

New bacterial species found in human mouth

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Scientists have discovered a new species of bacteria in the mouth. The finding could help scientists to understand tooth decay and gum disease and may lead to better treatments, according to research published in the August issue of the *International Journal of Systematic and Evolutionary Microbiology*.

"The healthy human mouth is home to a tremendous variety of microbes including viruses, fungi, protozoa and bacteria," said Professor William Wade from King's College London Dental Institute. "The bacteria are the most numerous: there are 100 million in every millilitre of saliva and more than 600 different species in the mouth. Around half of these have yet to be named and we are trying to describe and name the new species."

Scientists studied healthy tissue as well as tumours in the mouth and found three strains of bacteria called *Prevotella* that could not be identified. *Prevotella* species are part of the normal microbial flora in humans and are also associated with various oral diseases and infections in other parts of the body. The researchers named the new species *Prevotella histicola*; *histicola* means 'inhabitant of tissue'.

"Interestingly, this species was isolated from within the oral tissues, both in oral cancers and normal, healthy tissue," said Professor Wade. "This confirms other work showing that oral bacteria can invade both tissues and individual cells."

Tooth decay and gum disease are the most common bacterial diseases of

man and are caused by changes in the microbes normally present in the mouth. To understand these diseases better, scientists first need to know which bacteria are present in human mouths. Understanding the composition of the oral microbiota will also help scientists devise new prevention measures and treatments for oral diseases.

"A detailed description and name for each species of bacteria are needed so that different laboratories can recognise all of the bacterial species present in the mouth," said Professor Wade.

Source: Society for General Microbiology

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