Antibacterial activity of Slovenian honeys against selected species of oral bacterial flora

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Honey ...
- has been recently proposed by several authors as an alternative agent for the treatment of chronic wounds.
- showed antimicrobial activity against several human pathogens in recent studies, mostly due to presence of hydrogen peroxide, flavonoids and high sugar concentration.

Periodontal disease ...
- is a multifactorial infectious disease, in which bacteria in dental plaque (biofilm) play a major role.
- its prevalence is increasing and is the most frequent cause of teeth loss.

Aim of the study
- was to investigate in vitro the antibacterial activity of different types of Slovenian honey against selected periodontopathic bacteria and oral streptococci.

Methods
- Honey samples were selected to represent a range of 7 different floral sources.
- The agar-diffusion method was used to test the activity of honey against clinical isolates of the following periodontopathic species: Prevotella intermedia, Prevotella veroralis, Porphyromonas gingivalis, Aggregatibacter actinomycetemcomitans, the following species of facultative oral streptococci (Streptococcus sanguis, Streptococcus salivarius, Streptococcus oralis and Streptococcus mutans) and an isolate of Capnocytophaga sp.

Results & Conclusions
- Average diameters of the inhibition zones of undiluted honey samples are shown in Figure 1.
- Honey samples were less active against oral streptococci in comparison to periodontopathic species (Figure 2).
- All honey showed the best antibacterial activity against A. actinomycetemcomitans.
- All honey showed the lowest antibacterial activity against Capnocytophaga sp.

Fig. 1: Activity of Slovenian honey against selected anaerobic species of oral bacteria flora
Fig. 2: Activity of Slovenian honey against selected oral streptococci