

**SALIVARY MELATONIN LEVELS, PERIODONTAL DISEASE LINKED**

**S**alivary melatonin may play an important role in maintaining periodontal health, according to a study published in the September issue of *Journal of Periodontology*.

Researchers at the University of Granada, Spain, and the University of Michigan, Ann Arbor, studied 37 patients with different degrees of periodontal disease. All subjects underwent a medical and dental examination, and researchers collected data on salivary and plasma melatonin levels, as well as community periodontal index (CPI) status, from each subject.

Melatonin, a hormone created by the pineal gland, may be able to protect the oral cavity against free radicals produced by inflammatory diseases, said researchers. Melatonin has strong antioxidant effects that can protect cells against inflammatory processes and oxidative damage, and melatonin supplements commonly are promoted to ease jet lag and hasten sleep.

“Patients with higher salivary and melatonin ratios had lower community periodontal index. CPI is the score used to assess periodontal status,” said study co-author Dr. Pablo Galindo, Department of Oral Surgery, School of Dentistry, University of Granada, Spain. “This finding suggests that the melatonin may fight against infection and inflammation possibly due to its antioxidant, anti-aging and immunoenhancing ability.”

Researchers also observed that older patients had lower saliva volumes and melatonin ratios and higher CPI scores than did younger patients.

“Further research is required to fully explain the relationship between melatonin and its influence on periodontal health,” said Dr. Kenneth A. Krebs, president, American Academy of Periodontology. “Until we know more, it’s important for people to talk to their dental professional about the state of their periodontal health.”

**COATING ON BRACES MAY INHIBIT PLAQUE GROWTH, DECALCIFICATION**

**E**arly tests on a new coating for orthodontic brackets and wires developed by researchers at New York University College of Dentistry, New York City, suggest that the coating could inhibit plaque growth and decalcification without decreasing the bond strength between brackets and teeth.

The coating is made from a calcium phosphate base that releases zinc onto orthodontic appliances and the surrounding teeth. Zinc inhibits the growth of acid-producing bacteria that demineralize teeth, and it minimizes dental calculus formation. The coating would be inexpensive to produce, would not require U.S. Food and Drug Administration approval and could be marketed pending patent approval and further testing in patients, said principal investigator Racquel Z. LeGeros, PhD, professor of biomaterials and biomimetics at NYU.

According to NYU’s press release, this is believed to be the first time that such a calcium-phosphate coating has been studied. Efforts to stem plaque and calculus formation in orthodontic patients with other methods—such as applying fluoride-releasing tooth varnish-

es or performing laser therapy around brackets—have had limited success and have diminished bond strength in some cases.

**POTENTIAL DRUG DELIVERY METHOD FOUND**

**A** technique using a brief burst of electricity to release biomolecules and nanoparticles from a tiny gold launch pad someday could be used to dispense small amounts of medicine on command from a chip implanted in the body, according to a presentation at the 232nd national meeting of the American Chemical Society in San Francisco on Sept. 10.

“The technique is relatively simple, but nothing like this has been done before,” said Peter C. Searson, PhD, professor of materials science and engineering, Johns Hopkins University, Baltimore. “Scientists have known that molecules could be removed from a surface in this way, but it’s never been considered useful. They’ve been more interested in preventing this from happening.”

However, Dr. Searson and Johns Hopkins University biomedical engineering graduate students Prashant Mali and Nirveek Bhattacharjee concluded that a controlled release of useful molecules might have important applications in the growing field of nanobiotechnology.

They used gold electrodes, each as thin as a single strand of human hair, that were fabricated through the same photolithography techniques used to make computer chips. They tethered each useful biomolecule to this surface using a long chain of hydrocarbon molecules. At one end, the chain was an-

chored to the electrode by a gold-sulfur bond. At the other end of the chain was the biomolecule researchers wanted to release on command. When researchers sent a brief, mild pulse of electricity through wires attached to each electrode, the current caused the bond between the sulfur atoms and the gold platform to break, setting the tethered molecule free.

The researchers said that in theory this technique could be incorporated into a biocompatible implant chip that would release medicine inside a patient on command.

Scientists elsewhere are working on other drug delivery techniques, such as microfabricated containers that unload their medication inside the body when a lid dissolves. Although their approach requires further research and development, Dr. Searson and his team said it could have several advantages over the container technology.

"Because our molecules are attached to a surface, we can work with much smaller concentrations," Dr. Searson said. "We've also shown that our system is reusable. After a group of molecules is released, you can easily attach new molecules to an electrode and use it again."

Researchers also reported their technique in the June issue of the journal *Nano Letters*.

#### CLARIFICATION

In July JADA, an article titled "Evaluating Amalgam Separators Using an International Standard," by Hanu Batchu, MS, and colleagues, mentioned a product called A 1300 (Air Techniques, Melville, N.Y.).

The complete product name is

Guardian Amalgam Collector, package number A1300 (Air Techniques, Hicksville, N.Y.). The authors used the package number in their article as the product name to distinguish this amalgam separator from other Guardian Amalgam Collector packages they have used. ■

Compiled by Amy E. Lund, senior editor.

#### MEETINGS

■ The American Equilibration Society will hold its annual meeting Feb. 21-22 in Chicago. For more information, contact Mr. Marcus Sheldon by e-mail at "aesdental@sprynet.com" or visit "www.occlusion-tmj.org".

■ The Academy of Operative Dentistry will hold its annual meeting Feb. 21-23 in Chicago. For more information, contact Dr. Gregory E. Smith by e-mail at "gesaod@operativedentistry.com" or visit "www.operativedentistry.com".

■ The Chicago Dental Society will hold its midwinter meeting Feb. 22-25 in Chicago. For more information, contact Mr. Randall Grove by phone at 1-312-836-7300, by fax at 1-312-836-7329 or by e-mail at "rgrove@cds.org".

■ The American Association for Dental Research will hold its annual meeting March 21-24 in New Orleans. For more information, contact Dr. Christopher Fox by phone at 1-703-548-0066 or by e-mail at "cfox@iadr.org" or visit "www.dentalresearch.org".

■ The European Academy of Esthetic Dentistry's annual spring meeting will be held June 14-16 in Baden Baden, Germany, June 14-16. For more information, visit "www.eaed.org".

■ The American Dental Society of Europe's meeting will be held

June 26-29 in Glasgow, Scotland. For more information, contact Dr. Alastair MacDonald by phone at 011-44-141-338-8108 or by e-mail at "almacendo@btinternet.com".

■ The 54th European Organization for Caries Research Congress will be held July 4-7 in Copenhagen, Denmark. For more information, visit "www.orca-caries-research.org/congresses.html".

#### APPOINTMENTS/ ELECTIONS/AWARDS

■ **Dr. Leon Assael**, Portland, Ore., has been appointed chairman of oral and maxillofacial surgery at the Oregon Health and Sciences University School of Dentistry, and **Eric Anderson**, Portland, Ore., was named assistant professor of restorative dentistry.

■ **Reva Barewal**, Portland, Ore., received a Tissue Prosthesis Award from the Astra Tech World Congress.

■ **Dr. William Carpenter**, San Francisco, received the Distinguished Alumnus of the Year Award from the University of Pittsburgh School of Dental Medicine.

■ **Dr. Bruce R. DeGinder**, Williamsburg, Va., was installed as president of the Academy of General Dentistry. Other officers are **Dr. Vincent Mayer**, Haddonfield, N.J., president-elect; **Dr. Paula Jones**, Naperville, Ill., vice president; **Dr. David Halpern**, Columbia, Md., secretary; **Dr. Jeffrey Cole**, Wilmington, Del., treasurer; **Dr. Howard R. Gamble**, Sheffield, Ala., speaker of the house; and **Dr. Roger D. Winland**, Athens, Ohio, editor.

■ **Dr. Albert Guckes**, Chapel

Hill, N.C., received the National Foundation for Ectodermal Dysplasias' John E. Gilster, DDS, Outstanding Service Through Dentistry Award.

— **Dr. Kathleen O'Loughlin**, Charlestown, Mass., was elected to the Tufts University School of Dentistry Board of Trustees.

— **Dr. Paul Subar**, Mill Valley, Calif., received the California Dental Association's first Arthur A. Dugoni Faculty Award.

— **Dr. Rodney Vergotine**, Chicago, has been named clinical assistant professor of pediatric dentistry at the University of Illinois at Chicago College of Dentistry; **Dr. Jeffrey K. Collins**, Chicago, has been named assistant clinical professor in the school's Department of Oral and Maxillofacial Surgery; **Dr. Sara C. Gordon**, Chicago, was hired as an associate professor and director of oral pathology graduate education for the Department of Oral Medicine and Diagnostic Sciences; and **Dr. Xiaofeng "Charlie" Zhou**, Chicago, is an assistant professor, Center for Molecular Biology of Oral Diseases.

## CALENDAR OF EVENTS

### ADA ANNUAL SESSIONS

**2007** Sept. 27-Oct. 2, San Francisco

**2008** Oct. 16-19, San Antonio

**2009** Sept. 30-Oct. 3, Honolulu

### 2007 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.

**Alabama Dental Association**, 836 Washington Ave., Montgomery 36104-3839, 1-334-265-1684, **June 12-17, Orange Beach.**

**Alaska Dental Society**, 9170 Jewel Lake Road, Suite 203, Anchorage 99502-5381, 1-907-563-3003, **May 2-5, Anchorage.**

**Arizona Dental Association**, 3193 N. Drinkwater Blvd., Scottsdale 85251-6491, 1-480-344-5777, Western Regional Dental Convention, **March 8-10, Phoenix.**

**Arkansas State Dental Association**, 7480 Highway 107, Sherwood 72120, 1-501-834-7650, **March 30-31, Hot Springs.**

**California Dental Association**, 1201 "K" Street Mall, Sacramento 95814, 1-916-443-0505, **Spring Scientific Session, May 3-6, Anaheim; Fall Scientific Session, Sept. 27-Oct. 2, San Francisco.**

**Colegio de Cirujanos Dentistas de Puerto Rico**, 200 Domenech Ave., Hato Rey 00918, 1-787-764-1969, **Feb. 21-24, San Juan.**

**Colorado Dental Association**, 3690 S. Yosemite, Suite 100, Denver 80237-1808, 1-303-740-6900, **June 15-17, Breckenridge.**

**Connecticut State Dental Association**, 835 W. Queen St., Southington 06489, 1-860-378-1800, **Charter Oak Dental Meeting, May 10-12, Uncasville.**

**Delaware State Dental Society**, The Christiana Executive Campus, 200 Continental Drive, Suite 111, Newark 19713, 1-302-368-7634,

**May 10-11, Dewey Beach.**

**District of Columbia Dental Society**, 502 C St., N.E., Washington 20002-5810, 1-202-547-7613, **Nation's Capitol Dental Meeting, April 19-21, Washington.**

**Florida Dental Association**, 1111 E. Tennessee St., Suite 102, Tallahassee 32308-6913, 1-850-681-3629, **Florida National Dental Congress, June 14-16, Orlando.**

**Georgia Dental Association**, 7000 Peachtree Dunwoody Road, Suite 200, Building 17, N.E., Atlanta 30328-1655, 1-404-636-7553, **July 26-29, Destin, Fla.**

**Hawaii Dental Association**, 1345 S. Beretania St., Suite 301, Honolulu 96814-1821, 1-808-593-7956, **The Hawaii Meeting, Jan. 25-26, Honolulu.**

**Idaho State Dental Association**, 1220 W. Hays St., Boise 83702-5315, 1-208-343-7543, **June 13-16, Boise.**

**Illinois State Dental Society**, 1010 S. Second St., Springfield 62705, 1-217-525-1406, **Sept. 7-9, Oak Brook.**

**Indiana Dental Association**, P.O. Box 2467, Indianapolis 46206-2467, 1-317-634-2610, **May 17-19, Indianapolis.**

**Iowa Dental Association**, 5530 W. Parkway, Suite 100, Johnston 50131, 1-515-986-5605, **May 5-7, Coralville.**

**Kansas Dental Association**, 5200 S.W. Huntoon St., Topeka 66604-2398, 1-785-272-7360, **April 19-21, Manhattan.**

**Kentucky Dental Association**, 1920 Nelson Miller Parkway, Louisville 40223, 1-502-489-9121, **The Kentucky Meeting, May 10-13, Louisville.**

**Louisiana Dental Asso-**

**ciation**, 7833 Office Park Blvd., Baton Rouge 70809-7604, 1-225-926-1986, **April 12-14, New Orleans.**

**Maine Dental Association**, P.O. Box 215, Manchester 04351-0215, 1-207-622-7900, **June 15-16, Rockport.**

**Maryland State Dental Association**, 6410 Dobbin Road, Suite F, Columbia 21045, 1-410-964-2880, **Chesapeake Dental Conference, Sept. 7-9, Baltimore.**

**Massachusetts Dental Society**, Two Willow St., Suite 200, Southborough 01745-1027, 1-508-480-9797, **Yankee Dental Congress, Jan. 24-28, Boston.**

**Michigan Dental Association**, 230 N. Washington Square, Suite 208, Lansing 48933-1312, 1-517-372-9070, **May 2-5, Detroit.**

**Minnesota Dental Association**, 2236 Marshall Ave., Saint Paul 55104-5758, 1-651-646-7454, **Star of the North Meeting, April 28-30, Saint Paul.**

**Mississippi Dental Association**, 2630 Ridgewood Road, Suite C, Jackson 39216-4903, 1-601-982-0442, **June 7-13, Destin, Fla.**

**Missouri Dental Association**, 3340 American Ave., Jefferson City 65109, 1-573-634-3436, **Winter Session, Jan. 19-20, Columbia.**

**Montana Dental Association**, P.O. Box 1154, Helena 59624-1154, 1-406-443-2061, **May 2-4, Missoula.**

**Nebraska Dental Association**, 3120 "O" St., Lincoln 68510-1533, 1-402-476-1704, **April 13-15, Lincoln.**

**Nevada Dental Association**, 8863 W. Flamingo Road, Suite 102, Las Vegas 89147-8718, 1-702-255-4211,

**Midwinter Meeting, Feb. 8-10, Furnace Creek, Calif.; Annual Summer Meeting, July 4-7, Kahuku, Hawaii.**

**New Hampshire Dental Society**, 23 S. State St., Concord 03301, 1-603-225-5961, **May 17-19, Church Landing.**

**New Jersey Dental Association**, One Dental Plaza, P.O. Box 6020, North Brunswick 08902-6020, 1-732-821-9400, **June 6-8, Atlantic City.**

**New Mexico Dental Association**, 9201 Montgomery Blvd. N.E., Suite 601, Albuquerque 87111, 1-505-294-1368, **June 7-9, Albuquerque.**

**New York State Dental Association**, 121 State St., 4th Floor, Albany 12207-1622, 1-518-465-0044, **Board of Governors Meeting, June 7-10, San Juan, Puerto Rico.**

**North Carolina Dental Society**, P.O. Box 4099, Cary 27519-4099, 1-919-677-1396, **May 17-20, Myrtle Beach, S.C.**

**North Dakota Dental Association**, P.O. Box 1332, Bismarck 58502-1332, 1-701-223-8870, **Midwinter Meeting, Jan. 19-20, Bismarck; Annual Session, Sept. 14-16, Fargo.**

**Ohio Dental Association**, 1370 Dublin Road, Columbus 43215-1009, 1-614-486-2700, **Sept. 14-17, Columbus.**

**Oklahoma Dental Association**, 317 N.E. 13th St., Oklahoma City 73104-2835, 1-405-848-8873, **April 26-29, Oklahoma City.**

**Oregon Dental Association**, P.O. Box 3710, Wilsonville 97070-3710, 1-503-218-2010, **Oregon Dental Conference, April 12-14, Portland.**

**Pennsylvania Dental Association**, P.O. Box 3341, Harrisburg 17105-3341, 1-717-

234-5941, **April 26-29, Hershey.**

**Rhode Island Dental Association**, 200 Centerville Road, Suite 7, Warwick 02886-4339, 1-401-732-6833, **May 16, Providence.**

**South Carolina Dental Association**, 120 Stonemark Lane, Columbia 29210-3841, 1-803-750-2277, **May 3-6, Myrtle Beach.**

**South Dakota Dental Association**, P.O. Box 1194, Suite 103, 804 N. Euclid, Pierre 57501-1194, 1-605-224-9133, **May 17-20, Rapid City.**

**Tennessee Dental Association**, Suite 300, 660 Bakers Bridge Ave., Franklin 37067, 1-615-628-0208, **May 17-20, Nashville.**

**Texas Dental Association**, 1946 S. IH35, Suite 400, Austin 78704, 1-512-443-3675, **The Texas Meeting, May 10-13, San Antonio.**

**Utah Dental Association**, 1151 E. 3900 South, Suite 160, Salt Lake City 84124-1216, 1-801-261-5315, **Feb. 8-9, Salt Lake City.**

**Vermont State Dental Society**, 100 Dorset St., Suite 18, South Burlington 05403-6241, 1-802-864-0115, **Sept. 20-21, Burlington.**

**Virginia Dental Association**, 7525 Staples Mill Road, Richmond 23228, 1-804-261-1610, **June 14-16, Norfolk.**

**Washington State Dental Association**, 1001 Fourth Ave., Suite 3800, Seattle 98154, 1-206-448-1914, **Pacific Northwest Dental Conference, July 19-20, Seattle.**

**West Virginia Dental Association**, 2016-1/2 Kanawha Blvd. East, Charleston 25311, 1-304-344-5246, **Annual Session, June 19-22, White Sulphur Springs.**

**Wisconsin Dental Association**, 6737 W. Washington St., Suite 2360, West Allis 53214-4815, 1-414-276-4520, **Jewel of**

**the Great Lakes, May 10-11, Green Bay.**  
**Wyoming Dental Association**, P.O. Box 40019,

Casper 82604, 1-307-237-1186,  
**June 21-24, Rock Springs.**

Compiled by Jennifer Garvin, senior editor,  
ADA News.