of their local antimicrobial susceptibility patterns. The aim of the present prospective study was to determine the aetiology and antimicrobial susceptibility of uropathogens in culture-positive, in women seen at primary health care settings with acute uncomplicated cystitis.

**Methods & Materials**: This prospective study investigated consecutive adult's women presenting with suspected acute uncomplicated cystitis to primary health care clinics in Rwanda, over a 6-months period between 2 February 2011 and 20 July 2011.

**Results**: Of the total215 mid-stream urine samples, 57 (26.5%) pure significant bacterial growths were isolated and *Escherichia coli* was the most common isolate (87.7%). %). *E. coli* isolates exhibited an excellent susceptibility to ceftriaxone (100%), followed by ciprofloxacin (94%) and nitrofurantoin (94%); however, only 28% of *E. coli* isolates were susceptible to trimethoprim-sulfamethoxazole.

**Conclusion**: Uncomplicated cystitisa common problem among healthy adult women, occurring in about 26% of the study population. Nitrofurantoin or ciprofloxacin may be considered as drugs of choice for empirical antimicrobial agent for acute uncomplicated cystitis at primary health settings in Rwanda.

http://dx.doi.org/10.1016/j.ijid.2014.03.606

**Type: Poster Presentation**

Final Abstract Number: 40.018
*Session: Antibiotic Resistance*
*Date: Thursday, April 3, 2014*
*Time: 12:45-14:15*
*Room: Ballroom*

### Investigation of sulbactam sensitivity rates in nosocomial *Acinetobacter baumannii* isolates by E-test

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**Background**: The *Acinetobacter* species possess an essential role for nosocomial infections. Multidrug resistance in *Acinetobacter* infections are gradually increasing in worldwide, *for this reason therapeutic options are becoming very limited.* There is intrinsic bactericidal activity of sulbactam through penicillin-binding protein (PBP-2) against multi-drug resistant *Acinetobacter* spp. Although its breakpoints are not exactly determined, *it is frequently used as sulbactam-ampicillin or alone in combinations for treatment of some Acinetobacter infections. In the present study, MIC values of sulbactam alone for multi-drug resistant nosocomial A. baumanni strains were investigated by E-test.*

**Methods & Materials**: A. *baumanni* strains were identified by conventional methods and the VITEK 2 (bioMérieux SA, France) system, antibiotic susceptibility were performed by disc diffusion test according to CLSI. The isolates were described as multidrug resistant if there was resistance to three or more antibiotic groups. One hundred multidrug resistant Acinetobacter isolates were included in the study and stored at -80'C in trypticase cysteine agar until

the study day. Minimum inhibitory concentrations of sulbactam against *A. baumanni* strains were detected by E-test (bioMérieux, France) on Mueller-Hinton agar media (Oxoid, UK). As a control strain *Escherichia coli* ATCC 25922 were used. MIC values of all

strains were noted and MIC50, MIC90 values were calculated. Hence MIC susceptibility breakpoints of sulbactam against Acinetobacter are not currently determined, susceptibility percentages were calculated separately considering to the each MIC breakpoints reported in literature (as $\leq 4$ mcg/mL and as $\leq 8$ mcg/mL).

**Results**: The MIC values of sulbactam against *Acinetobacter* isolates were varying in a wide range (between 1 mcg/mL and 256 mcg/mL); MIC50 and MIC90 values were 12 and 96 respectively. When MIC value was considered as $\leq 8$ mcg/mL for interpretation of susceptibility, 44% of isolates were found susceptible; susceptibility percentage was decreasing to 21% if breakpoint was considered as $\leq 4$ mcg/mL.

**Conclusion**: Sulbactam seems a promising drug to use in infections due to multi-drug resistant *A. baumannii* strain after testing the MIC values. But, further studies are needed evaluating its clinical usefulness also.

http://dx.doi.org/10.1016/j.ijid.2014.03.607

**Type: Poster Presentation**

Final Abstract Number: 40.019
*Session: Antibiotic Resistance*
*Date: Thursday, April 3, 2014*
*Time: 12:45-14:15*
*Room: Ballroom*

### A comparative assessment of the antimicrobial susceptibility of *E. coli* strains isolated from aquatic sources: Fish, sediment and water

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**Background**: A significantly increased level of antimicrobial resistance is demonstrated by several studies in regard to the bacteria present in the aquatic habitats. The "resistome" is continuously augmenting, due to the further replacement of older generation antibiotics with newer ones and concurrent influence of other environmental factors, thus posing serious risks to both public and veterinary public health.

**Methods & Materials**: A total of 150 samples (each 50 of water, sediment and rectal swabs from benthic and pelagic fish) from the Danube Delta region were processed. MacConckey agar was used for the initial isolation of *E. coli*, and all lactose positive colonies were transferred on Brilliance[TM] *E.coli/coliform* selective medium (Oxoid). Antibiotic sensitivity patterns were established based on the results of disk diffusion method according to CLSI standards. Furthermore, all E. *coli* isolates were screened for the presence of virulence associated genes (stx1, stx2) by a standardized PCR protocol.

**Results**: The presence of *E. coli* was observed for all types of samples, with a higher prevalence in case of the sediment (70%) and both types of fish (80%) when compared to water (30%). All samples exhibited antimicrobial resistance towards at least 5 of