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The characterization of oral micro biome in periodontally healthy people

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Periodontitis is a serious inflammatory disease affecting supporting structures of teeth (periodontium). Bacteria play an essential role in disease development; they accumulate in the subgingival space and form biofilms. Depending on the velocity of progression of the tissue destruction we distinguish the aggressive and chronic type of periodontitis. The probability of development of chronic periodontitis disease increases with the age of the patient. Thanks to modern sequencing methods, the oral taxa present in patients with periodontitis are generally well described. The characterization of the oral microbiome associated with periodontal health, however, could be radically improved. According to our preliminary results we define the onset of chronic periodontitis as a continuous process with the gradual colonization of mouth pathogenic bacteria. The aim of our project is a characterization of oral microbiome in typically healthy persons on a group of 60-100 young people, using the Illumina MiSeq sequencing method. We suppose that in a group of these very young people there is the biggest probability to obtain bacterial profiles without any periodontal changes. A better definition of oral microbiome associated with periodontal health will subsequently enable the use of sequencing methods for early diagnosis of patients with periodontitis.

Biography

Magdalena Pavlikova has been a member of the Laboratory for Biology of Secondary Metabolism since her bachelor degree. Currently, she is a student of the third year of Doctoral studying program Microbiology at the Charles University in Prague.

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