

## Introduction and Objective

- Expanded quantitative urine culture (EQUC) combined with 16s rRNA sequencing have been used to prove the existence of a urinary microbiome.
- The pediatric urinary microbiome of asymptomatic healthy infants has not been characterized using EQUC.
- Using a modified EQUC, we hypothesize that a urinary microbiome may be detectable with EQUC.

## Methods

- IRB approval was obtained to collect sterile catheterized urine samples from healthy infants less than 12 months of age undergoing an elective circumcision under general anesthesia.
- Exclusion criteria: History of UTI, genitourinary anomaly, prior urethral catheterization, preoperative antibiotics.
- 100µ of urine aliquots were plated in 5% Sheep's Blood and Brucella agars, incubated aerobically and anaerobically at 5% CO<sub>2</sub> for 2 to 5 days.
- Matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF) was used to identify obligate anaerobic bacterial isolates.

## Results

- 13 parents consented to this study
- Mean age at surgery was 268 days (range 183 to 348 days)
- 5 of 13 samples grew suspected obligate anaerobes after confirmation with aerotolerance test.
- Only one sample grew more than one species.

Patient Characteristics (%)	
<b>Race</b>	
White	7 (54)
Black	6 (46)
<b>Term</b>	
Preterm	7 (54)
Fullterm	4 (31)
Unknown	2 (15)

Species	Number of Samples
<i>Actinotignum schaalii</i>	4
<i>Peptoniphilus harei</i>	1
<i>Clostridium sordelli</i>	1

## Conclusion

- Actinotignum schaalii* is a gram-positive facultative anaerobe and an emerging pathogen identified by EQUC and MALDI-TOF in older adult patients with urologic conditions.
- We found this species present in 31% of patients.
- This is the first time the presence of this species has been reported in healthy infants
- Future work is further collection of samples comparing EQUC results with 16s rRNA sequencing.