

2<sup>nd</sup> World Congress on

# Bio Summit & Molecular Biology Expo

October 10-12, 2016 Dubai, UAE

## The oral microbiome and salivary biomarkers in health and disease

Farah Ibrahim Al-Marzooq<sup>1</sup> and Natheer Al-Rawi<sup>2</sup>

<sup>1</sup>Research Institute of Medical & Health Sciences, University of Sharjah , UAE

<sup>2</sup>College of Dental Medicine, University of Sharjah , UAE

The oral microbiome plays a relevant role in human health and it is a key element in a variety of oral and systemic diseases. There is a relation between oral and systemic diseases, but the question remains whether the oral diseases are the cause or the consequence of pathological process in other body sites. We aim to compare the bacterial community and the level of selected biomarkers in the saliva of adults in health and disease conditions. 90 saliva samples were collected from three equal groups (obese with diabetes, obese without diabetes and healthy control). Resistin (a biomarker of insulin resistance) was measured in saliva using ELISA technique. Real-time PCR was used to quantify selected bacterial species associated with oral infections. Salivary resistin was significantly higher in the obese patients (diabetics and non-diabetics) compared to the healthy control. Fusobacterium (associated with gingivitis), Porphyromonas gingivalis and Tannerella forsythia (associated with periodontitis) were detected in significantly higher quantities in the obese patients (diabetics and non-diabetics) compared to the healthy control. No correlation was found between the levels of salivary resistin and different oral bacteria. This study highlighted the importance of saliva as a non-invasive sample for the detection of biomarkers and microbes associated with oral and systemic diseases. This may pave the way for more effective diagnostic and therapeutic methods which can contribute to the development of personalized medicine and personalized dental medicine.

### Biography

Farah Ibrahim Al-Marzooq is a medical doctor specialized in microbiology. She has completed her PhD degree (with thesis distinction) from the Department of Medical Microbiology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia in 2015. During her PhD study, she was able to identify 3 novel gene variants (related to antibiotic resistance) reported for the first time at the global level. She is currently working as a postdoctoral research associate in the Research Institute of Medical & Health Sciences , University of Sharjah , UAE. Her research work was published in several reputable international journals.

falmarzooq@sharjah.ac.ae

### Notes: