**On Campus**

**Columbia Celebrates Chinese New Year**

On Feb. 11, the Columbia University Chinese Students and Scholars Association (CUCSSA) held its sixth annual Chinese New Year Grand Party in Alfred Lerner Hall, welcoming approximately 1,500 guests. This year’s celebration, one of the largest of its kind on the East Coast, raised contributions for victims of the recent tsunami. The event featured a diverse array of events, including traditional Chinese folk art performers, martial arts scenes by the Peking Opera Troupe, acrobatic performances, a dance party, film, karaoke, a raffle and video presentations.

Above: Members of the Beijing Opera.

Above: Hannah, student of Jun Ling Wang of Chinese Musical Art Inc., plays the zither for the capacity audience. Left and below left: Members of the Quanzhou Marionette Troupe perform.

**Current Research**

**Mailman School: Brushing Your Teeth May Reduce Risk of Stroke**

By Craig LeMoult

A new study by researchers at Columbia University Medical Center (CUMC) provides the most direct evidence to date that preventing gum disease could significantly improve your chances of avoiding vascular problems.

The study, which appears in the Feb. 8 edition of the American Heart Association publication *Circulation*, shows that people with gum disease are more likely to suffer from atherosclerosis, a narrowing of blood vessels that can lead to stroke or heart attack.

Previous studies have suggested a relationship between periodontal disease and vascular disease, but they have relied on surrogate markers for periodontal disease, such as tooth loss or pocket depth. This is the first study to examine the microbiology of periodontal infection and positively connect it to atherosclerosis.

“This is the most direct evidence yet that gum disease may lead to stroke or cardiovascular disease,” said Moïse Desvarieux, assistant professor of epidemiology at the Mailman School of Public Health and lead author of the paper. “And because gum infections are preventable and treatable, taking care of your oral health could very well have a significant impact on your cardiovascular health.”

Columbia researchers measured the bacteria levels in the mouths of 657 people who had no history of stroke or heart attack. They also measured the thickness of the subjects’ carotid arteries, which are measured to identify atherosclerosis. The researchers found that people with a higher level of the specific bacteria known to cause periodontal disease also had an increased carotid artery thickness, even after taking other cardiovascular risk factors into account.

Desvarieux, who is principal investigator of the study, and his colleagues showed that in these people, atherosclerosis is associated specifically with the type of bacteria that causes periodontal disease and not with other oral bacteria. They confirmed this by assessing the levels of three different groups of microbes that are known to cause periodontal disease, those that are thought to possibly cause periodontal disease and those that are not connected to the disease. The relationship between atherosclerosis and oral bacteria only existed for bacteria causally related to periodontitis.

The research is part of the NIH-funded Northern Manhattan Stroke (INVEST) at CUMC and the University of Minnesota, and the NINDS-funded Northern Manhattan Critical Care division of the Columbia College of Physicians and Surgeons, and a coauthor of the study.

“According to Desvarieux, one possible explanation for the link is that the bacteria that cause the gum disease may migrate through the body via the bloodstream and stimulate the immune system, causing inflammation that results in the clogging of arteries.”

“It is important that we have shown an association between specific periodontal pathogens and carotid artery thickness that is unique and unrelated to other oral bacteria,” said Panos N. Papapanou, professor and chair of the Section of Oral and Diagnostic Sciences, and director of the Division of Periodontics at the Columbia School of Dental & Oral Surgery. Papapanou is a coauthor on the study, and his laboratory performed the periodontal microbiological analysis.

“The measurement of carotid arteries thickness, which has been shown to be a strong predictor of stroke and heart attacks, was performed in our ultrasound lab without knowledge of the subjects’ periodontal status to ensure an unbiased evaluation of cardiovascular health,” said Associate Chair of Neurology Ralph L. Sacco, who is also director of the Stroke and Critical Care division of the Columbia College of Physicians and Surgeons, and a coauthor of the study.

“This study is an example of the multidisciplinary alliance of strong epidemiologic design and methods, microbiology and imaging,” said Desvarieux. “We will continue to study these patients to determine if atherosclerosis continues over time and is definitively associated with periodontal disease.”

For more information, visit www.cumc.columbia.edu

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