Review of: "Oral streptococci subvert the host innate immune response through hydrogen peroxide"

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Periodontal disease being multifactorial in nature, is characterized by the disturbance in host-microbial interactions, involving a wide range of complex entities. Many of the previous studies have focused greatly on periodontal pathogens, while this study tests the effects of hydrogen peroxide produced by oral streptococci. We would like to first appreciate the authors for conducting such an extensive research work on a topic that is often overlooked. Oral streptococci have been predominantly categorized as bystanders in periodontal disease, therefore a study on their actions on the periodontium, is an interesting approach, in unearthing what we could have missed out in the past.

The authors have done a thorough study to test the various aspects of their hypothesis/objectives. The study emphasizes on the role of H_2O_2 produced by oral streptococci in prevention of overt gingival inflammation, through activation of Nrf-2 ARE antioxidant defence system and inhibition of NF-κβ pathway.

However, we may have some concerns regarding the conclusion made below the segment “Activation of Nrf-2ARE by oral streptococci H_2O_2 inhibited the NF-κβ signalling pathway” (results section). We also feel that the article could have been written in simpler terms, with explanations of the components used, to enable better understanding of the concepts for dental students and researchers at all levels.

We wish the authors of the study very well, on any future work on this subject and are looking forward to it. We enjoyed reading the article and understanding their work. Thank you for this opportunity.