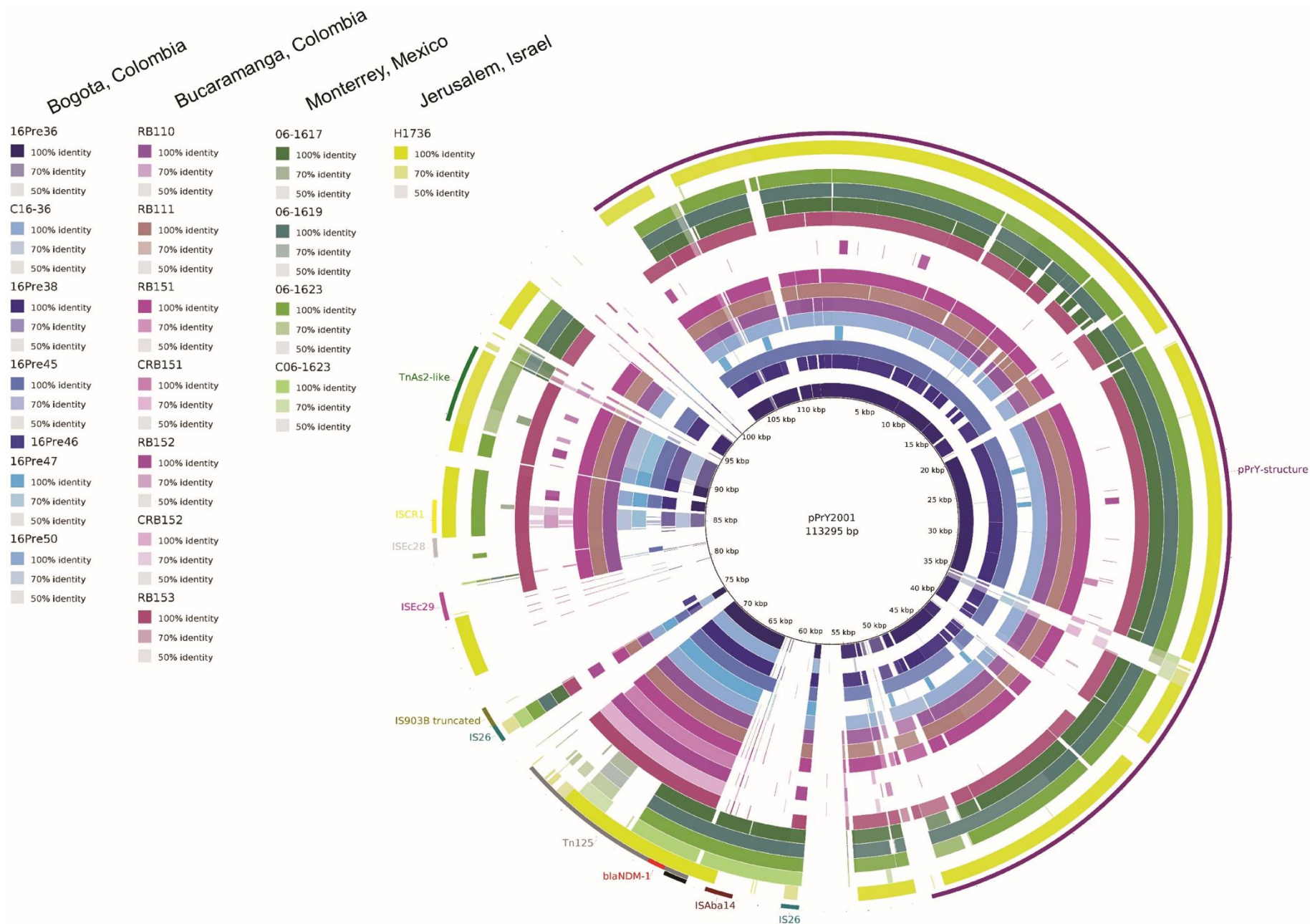


Supplementary figure S1. - Pairwise comparison of assembled contigs (alternated blue and red) from *E. coli* transconjugants and their respective donor strains against the most related *bla*_{NDM-1}-positive plasmid. (A) *A. baumannii*, (B) *K. pneumoniae*, (C) *P. rettgeri* from Bogota (Colombia), (D) *P. rettgeri* from Bucaramanga (Colombia) and (E) *P. rettgeri* from Monterrey (Mexico). Using CONTIGuator_v2.7,

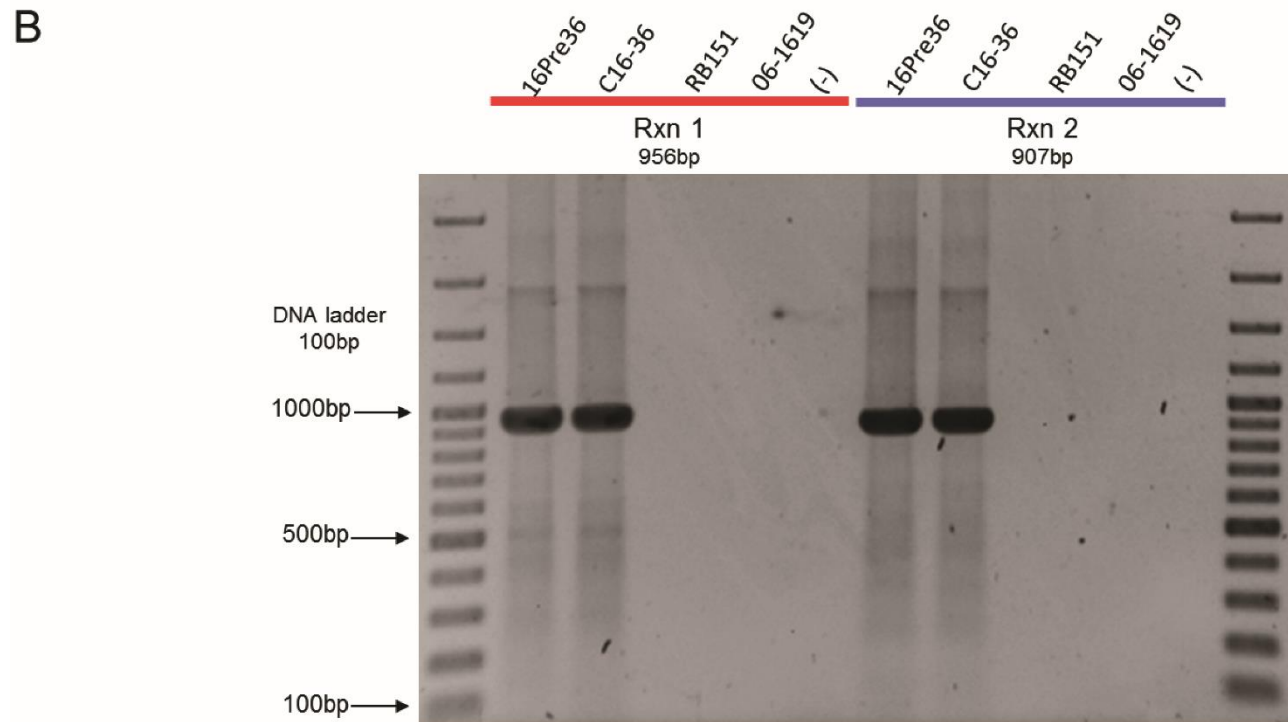
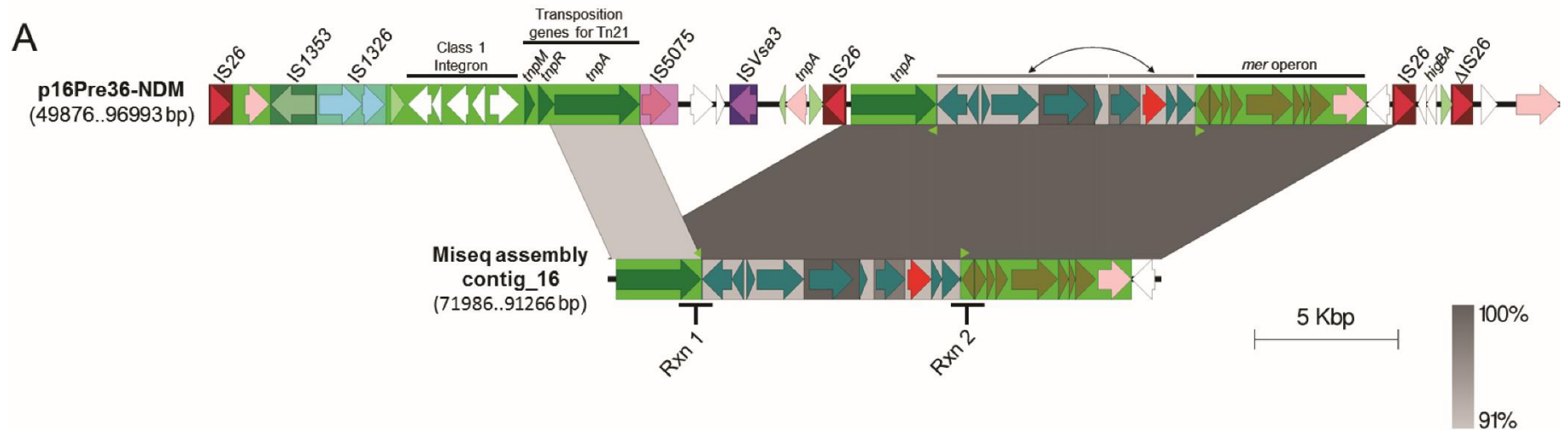
to the *E. coli* transconjugants assemblies, chromosomal contigs were removed using the *E. coli* J53 genome as reference (AICK00000000.1) and to the donor strains, plasmid contigs were filtered out using as reference the respective *bla*_{NDM-1}-plasmid. Grey and red (inverted matches) shading between pairs of sequences indicate >98% of nucleotide identity in a window of 400 bp.



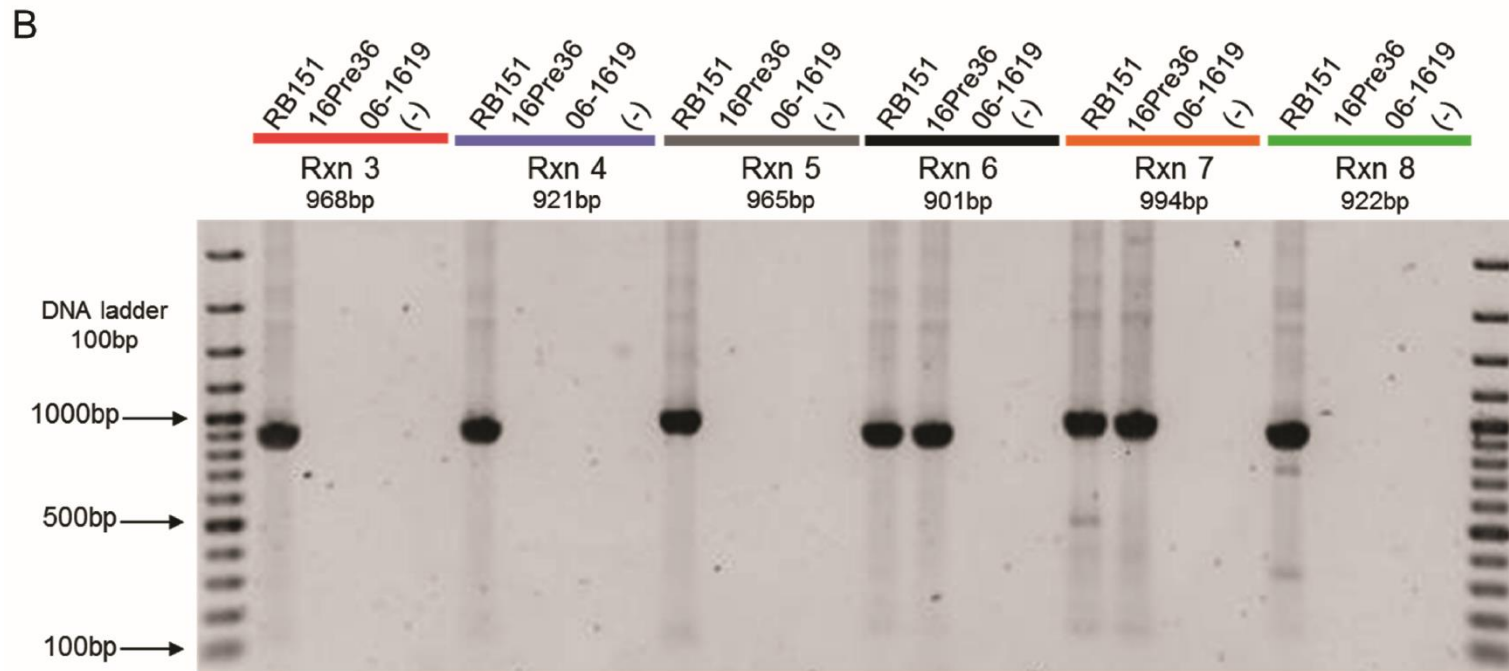
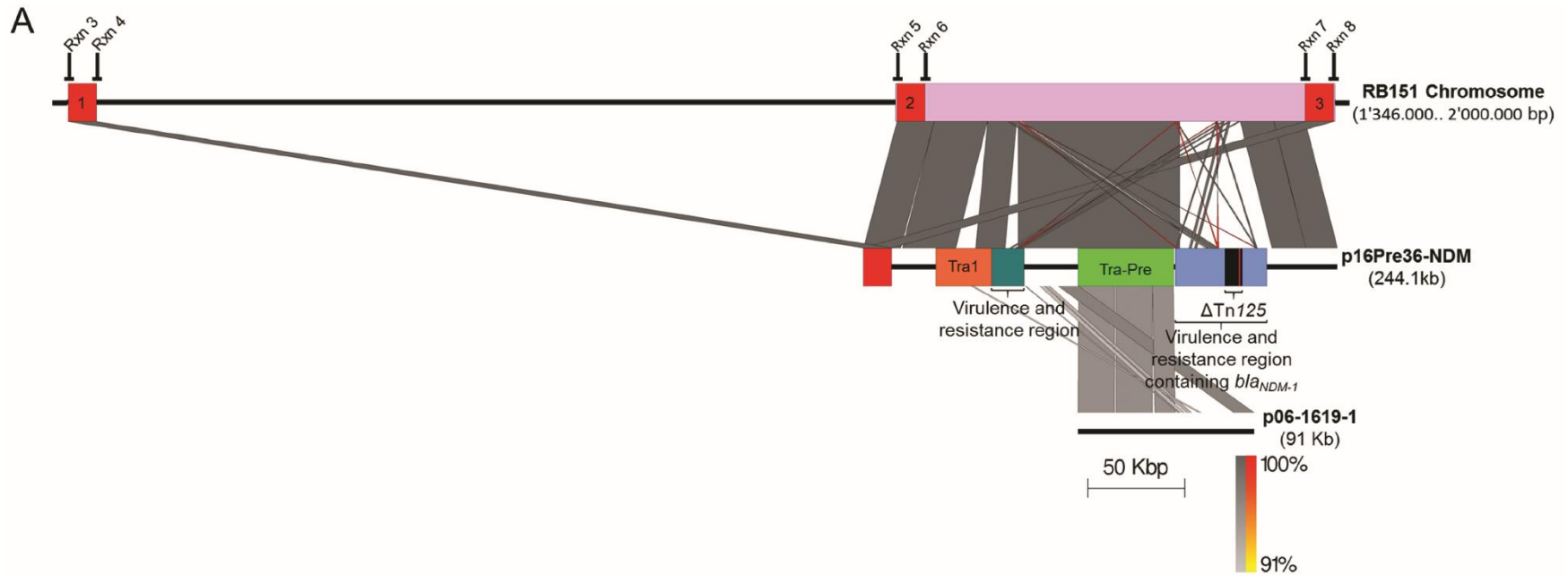
Supplementary figure S2. - Pairwise comparison of *P. rettgeri* and their *E. coli* transconjugants WGS assembled contigs against the pPrY2001 plasmid (Mataseje, et al. 2014). It was included the *P. rettgeri* H1736 partially assembled genome (Olaitan, et al. 2015).

Strain or plasmid	PlasmidFinder result				
	IncA/C2	IncFIB(pKPHS1)	IncFII	IncN	IncT
16Kpn1	■	■	■		
C16-1	■	□	□		
16Kpn2	■	■	■		
16Kpn3	■	■	□		
16Kpn5	■	■	■		
16Kpn7	■	■	■		
16Kpn10	■	■	■		
16Pre36					
C16-36					
16Pre38					
16Pre45					
16Pre46				■	
16Pre47					
16Pre50					
RB110					
RB111					
RB151					
CRB151					
RB152					
CRB152					
RB153					
06-1617					
06-1619					
06-1623					■
C06-1623					
19Aba78					
C19-78					
p6234-178kb	■				
pNDM-BJ01					
p16Pre36-NDM					
p16Pre36-2					
pRB151-NDM					
p06-1619-NDM					
p06-1619-2					
pPrY2001					

Supplementary figure S3. - Incompatibility (Inc) regions present in the 21 clinical isolates, six *E. coli* transconjugants and plasmids included in this study. Black shading indicates >95% nucleotide identity with a minimum 95% overlap identified using PlasmidFinder 1.3 database (Carattoli, et al. 2014).



Supplementary figure S4. - Confirmation of insertion of Δ Tn125 into Tn21 in plasmid p16Pre36-NDM. (A) BLASTn comparison of the resistance and virulence region containing *bla*_{NDM-1} of p16Pre36-NDM obtained from assembly of PacBio reads against contig 16 obtained from the assembly of Miseq reads for the sample 16Pre36 (libraries were obtained from independent DNA samples). (B) PCR validation of the insertion and rearrangement of Δ Tn125 into Tn21.



Supplementary figure S5. - Chromosomal insertion in the *P. rettgeri* RB151 of a region related to p16Pre36-NDM, containing the pPrY-like structure and the Tra1 operon. The p16Pre36-NDM start point was shifted to align with the chromosomal insertion (A). A

repeated sequence found three times in the chromosome of RB151 and found once in p16Pre36-NDM is shown in red; this is a 14.6 Kbp not reported sequence encoding for a putative phage integrase and also to an unclassified integron with resistance genes to trimethoprim and erythromycin. Is also shown results for PCR verification of the chromosomal insertion observed in (A) using specific primers (Rxn 3-8) and total genomic DNA (B).

Supplementary table S1. - Primers used in this study.

Reaction	ID	Sequence 5' ->3'	Target sequence	GenBank accession No	Reference
Rxn 1	GN563	GAGGAGCACTACACCGACAC	p16Pre36-NDM	KX832927	This study
	GN564	GATCCACGCTTTTGTGCGAGG			
Rxn 2	GN565	ATCCGACGAATGTTGCCGA	p16Pre36-NDM	KX832927	This study
	GN566	GCCGGTAAATCCGCTTCCA			
Rxn 3	GN552	TGCCGCGTTATCAATCCCT	RB151 Chromosome	CP017671	This study
	GN553	GTCGTGAAATACCTCGGGTGAA			
Rxn 4	GN554	CTTGGCTGTAACCTTCGTTGC	RB151 Chromosome	CP017671	This study
	GN555	ATCTGAGGGTCTGAGTGACGA			
Rxn 5	GN556	ATAACCTAGGGGTAGCGCGT	RB151 Chromosome	CP017671	This study
	GN553	GTCGTGAAATACCTCGGGTGAA			
Rxn 6	GN554	CTTGGCTGTAACCTTCGTTGC	RB151 Chromosome	CP017671	This study
	GN557	CCAGCCTGTAGAGCAGTTTGT			
Rxn 7	GN558	ACCCACAGCGTACAAAACCA	RB151 Chromosome	CP017671	This study
	GN553	GTCGTGAAATACCTCGGGTGAA			
Rxn 8	GN554	CTTGGCTGTAACCTTCGTTGC	RB151 Chromosome	CP017671	This study
	GN559	AAGGGCTCGATATTGCGGTT			
For <i>E. coli</i> species confirmation	GN284	TTCTCTGCCGTTTCCAA	<i>uidA</i>	AE014075.1	(Takahashi, et al. 2009)
	GN285	GCTGTGCGCTTTAACCTCT			
For <i>K. pneumoniae</i> species confirmation	GN282	CAGCAGACGAACTTCCTG	<i>khe</i>	AP006725.1	This study
	GN283	CGAGGTTTACGTCTCAAC			
For <i>A. baumannii</i> species confirmation	GN360	GATCAAGTACGTGAAGCTG	<i>gyrB</i>	LT605059.1	This study
	GN361	ACGAGCATATTCCGCAGA			
For <i>P. rettgeri</i> species confirmation	GN569	GCCCCCTTCAAGCTGAATTA	<i>dnaA</i>	CP017671	This study
	GN570	GCGTCAGTTCACAAAAGTCA			

References

- Carattoli A, et al. 2014. In silico detection and typing of plasmids using PlasmidFinder and plasmid multilocus sequence typing. *Antimicrob Agents Chemother* 58: 3895-3903. doi: 10.1128/AAC.02412-14
- Mataseje LF, et al. 2014. Complete sequences of a novel *bla*_{NDM-1}-harbouring plasmid from *Providencia rettgeri* and an FII-type plasmid from *Klebsiella pneumoniae* identified in Canada. *J Antimicrob Chemother* 69: 637-642. doi: 10.1093/jac/dkt445
- Olaitan AO, Diene SM, Assous MV, Rolain JM. 2015. Genomic plasticity of multidrug-resistant NDM-1 positive clinical isolate of *Providencia rettgeri*. *Genome Biol Evol* 8: 723-728. doi: 10.1093/gbe/evv195
- Takahashi H, et al. 2009. Real-time PCR and enrichment culture for sensitive detection and enumeration of *Escherichia coli*. *J Microbiol Methods* 79: 124-127. doi: 10.1016/j.mimet.2009.08.002