 to 20 cigarettes per day," said Michael P. Rethman, DDS, MS, and president of the American Academy of Periodontology.

"What we found in tobacco smokers is that the body's defense mechanism was weakened, whereas the defense mechanism in non-smokers promoted a more favorable healing response."

Additionally, research showed that smoking tobacco releases enzymes that may advance the development of periodontitis, a bacterial infection of the gums,

bone and attachment fibers supporting teeth and hold them in the jaw. Oral health improves once the smoker quits.

"Patients who want to quit smoking are urged to increase brushing and flossing their teeth and gums," Rethman said. "It's suggested that the fresh clean feeling a person feels in the mouth after brushing and flossing may curb the urge to smoke. Ironically, these simple tips also help to prevent periodontal diseases."

Joining forces with the Great American Smokeout last November, the American Academy of Periodontology created a special section on its web site, www.perio.org, to inform people about the impact of tobacco on periodontal health. Dental care professionals can request a free brochure of *Tobacco and Gum Disease* online at the above web site or call (800) FLOSS-EM.



Oral Cancer Tops List for Diagnostic Concerns

The single most important diagnostic issue facing dentists is oral cancer, said Gary C. Coleman in the June 2003 issue of *Texas Dental Journal*.

An estimated 30,000 cases of oral cancer are diagnosed annually in the U.S. with roughly half ending in death. An effective diagnosis is based on recognizing associated findings or "suspicion factors" that suggest malignant neoplasia, Coleman said.

Association of one or more of these suspicion factors with an oral lesion could be weak evidence of squamous cell carcinoma or other oral malignancy. However, Coleman said, a mixture of several suspicious factors may justify for definite diagnosis by incisional or excisional biopsy.

In the article, Coleman discussed the suspicion factors including clinical feature of the lesion, possible causes such as alcohol or tobacco use, age, surface character, delineation, distribution, pain, palpation, location, clinical course and rate of change.

Clinical presentation of oral cancer varies among patients. Luckily, he said, many of the oral lesions exhibiting suspicious factors are reactive lesions or benign. The challenge for dentists is to accurately read the secondary characteristics related with a white patch or ulcer to correctly recognize lesions that support reasons for the discomfort and cost of a definitive diagnostic biopsy procedure.

Since early detection and treatment are key to surviving oral cancer, Coleman said diagnosis is the single most important factor for dentists.

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No Link Between Asthma and Periodontal Disease

There is no evidence to support the association between asthma and periodontal health in adolescents, said researchers at Baylor College of Dentistry and Goldman School of Dental Medicine, Boston College. Their report appeared in the May/June 2003 *Pediatric Dentistry*.

Of the 1,596 youths between the ages of 13 and 17, 16 percent were asthmatics. The teens were examined for bleeding on probing, subgingival calculus, supragingival calculus, probing depth greater than or equal to 3mm, and loss of periodontal attachment greater than or equal to 2 mm.

None of the periodontal measures was associated with asthma severity or with the use of anti-asthmatic medicines, the authors reported. They did note that the finding possibly may be because of inherent limitations of cross-sectional studies, lack of knowledge about the daily dose of anti-

asthmatic medication and the compliance level with therapeutic methods.

Six previous studies, the authors noted, examined the association between asthma and periodontal diseases and none showed consistent findings when taken as a group. Complicating the interpretations of these studies are factors such as treating asthmatics involves using medications that affect immune response and inflammation.

Researchers said asthma has become more prevalent since the 1980s and affects people of all ages, racial groups, genders, especially children. From 1980 to 1994, asthma among U.S. youths between the ages of 5 and 14 has increased by 174 percent.

The authors said ensuing studies should be longitudinal. Researchers used health interview data and oral examinations from the 1988-1994 Third National Health and Nutrition Examination Survey.



Study Looks at Infants and Bacterial *S. mutans*

Researchers in Brisbane, Queensland, Australia, found that the colonization of *Streptococcus mutans* increased as the infant aged, so that by the toddler's second birthday, 84 percent of the children in the study had the bacteria.

The same researchers previously determined that before tooth eruption, more

than 50 percent of the infants already were infected with *S. mutans*. The recent report, using the same infants in the first study, found the colonization of *S. mutans* following tooth eruption.

Researchers followed 312 infants—93 pre-term; 219 full term—every three months from the children's birth until age 2. In eight of the infants who developed caries, *S. mutans* was initially detected at the median age of 18 months, according to the report.

Additionally, infants who had their teeth regularly brushed by their first birthday showed decreased signs of harboring *S. mutans* than those who had not brushed. Researchers said these findings support and extend the work of others who promote early dental care.

Causes of *S. mutans* colonization, according to the report, include child-rearing habits ranging from adult to child sharing food and utensils, and close contact such as breastfeeding and the child sleeping beside the mother.

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Diagnosing Cracked Tooth Syndrome

Since fractures or splits are the third-most common cause of tooth loss in industrialized countries, researchers recommend early reinforcement of at-risk teeth.

According to researchers at the University of Washington School of Dentistry and the Medical University Hannover, Germany, cracked tooth syndrome is often associated with bizarre symptoms that can complicate diagnosis and therefore the condition may persist for several years.

Accidental trauma is the leading cause of incomplete fractures, researchers said. For example, inadvertently biting with a hard force a small and very dense object, such as a seed, may immediately generate an excessive load due to the small contact area. As a result, the loaded tooth may split or fracture.

The study, published in the June 2003 *Quintessence International*, defined cracked tooth syndrome as an incomplete fracture of the natural crown of a pre-molar or molar. Incomplete splits typically run in a mesiodistal direction. While most of those teeth are

restored, the share of caries-free and non-restored teeth is between 13 and 35 percent.

Researchers said diagnosis is simple as viewing a cracked tooth. Unfortunately, the most common mesiodistal cracks are microscopic.

Because a split typically runs parallel to the plane of the film, radiographic examination seldom improves the diagnosis of a crack. However, researchers noted, the radiologic findings of a localized periodontal breakdown in an otherwise periodontally healthy dentition may signify a troublesome tooth.

Sharp pain on chewing tough or hard foods can be telling diagnostic evidence of a fractured tooth. To confirm a case of a split, patients should be asked to bite on an orangewood stick or similar hard object, and then release the pressure quickly, researchers recommended.

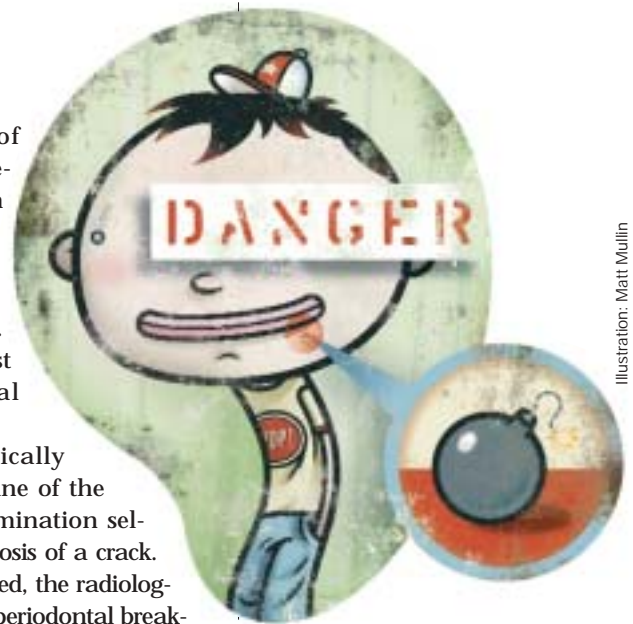
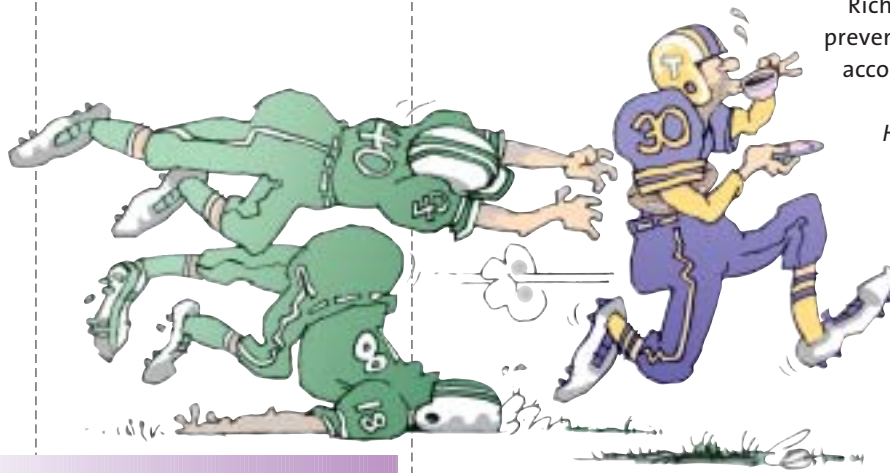


Illustration: Matt Mullin



Popular Beverage May Fit You to a Tea

Rich in antioxidant flavonoids called catechins, tea may prevent cancer, heart disease and help keep bones strong, according to preliminary research.

In the Mayo Clinic's September 2003 newsletter, *HealthQuest*, a study found that people who consumed six cups of black tea had a 50 percent lower risk of developing coronary artery disease as compared to those who didn't drink the beverage.

Additionally, laboratory studies showed that green tea helped prevent or delay cancer development in breast, colon, liver and prostate cells. A previous study found that regularly consuming black or green tea over a decade may improve bone mineral density by up to five percent.

*No endeavor that is
worthwhile is
simple in prospect;
if it is right, it will be
simple in retrospect.*

Edward Teller

Upcoming Meetings

2004

Jan. 22-23	Sacramento District Dental Society 24th annual Midwinter Convention and Expo, Sacramento, (916) 446-1211.
Feb. 15-21	Barbados Dental Association 16th annual Midwinter Convention, Barbados, www.barbadosda.org
March 2-3	Academy of Laser Dentistry Certification Program, Standard Proficiency and Advanced Proficiency, Palm Springs, (954) 346-3776, www.laserdentistry.org .
March 3-6	Academy of Laser Dentistry 11th Annual Conference, Palm Springs, (954) 346-3776, www.laserdentistry.org .
March 5-8	Academy of Laser Dentistry 10th Anniversary Conference and Exhibition, Destin, Fla., (954) 346-3776, www.laserdentistry.org .
April 15-18	CDA Spring Scientific Session, Anaheim, (866) CDA-MEMBER (232-6362).
April 27-May 2	American Academy of Cosmetic Dentistry's 20th annual Scientific Session, Vancouver, British Columbia, www.aacd.com .
Sept. 8-11	International Federation of Endodontic Association's sixth Endodontic World Congress, Brisbane, Queensland, Australia, www.ifea2004.im.com.au .
Sept. 10-12	CDA Fall Scientific Session, San Francisco, (866) CDA-MEMBER (232-6362).
Sept. 30-Oct. 3	ADA Annual Session, Orlando, Fla., (312) 440-2500.

To have an event included on this list of nonprofit association meetings, please send the information to Upcoming Meetings, *CDA Journal*, P.O. Box 13749, Sacramento, CA 95853 or fax the information to (916) 443-2943.