

## Po 16 : Detection of Saccharibacteria (TM7), a Candidate Phyla Radiation in the urinary microbiome

Abdourahamane Yacouba, microbiologiste, maitre-assistant, Faculté des Sciences de la Santé/UAM, E-mail : [abdourahamaneyacouba@yahoo.fr](mailto:abdourahamaneyacouba@yahoo.fr).

**Introduction:** Candidate Phyla Radiation (CPR) microbes have recently been described as a new extension of the tree of life in different environments. CPR has been detected in various human samples, including the oral cavity, vagina, and gut, but has not been reported in urine specimens. Here, we use different approaches combining 16S rRNA PCR sequencing and scanning electron microscopy to demonstrate the presence of the Saccharibacteria species in urine samples. **Methods:** Urine was collected under different urinary health conditions. A combination of multiple approaches, including targeted qPCR, scanning electron microscopy, metagenomics, and culturomics, was adopted to detect Saccharibacteria in urine samples and to characterise the bacteria and environment associated with their presence. The salinity and pH of the urine samples were analysed for each patient. **Results:** A total of 178 urine samples from 178 subjects were included in this study, with a median participant age of 48 years [interquartile range (IQR) 29.75-69 years] and a sex ratio of 0.56. The detection rate of CPR was 7.9%. Salinity was higher in CPR positive samples ( $p=0.009$ ), and CPR detection was higher in specimens sampled from women than from men ( $p=0.04$ ). Our efforts to isolate CPR organisms by culture were unsuccessful. We found using both culturomics and metagenomics that *Anaerococcus hydrogenalis*, *Atopobium parvulum*, *Bacteroides fragilis*, *Gardnerella vaginalis*, *Streptococcus parasanguinis*, and *Pseudoramibactera lactolyticus* are associated with Saccharibacteria-positive samples. **Conclusion:** The findings from this study demonstrate the presence of Saccharibacteria organisms in urine. As our efforts to isolate Saccharibacteria organisms by culture were unsuccessful, further studies are needed to confirm our findings and to better understand the lifestyle of the Saccharibacteria organism, its relation to other microorganisms living in the urinary tract, and its role in this ecosystem. **Keywords:** Bacteriophage Therapy, Research Funding, Global Health, Antibiotic Resistance, Investment Trends.