

## FORSKNINGSRAPPORT - ABSTRACTS 2019

### Peri-implant crevicular fluid proteome before and after adjunctive enamel matrix derivative treatment of peri-implantitis

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**Introduction:** The peri-implant crevicular fluid (PICF) is an easily accessible biological medium suitable for identifying and measuring biomarkers associated with peri-implant disease.

**Aim:** The aim of this study was to explore which PICF protein pattern is associated with the active peri-implantitis process.

**Methods:** Peri-implant crevicular fluid from 25 peri-implantitis sites were subjected to proteomic analysis using liquid chromatography-tandem mass spectrometry before and at 3, 6 and 12 months after surgical treatment, to identify associations between PICF protein pattern and implant loss, bleeding on probing, pocket depth and enamel matrix derivative (EMD) treatment.

**Results:** The main findings, based on 3–12 months PICF using principal component analysis, were two major clusters of the subjects proteomic profiles. Cluster 2 differentiated from cluster 3 by 52 proteins ( $R^2 = 90\%$ ,  $Q^2 = 80\%$ ) and belonging to cluster 2 was associated with implant loss ( $p = 0.009$ ) and bleeding on probing ( $p = 0.001$ ). Cluster 3 was associated with implant survival and EMD treatment ( $p = 0.044$ ).

**Conclusions:** We found that a specific PICF proteomic profile was more associated with active peri-implantitis process and implant loss.