

## **0582 $\alpha$ -D-Glucosidase, $\alpha$ - $\beta$ -D-Galactosidases, and Host Cells in Gingival Crevicular Fluid from Subjects with Aggressive Periodontitis**

[S. AIRILA-MÅNSSON](#)<sup>1</sup>, B. SÖDER<sup>1</sup>, L.J. JIN<sup>2</sup>, B. KLINGE<sup>1</sup>, and P.-Ö. SÖDER<sup>1</sup>, <sup>1</sup> Karolinska Institutet, Huddinge, Sweden, <sup>2</sup> University of Hong Kong, Hong Kong

**Objectives:** The aim was to study  $\alpha$ -D-glucosidase,  $\alpha$ - $\beta$ -D-galactosidases, and host cells in gingival crevicular fluid (GCF) from subjects with aggressive periodontitis (AgP-group). **Methods:** The participants were 20 subjects and 5 healthy controls. Gingival crevicular fluid (GCF) was collected from the deepest sites, 4 sites/subject. GCF was collected in an intracrevicular washing system. The protein content was assayed by a protein-staining method. The activity of  $\alpha$ -D-glucosidase,  $\alpha$ - $\beta$ -D-galactosidases were determined by measuring the release of 4-methylumbelliferone at 450 nm. Cell counts were performed in a Bürker chamber. Analysis of Variance (ANOVA) and regression analysis were the statistical methods used. **Results:** There were significant differences in all clinical parameters ( $p < 0.05$ - $p < 0.001$ ) between the groups except number of remaining teeth. The number of mononuclear cells was significantly higher ( $p < 0.05$ ) in the AgP-group compared to controls. The total protein content was in the AgP-group mean  $267.1 (\pm 25.1SD)$   $\mu\text{g/ml}$  and in the controls  $111.4 (\pm 29.1SD)$  ( $p < 0.01$ ). There were statistically significant differences between AgP-group and controls in  $\alpha$ - $\beta$ -D-galactosidase activities ( $p < 0.05$ ). In the AgP-group there was a correlation between  $\alpha$ -D-glucosidase activity and  $\alpha$ - $\beta$ -D-galactosidase activity ( $r = 0.81$ ,  $p < 0.001$ ). **Conclusions:**  $\alpha$ -D-Glycosidase and  $\alpha$ - $\beta$ -D-galactosidases in the GCF seem to react as sensitive biomarkers for subclinical changes that may later lead to clinical disease.

[Seq #67 - Diagnostics: Periodontal Pathogens](#)

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