

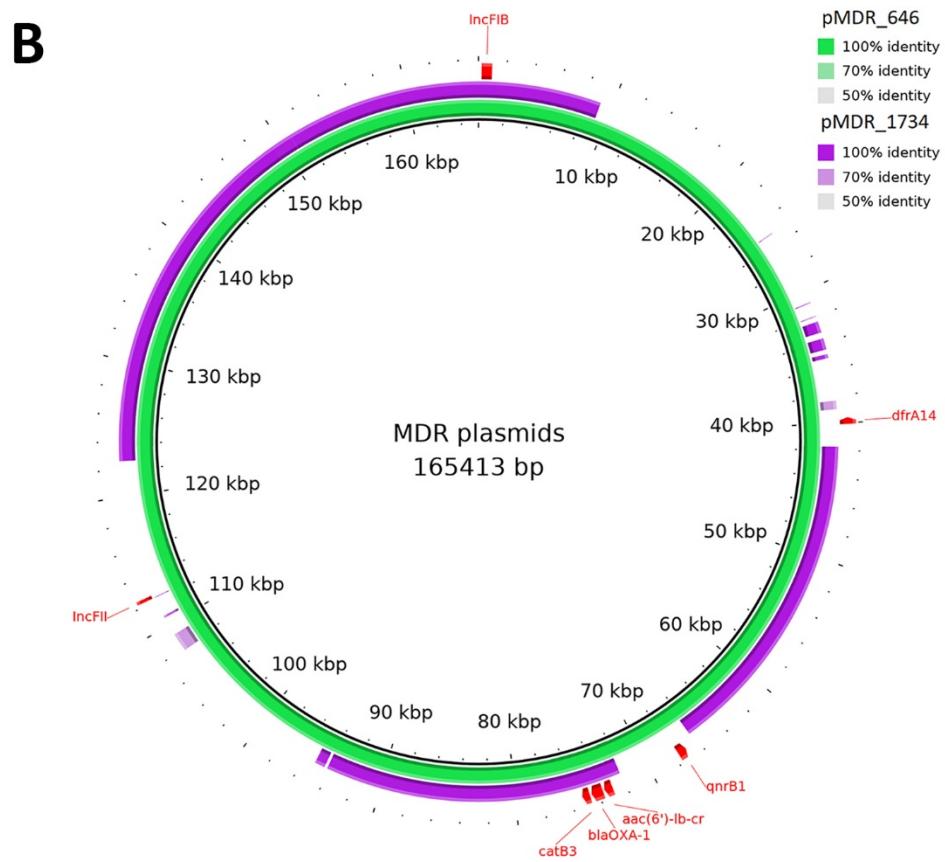
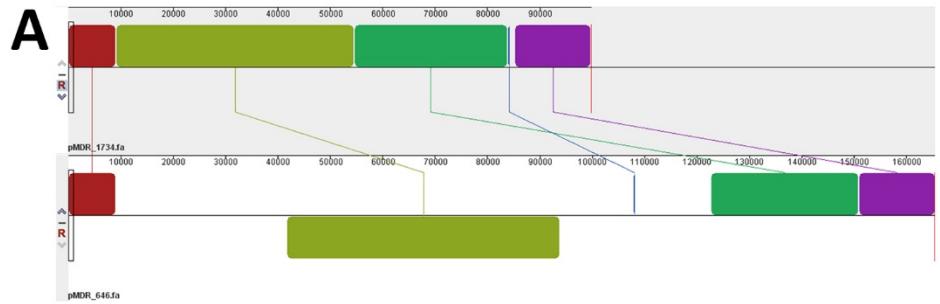
Acquisition of Carbapenem-Resistance Gene *bla*_{KPC-2} in Hypervirulent, *Klebsiella pneumoniae*, Singapore

Appendix

Appendix Table. Features of complete genomes*

Isolate/ subject, Replicon, Accession number	Size (bp)	Incompatibility group	oriT	Self-transmissible modules	Features
ENT494 / A2					
Chromosome_494, VONF01000001.1	5443212	-	N	3/4	<i>bla</i> _{SHV-11} , <i>oqxA</i> , <i>oqxB</i> , <i>fosA6</i>
pKpVp_494, VONF01000002.1	221812	IncHI1B	N	1/4	aerobactin and salmochelin loci, <i>rmpA</i> genes
pENT494_95kb, VONF01000003.1	95210	IncFIA	Y	4/4	cryptic
pKPC2_494, VONF01000004.1	71861	Not identified	Y	4/4	<i>bla</i> _{KPC-2} , <i>bla</i> _{TEM-1A} , <i>bla</i> _{TEM-1B} , <i>mph(A)</i>
pENT494_27kb, VONF01000005.1	27285	Not identified	Y	2/4	cryptic
ENT646 / A2					
Chromosome_646, VONE01000001.1	5444482	-	N	3/4	<i>bla</i> _{SHV-11} , <i>oqxA</i> , <i>oqxB</i> , <i>fosA6</i>
pKpVP_646, VONE01000002.1	223140	IncHI1B	N	1/4	aerobactin and salmochelin loci, <i>rmpA</i> genes; pKpVP_494 +1 <i>IS110</i>
pMDR_646, VONE01000003.1	165414	IncFIB, IncFII	Y	4/4	<i>aac(6')-lb-cr</i> , <i>bla</i> _{OXA-1} , <i>qnrB1</i> , <i>catB3</i> , <i>dfrA14</i>
pENT646_95kb, VONE01000004.1	95210	IncFIA	Y	4/4	cryptic; identical to pENT494_95kb
pENT646_78kb, VONE01000005.1	78288	Not identified	N	1/4	cryptic
pKPC2_646, VONE01000006.1	71861	Not identified	Y	4/4	<i>bla</i> _{KPC-2} , <i>bla</i> _{TEM-1A} , <i>bla</i> _{TEM-1B} , <i>mph(A)</i> ; identical to pKPC2_494
ENT1734 / A2					
Chromosome_1734, VOND01000001.1	5448145	-	N	3/4	<i>bla</i> _{SHV-11} , <i>oqxA</i> , <i>oqxB</i> , <i>fosA6</i>
pKpVP_1734, VOND01000002.1	224835	IncHI1B	N	1/4	aerobactin and salmochelin loci, <i>rmpA</i> genes; pKpVp + two <i>IS110</i>
pMDR_1734, VOND01000003.1	99794	IncFIB	Y	3/4	<i>aac(6')-lb-cr</i> , <i>bla</i> _{OXA-1} , <i>catB3</i> ; multiple deletions of pMDR_646
pENT1734_95kb, VOND01000004.1	95210	IncFIA	Y	4/4	cryptic; identical to pENT494_95kb
pKPC2_1734, VOND01000005.1	71861	Not identified	Y	4/4	<i>bla</i> _{KPC-2} , <i>bla</i> _{TEM-1A} , <i>bla</i> _{TEM-1B} , <i>mph(A)</i> ; identical to pKPC2_494
ENT1192 / A14					
Chromosome_1192, VOMY01000001.1	5246080	-	Y	2/4	<i>bla</i> _{SHV-1} , <i>oqxA</i> , <i>oqxB</i> , <i>fosA5</i>
pKpVP_1192, VOMY01000002.1	215341	IncHI1B	N	1/4	aerobactin and salmochelin loci, <i>rmpA</i> genes
pMDR_1192, VOMY01000003.1	109672	IncFII(K)	Y	4/4	<i>aac(6')-lb-cr</i> , <i>qnrB1</i> , <i>catB3</i> , <i>tet(A)</i> , <i>dfrA14</i>
pENT1192_81kb, VOMY01000004.1	81371	IncFIA	N	3/4	cryptic
pKPC2_1192, VOMY01000005.1	71861	Not identified	Y	4/4	<i>bla</i> _{KPC-2} , <i>bla</i> _{TEM-1A} , <i>bla</i> _{TEM-1B} , <i>mph(A)</i> ; identical to pKPC2_494
ENT607 / A15					
Chromosome_607, VOMV01000001.1	5416548	-	N	3/4	<i>bla</i> _{SHV-11} , <i>oqxA</i> , <i>oqxB</i> , <i>fosA6</i>
pKpVP_607, VOMV01000002.1	235891	IncHI1B	N	1/4	aerobactin and salmochelin loci, <i>rmpA</i> genes
pMDR_607, VOMV01000003.1	104712	IncFIB, IncFII(K)	Y	4/4	<i>aadA1</i> , <i>cmlA1</i> , <i>arr-2</i> , <i>sul1</i>
pKPC2_607, VOMV01000004.1	71861	Not identified	Y	4/4	<i>bla</i> _{KPC-2} , <i>bla</i> _{TEM-1A} , <i>bla</i> _{TEM-1B} , <i>mph(A)</i> ; 1 bp difference from pKPC2_494

*KPC, *Klebsiella pneumoniae* carbapenemase; KpVP, *K. pneumoniae* virulence plasmid; MDR, multidrug resistance; N, no; Y, yes.



Appendix Figure. A) Alignment of pMDR_646 and pMDR_1734. The alignment was performed using Mauve. B) Feature-comparison of pMDR_646 and pMDR_1734. The map was generated using BRIG-0.95. MDR, multidrug resistance.