**Sleep disorder is associated with altered composition of oral bacteria; the RHINESSA study, Bergen, Norway**

**Aim of the study –** To study whether the composition of oral microbiota differ compared to participants those reported sleep problem vs those who did not.

The study population includes 477 adult participants (≥18 years of age) investigated as part of the RHINESSA generation study (www.rhinessa.net) in Bergen, Norway. The participants were examined in 2014-2015 with questionnaires, interviews, and clinical examinations. We collected data on age, gender, educational level, smoking status and use of antibiotics in the four weeks before clinical examination. Fourteen participants were excluded from further analyses due to the use of antibiotics in the last four weeks before gingival sampling. The questionnaires are available at [www.rhinessa.net](http://www.rhinessa.net)

*Gingival sample collection*

The clinical examination included gingival fluid sampling on which 16S rRNA MiSeq amplicon sequencing was done on the Microbiome Core Facility, University of North Carolina, Chapel Hill, NC, USA. The description of the biosampling, the laboratory procedures and quality control are described in detail in the Supplement.

**Questionaries related to the sleep disorder**

1. *How often do you snore loudly and disturbingly? RHINESSA*

Ans: 1=never or almost never/2=less than once a week/3=once or twice a week/4=3-5 nights/days a week/5=almost every day or night

1. *How often do you have heartburn or belching when gone to bed? RHINESSA*

Ans: 1=never or almost never/2=less than once a week/3=once or twice a week/4=3-5 nights/days a week/5=almost every day or night

1. *How often do you have difficulty getting to sleep at night? RHINESSA*

1=never or almost never/2=less than once a week/3=once or twice a week/4=3-5 nights/days a week/5=almost every day or night