

# Gender-specific differences in the salivary microbiome of caries-active children

June 22 2019

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At the 97th General Session & Exhibition of the International Association for Dental Research (IADR), held in conjunction with the 48th Annual Meeting of the American Association for Dental Research (AADR) and the 43rd Annual Meeting of the Canadian Association for Dental Research (CADR),

Stephanie Ortiz, Oregon Health & Science University, Portland, USA, gave a poster presentation on "Gender-specific Differences in the Salivary Microbiome of Caries-active Children." The IADR/AADR/CADR General Session & Exhibition is held at the Vancouver Convention Centre West Building in Vancouver, BC, Canada from June 19-22, 2019.

Dental caries represents one of the most common chronic diseases found in young [children](#) and is a multi-factorial disease involving complex interactions of microbiological, genetic and socioeconomic risk factors. While women exhibit higher caries incidence than men, it is unclear if this disparity can be extended to children. Ortiz and coauthors sought to determine gender-specific differences in the salivary microbiome within caries-active children by collecting and testing saliva specimens.

Saliva specimens were collected from 85 children, 41 boys and 44 girls, between the ages of two to 14 years. Microbial DNA was isolated using the QIA Symphony isolation robot and then subjected to PCR amplification using V3-V4 16S rDNA-specific primers and next generation sequencing with high-throughput Illumina sequencing. Oral

microbiota libraries and profiles were generated by the Forsyth Institute, Cambridge, MA and subjected to further biostatistical analyses at Oregon Health & Science University, Portland, USA.

Significant differences in oral microbiota were found between caries-active boys versus girls. The primary microbial genera associated with caries in [young children](#) includes Actinobaculum, Atopobium, Aggregatibacter and Streptococcus. Actinobaculum, Veillonella parvula and the acid-generating Lactococcus lactis, all microorganisms associated with dental caries, were found in much higher prevalence in caries-active girls than boys, indicating that these microorganisms may play a more significant role in girls to shape the cariogenic microbial environment

**More information:** This poster presentation, #2780, was held on Friday, June 21, 2019 at 3:45 p.m. in West Exhibition Hall B of the Vancouver Convention Centre West Building, Vancouver, BC, Canada.

Provided by International & American Associations for Dental Research

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