NIH awards NYU $1.8 million to study severe early childhood caries

Dr. Page W. Caufield, a professor of cariology and comprehensive care at New York University College of Dentistry, has received a five-year, $1.83 million grant from the National Institute of Dental and Craniofacial Research (NIDCR), part of NIH, to conduct research to help identify those at risk for severe early childhood caries, a disease that can destroy most of a child's teeth by age six.

The grant will fund Caufield's team in creating a genetic profile of Streptococcus mutans, the bacterium that causes the condition, which disproportionately affects children in underserved socioeconomic groups.

"Through profiling, we will uncover genetic differences between virulent, disease-causing S. mutans strains and those strains found in children who are caries free," Caufield explains.

In an earlier phase of Caufield's research, which was also funded by the NIDCR, Caufield and his team discovered that mothers transmit S. mutans to their babies, a process believed to occur when the baby passes through the birth canal and comes in contact with transient bacteria originating in the mother's oral cavity. Plaque created by the bacteria covers the baby's teeth when they emerge and can erode some teeth in as little as one year. The earlier study identified S. mutans gene sequences common to a group of 50 medically underserved New York City Hispanic children with severe early childhood caries.

With the help of the new grant, the team will assess whether those gene sequences can reliably predict the disease in a group of 500 children from diverse racial and ethnic backgrounds. This finding is expected to propel the development of a diagnostic test that dentists could administer chairside to identify those at risk, so that preventive measures, such as sealing children's teeth shortly after they emerge, can be taken.

Caufield's co-investigators are Dr. Yihong Li, associate professor of cariology and comprehensive care; Dr. Deepak Saxena, assistant professor of basic science and craniofacial biology; and Dr. Robert Norman, research associate professor of epidemiology and health promotion, all of the NYUCD; and Dr. Jane Carlton, associate professor of medical parasitology, and Dr. Stuart Brown, associate professor of cell biology, of the NYU School of Medicine. Source: New York University

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**Tennessee to adopt electronic medical information system**

Tennessee and AT&T Inc. are introducing the nation’s first statewide system for exchanging patients’ medical information electronically. Although the company and the state may need several more months to iron the system out, it will enable health care professionals to access medical histories, issue prescriptions, transfer diagnostic images, and communicate over the Internet with other branches of medicine.

Governor Phil Bredesen expects the new system to lower costs while providing better health care throughout the state. He ran HealthAmerica Corp. before becoming a politician.

—John Hoffman

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**Dentists face Medicaid deadline**

Dentists and other health care professionals are reminded that as of April 1, 2008, all written prescriptions for Medicaid patients, including computer-generated prescriptions printed on paper inserted into a printer, must be on tamper-resistant pads.

On its Web site, the American Dental Association (ADA) notes that if and professional organizations devoted to other branches of medicine got the requirement delayed from its original deadline of October 1, 2007. Now that the six-month moratorium has expired, all hand-written Medicaid prescriptions require at least one tamper-resistant feature to prevent copying, erasure or counterfeiting.

"Some states require tamper-resistant prescriptions, but many don’t," ADA notes on its Web site. “The impact will be minimal for dentists in states already requiring tamper-resistant pads. Dentists in other states must use new pads from their dental supply firms for all Medicaid prescriptions beginning April 1." Further information can be found from state dental executives, state Medicaid directors’ Web sites and the Centers for Medicare & Medicaid Services.

Source: ADA

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**Advantages**

- Outstanding aesthetics
- High strength material
- Economic cosmetic solutions

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**Indications**

- Single units
- Long span bridges (16 units)

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**ZIRCONIA BIOCOMPATIBLE CAD/CAM ALL-CERAMIC**

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<td>Single units</td>
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<td>Full functionality</td>
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**CR COBALT CAD/CAM METAL-CERAMIC**

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<td>Excellent strength and hardness</td>
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<td>Corrosion and temperature resistance</td>
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**LIGHT® BIOCOMPATIBLE CAD/CAM METAL-CERAMIC**

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**Sunflex® PARTIALS**

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<td>No metal clasp</td>
<td>Single units</td>
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<td>More esthetic than other flexible acrylics</td>
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<td>Perfect fit for flexibility</td>
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**Suntech CAD/CAM CROWNS**

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<td>Full functionality</td>
<td>Long span bridges (16 units)</td>
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AADR pushes for greater funding for NIDCR

American Association for Dental Research (AADR) President Marc Heft, DMD, PhD, testified in support of dental research and increased funding before the U.S. House Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies on March 15. Citing advances in oral health science, Heft asked Congress to strengthen funding for the National Institute of Dental and Craniofacial Research (NIDCR) and provide $458 million for the institute in 2009.

From 1998-2005, Congress doubled the budget for the National Institutes of Health (NIH), leading to a dramatic acceleration in health care discoveries, including those for dental care and oral health research. But flat funding for NIH over the last six years has left researchers and their institutions vulnerable to rising costs. Since 2005, NIH has lost more than 10 percent of its purchasing power. “There are many research opportunities with an immediate impact on patient care that need to be pursued,” noted Heft, a professor and director of the department of oral and maxillofacial surgery and diagnostic sciences at the University of Florida.

“Additional funds can help greatly in bringing these opportunities to fruition. Imagine a world where disease can be detected at its earliest possible moment with quick, painless and non-invasive saliva-based tests. Imagine getting results from a test for oral cancer or systemic diseases without a two- or three-day wait, or going to the dentist for a mineral-restoring rinse, instead of getting a filling. We would not only improve Americans’ quality of life, but also save lives and ease the demand currently burdening the valuable resources available to our health care system.”

Source: AADR
Small-diameter dental implants become more popular in the U.S.

Millennium Research Group’s U.S. Dental Marketrack has found that small-diameter (less than or equal to 5 mm) dental implants are becoming increasingly popular in the U.S. Revenues for these implants are growing faster than those of regular-diameter (greater than 5 mm) dental implants. The U.S. market for small-diameter dental implants grew by more than 30 percent in 2007, generating over $20 million in revenues, the company says. An increasing number of general practitioners (GPs) incorporating dental implants into their list of services “has contributed significantly” to the rising sales of small-diameter dental implants.

“Patients often prefer the small-diameter to large-diameter dental implants because they involve less surgical time and are a more cost-effective option,” says Chris Shutsa, senior analyst at Millennium Research Group. “Small-diameter dental implants usually require fewer steps to place and can be placed noninvasively, making them a simpler solution for a clinician new to implantology.”

Although only a few manufacturers offer small-diameter dental implants approved by the Food and Drug Administration for long-term use, Millennium expects more competitors to enter the market over the next five years. The large population base that can benefit from small-diameter dental implants, in addition to continuous education efforts by implant manufacturers, will make dentists more comfortable with this treatment option, facilitating the market’s growth through at least 2012.

Dental Marketrack gathers data from more than 300 dentists, including general dentists, oral and maxillofacial surgeons, periodontists, and prosthetists throughout the U.S. on a quarterly basis. Millennium Research Group (www.MRG.net) is a Decision Resources Inc. company (www.DecisionResources.com).

Source: Millennium Research Group