

Periodontal inflammation and infection

Research group: Eija Könönen, DDS, PhD, Specialist in Periodontology, Docent in Oral Microbiology, Professor, Department of Periodontology, University of Turku. E-mail: eija.kononen@utu.fi, Phone: +35823338557; **Senior researchers:** Ulvi Gürsoy, DDS, PhD, Specialist in Periodontology, Docent, Mervi Gürsoy, DDS, PhD, Specialist in Periodontology, Ahmed Musrati, DDS, PhD; **Doctoral candidates:** Dareen Fteita MSc, DDS, Liisa Lehto BDS, Anna Liukkonen DDS, Joonas Liukkonen DDS, Fares Zeidán Chuliá MSc, PhD, Krista Salli MSc, Ahmed El-Gahawi, DDS; **Technicians:** Oona Hällfors, Katja Sampalahti

Project description: The study objects are periodontal infection and infection-induced inflammation, oral biofilm-host interaction, impact of periodontal disease on systemic conditions, and salivary diagnostics in periodontology. A major part of our research is directed to the use of saliva in large-scale studies to detect the inflammatory process, including alveolar bone destruction, and associated factors of innate immunity with the help of salivary biomarkers and/or bacterial combinations. Another research line is basic laboratory work, where our interest is the interaction of oral anaerobes and biofilms with host cells of the periodontium.

Publications:

- Liukkonen A, He Q, Gürsoy UK, Pussinen PJ, Gröndahl-Yli-Hannuksela K, Liukkonen J, Sorsa T, Suominen AL, Huuononen S, Könönen E. Mannose-binding lectin gene polymorphism in relation to periodontal infection. **J Periodontal Res** 2016 Sep 14. [Epub ahead of print]
- Gürsoy M, Gürsoy UK, Liukkonen A, Kauko T, Penkkala S, Könönen E. Salivary antimicrobial defensins in pregnancy. **J Clin Periodontol** 2016; 43: 807-15.
- Musrati AA, Fteita D, Paranko J, Könönen E, Gürsoy UK. Morphological and functional adaptations of *Fusobacterium nucleatum* exposed to human neutrophil peptide-1. **Anaerobe** 2016; 39: 31-8.
- Zeidán-Chuliá F, Gürsoy M, Neves de Oliveira BH, Özdemir V, Könönen E, Gürsoy UK. A systems biology approach to reveal putative host-derived biomarkers of periodontitis by network topology characterization of MMP-REDOX/NO and apoptosis integrated pathways. **Front Cell Infect Microbiol** 2016 Jan 11; 5: 102.
- Gürsoy UK, Liukkonen J, Jula A, Huuononen S, Suominen AL, Puukka P, Könönen E. Associations between salivary bone metabolism markers and periodontal breakdown. **J Periodontol** 2016; 87: 367-75.
- Könönen E, Wade WG. *Actinomyces* and related organisms in human infections. **Clin Microbiol Rev** 2015; 28: 419-42.

Number of PhDs supervised 2010-: 2

External funding: The Finnish Dental Society Apollonia, Turku University Foundation, Turun yliopiston tutkimusapurahasto, Tyksin erityisvastuualueen (erva)