



IADR

International Association
for Dental Research

For Immediate Release

Contact: Ingrid L. Thomas
ithomas@iadr.org or +1.703.299.8084

July 8, 2009

Is Obesity an Oral Bacterial Disease?

New research published in the June issue of the Journal of Dental Research suggests that oral bacteria may contribute to the development of obesity.

Alexandria, Va. – The world-wide explosion of overweight people has been called an epidemic. The inflammatory nature of obesity is widely recognized. Could it really be an epidemic involving an infectious agent? In this climate of concern over the increasing prevalence of overweight conditions in our society, investigators have focused on the possible role of oral bacteria as a potential direct contributor to obesity.

To investigate this possibility, the study's researchers J.M. Goodson, D. Groppo, S. Halem and E. Carpino measured salivary bacterial populations of overweight women. Saliva was collected from 313 women with a body mass index between 27 and 32, and bacterial populations were measured by DNA probe analysis. Levels in this group were compared with data from a population of 232 healthy individuals from periodontal disease studies. The median percentage difference of seven of the 40 bacterial species measured was greater than 2 percent in the saliva of overweight women. Classification tree analysis of salivary microbiological composition revealed that 98.4 percent of the overweight women could be identified by the presence of a single bacterial species (*Selenomonas noxia*) at levels greater than 1.05 percent of the total salivary bacteria. Analysis of these data suggests that the composition of salivary bacteria changes in overweight women.

It seems likely that these bacterial species could serve as biological indicators of a developing overweight condition. Of even greater interest, and the subject of future research, is the possibility that oral bacteria may participate in the pathology that leads to obesity.

The complete research study is published in the June issue of the International and American Associations for Dental Research's *Journal of Dental Research*, and is available online at <http://jdr.sagepub.com/cgi/content/full/88/6/519>.

About the International Association for Dental Research

The International Association for Dental Research (IADR) is a nonprofit organization with more than 10,000 individual members worldwide, dedicated to: (1) advancing research and increasing knowledge to improve oral health, (2) supporting the oral health research community, and (3) facilitating the communication and application of research findings for the improvement of oral health worldwide. To learn more, visit www.iadr.org. The **American Association for Dental Research** (AADR) is the largest Division of IADR, with nearly 4,000 members in the United States. To learn more, visit www.aadronline.com.

About the Journal of Dental Research

The *Journal of Dental Research* is a multidisciplinary journal dedicated to the dissemination of new knowledge in all sciences relevant to dentistry and the oral cavity and associated structures in health and disease. At 3.966, the *JDR* holds the highest Five-Year Impact Factor of all dental journals publishing original research, with a cited half-life >10 years, reflecting the influential nature of the *Journal's* content. It also has the highest Eigenfactor Score in the field.

###