

**ASM Microbe 2016, 16 al 20 de junio de 2016, Boston, EEUU.**

**Isolation of Six Enterobacteriaceae Producing New Delhi Metallo-beta-lactamase (NDM-1) in a Pediatric Patient from Argentina.**

**Author Block** F. Martino<sup>1</sup>, N. Tijet<sup>2</sup>, R. Melano<sup>2</sup>, F. Pasteran<sup>1</sup>, M. Rapoport<sup>1</sup>, D. Faccone<sup>1</sup>, E. Biondi<sup>3</sup>, M. Vazquez<sup>3</sup>, A. Corso<sup>1</sup>, S. A. Gomez<sup>1</sup>;

<sup>1</sup>Serv. Antimicrobianos, Laboratorio Natl. de Referencia (LNR), INEI-ANLIS "Dr. Carlos G. Malbrán", Ciudad Autonoma de Buenos Aires, Argentina, 2Publ. Hlth.OntarioLab., Toronto, Ontario, Canada, Toronto, ON, Canada, 3Hosp. de Niños Dr. Ricardo Gutiérrez, Ciudad Autonoma de Buenos Aires, Argentina

**BACKGROUND:** In Argentina, KPC is endemic and represents a severe public health problem, but since 2013, NDM metallo-β-lactamase has emerged in our country, and since then, its detection has been increasing **OBJECTIVES:** To characterize blaNDM carrying plasmids recovered from six Enterobacteriaceae (ETB) isolated from a single patient **METHODS:** Species identification was done by MALDI-TOF (Bruker Co). MBL-production were evaluated by the Blue-Carba test (BCT) and synergism between carbapenems and EDTA/SMA discs, respectively. MICs were determined by agar dilution (CLSI 2015). PCR, sequencing and conjugation were performed by standard methods. blaNDM-1 carrying plasmids were extracted from the transconjugants (TC) with the Qiagen Large-Construct kit and sequenced with the Illumina-MiSeq. Assembly of the contigs was done with the CLC Genomics Workbench software (CLC bio, Qiagen). Open reading frames were predicted and annotated by the RAST server ([rast.nmpdr.org](http://rast.nmpdr.org)), followed by manual curation and searches in the NCBI ([www.ncbi.nlm.nih.gov/BLAST](http://www.ncbi.nlm.nih.gov/BLAST)) **RESULTS:** A 4 y.o. boy cursing erythrodermic psoriasis with previous hospitalizations and multiple antimicrobial treatments was hospitalized for 137 days until his death due to septic shock. Between day 39 and 132, *K. pneumoniae*, *E. coli* (n=2), *C. freundii*, *E. cloacae* and *S. marcescens* were isolated from blood, retroculture and rectal swabs. All isolates and TC were resistant to carbapenems. Fosfomycin and minocycline were the most active drugs. All harboured the same ca139 Kb IncF plasmid with 176 ORFs carrying blaNDM-1, blaCMY-6, rmtc, aacA4, aac(6')lb-cr, sul1 resistance genes. blaNDM-1 environment gene order was: rmtc-ISKpn14-delta ISAb125-blaNDM-1-bleMBL-trpF-tat-dct-GroES-GroEL-insA. These plasmids had 99% identity with 98% of coverage with pNDM-US (CP006661) **CONCLUSIONS:** As far as we know, this is the first report of blaNDM in the same IncF plasmid in 6 ETB from a patient, alerting of the potential of the dissemination of this plasmid