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The oral – systemic link: oral infection/inflammation and the relation to general health

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ABSTRACT

Increasing evidence suggests an independent association between periodontitis and a range of comorbidities, among others: cardiovascular disease, type 2 diabetes and rheumatoid arthritis. Shared inflammatory pathways are likely to contribute to this association, but distinct causal mechanisms remain to be defined. Some of these comorbid conditions may improve by periodontal treatment, and a bidirectional relationship may exist, where, for example, treatment of diabetes can improve periodontal status, and successful treatment of periodontitis lowers blood glucose levels (i.e. HbA1c) in the diabetic patient. In this presentation an overview of the evidence linking periodontitis with selected systemic diseases will be discussed. The available evidence for an oral-systemic link calls for increased cooperation between dentists and medical doctors to provide optimal screening, treatment, and prevention of both periodontitis and its comorbidities.

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Effect of saccharomycin, a natural *Saccharomyces cerevisiae* biocide, on *Hanseniaspora guilliermondii* cells surface

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ABSTRACT

Introduction: During spontaneous wine fermentations, most of the non-*Saccharomyces* yeasts present in grape musts show an early decline in their population. It was traditionally assumed that *Saccharomyces cerevisiae* (*S.c.*) prevalence was due to the higher resistance of this species to ethanol. However, wine fermentations performed with single cultures of non-*Saccharomyces* strains showed that those strains could withstand much higher ethanol levels [1]. It was then found that *S.c.* (strain CCMI 885) produced antimicrobial peptides (AMPs) that are responsible for the early death of the non-*Saccharomyces* yeasts [2]. In previous work, we isolated, purified and sequenced those ntimicrobial peptides (AMPs) and found that they derive from the glyceraldehyde 3-phosphate dehydrogenase enzyme [3]. These GAPDH-derived AMPs compose the natural biocide secreted by *S.c.*, which we named saccharomycin, and are effective against sensitive yeasts both in its natural/isolated and synthetic form [4,5].

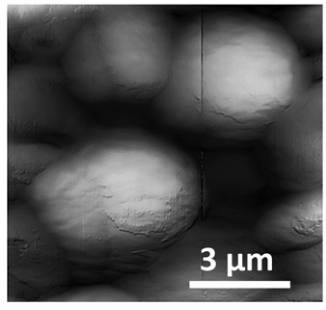

Figure 1. AFM image of H.g. cells after contact with the anti-microbial peptide (Saccharomycin) for 24 h, with roughness increase and surface rupture.