

Table S1. Contigs of clinical *A.lwoffii* strains carrying heavy metal resistance determinants closely related to determinants of ancient plasmids

Strain of <i>A. lwoffii</i>	Contigs with determinants of resistance to				
	mercury	arsenicum	chromium	copper	cobalt/zinc/cadmium
NCTC 5866	<b>adgTz-supercont2.5.C9</b> 14351 bp, AYHO01000009	<b>adgTz-supercont2.5.C9,</b> 14351 bp, AYHO01000009	<b>adgTz-supercont2.5.C9,</b> 14351 bp, AYHO01000009	adgTz-supercont2.6.C10, 14188 bp, AYHO01000010	-
NIPH 478	-	<b>acLZS-supercont1.3.C4</b> 131122 bp*, APQU01000004	acLZS-supercont1.9.C26, 20292 bp, APQU01000026	acLZS-supercont1.3.C3, 17981 bp, APQU01000003	<b>acLZS-supercont1.3.C4</b> 131122 bp, APQU01000004
NIPH715	<b>acLrE-supercont1.22.C69</b> , 33082 bp, APOT01000069	<b>acLrE-supercont1.22.C69,</b> 33082 bp, APOT01000069	-	<b>acLrE-supercont1.22.C69,</b> 33082 bp, APOT01000069	acLrE-supercont1.22.C68, 79564 bp, APOT01000068
CIP 70.31	-	-	acLsr-supercont1.3.C10, 7846 bp, APQT01000010	<b>acLsr-supercont1.11.C59</b> 64431 bp * APQT01000059	<b>acLsr-supercont1.11.C59,</b> 64431 bp APQT01000059
TG19636	-	-	-	-	TG19636 223, 13100 bp, AMJG01000222
SH145	-	-	-	-	cont1.149, 25730 bp, ACPN01000149

NBRC 109760	<b>ALW03_CON00057, 14170 bp, BBSQ01000057</b>	<b>ALW03_CON00057, 14170 bp, BBSQ01000057</b>	<b>ALW03_CON00057, 14170 bp, BBSQ01000057</b>	ALW03_CON00054, 15382 bp, BBSQ01000054; ALW03_CON00074, 3744bp*, BBSQ01000074	-
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\*not complete

Table S2. Genes of *ars* operon (*trxB-arsH-arsB-arsC-arsR-arsC*) revealed on different contigs (presumably chromosome regions) of *A. lwoffii* clinical strains

Strain	Contig [AC]	Genes	Identity (%) *
<i>A. lwoffii</i> NCTC 5866	0087 [AIEL01000087]	<i>arsH-arsB-arsC</i>	77%; 68%; 74%
	0016 [AIEL01000016]	<i>arsC-arsR</i>	83%; 68%
	0095 [AIEL01000095]	<i>trxB</i>	77%
<i>A. lwoffii</i> NIPH 478	aclZS-supercont1.5.C10 [APQU01000010]	<i>arsC-arsR</i>	83%; 68%
	aclZS-supercont1.5.C12 [APQU01000012]	<i>trxB</i>	77%
<i>A. lwoffii</i> NBRC 109760	ALW03_CON00003 [BBSQ01000003]	<i>arsC-arsR</i>	83%; 68%
	ALW03_CON00040 [BBSQ01000040]	<i>arsH-ars-arsC</i>	76%; 78%; 68%
	ALW03_CON00021 [BBSQ01000021]	<i>trxB</i>	77%
<i>A. lwoffii</i> ED23-35	7	<i>arsH-arsB-arsC-arsR-arsC</i>	86%; 87%, 81%, 75%, 68%
	36	<i>trxB</i>	<40%**
<i>A. lwoffii</i> VS15	18	<i>arsH-arsB-arsC-arsR-arsC</i>	86%; 87%, 81%, 75%, 67%
	27	<i>arsH</i>	92%
	11	<i>trxB</i>	<40%**

\*in relation to nucleotide sequences (100%) of *ars* genes from pALWED2.1

\*\* identity at the amino acid sequence level

Table S3. Genome size of *A. lwoffii* clinical isolates

Strain	AC	Whole genome size
NCTC 5866 (= CIP64.10 = NIPH 512)	NZ_AIEL0100000000.1	3,353,128
NIPH 512	NZ_AYHO00000000.1	3,382,003
NIPH 478	NZ_APQU00000000.1	3,276,129
NIPH 715	NZ_APOT00000000.1	3,400,693
CIP 70.31	NZ_APQT00000000.1	3,546,109
TG19636	NZ_AMJG00000000.1	3,497,784
SH145	NZ_ACPN00000000.1	3,347,001
WJ10621*	NZ_CM001194.1	3,419,011 3,184,320**
Average size of whole genome		3,400,407

\*Carries a plasmid pNDM-BJ01 (47,274 bp)[NC\_019268.1] with the gene bla<sub>NDM-1</sub>;

\*\*Main genome size

Table S4. Characteristics of genomes of *A. baumannii* strains

Strain	AC	Main genome size	No of plasmids	Plasmid size, (bp)	Whole genome size, (bp)
AB0057	CP001182	4,050,513	1	8,729	4,059,242
Ab04-mff	CP012006	3,935,688	2	169,023; 87,569	4,192,280
AB307-0294,	CP001172	3,760,981	-	-	3,760,981
AB5075-UW	CP008706	3,972,672	3	83,610; 8,731; 1,967	4,066,980
AC29	CP007535	3,851,648	2	74,749; 8,737	3,935,134
ACICU	CP000863	3,904,116	2	64,366; 28,279	3,996,761
ATCC 17978	CP000521	3,976,747	2	13,408; 11,302	4,001,457
ATCC 17978- mff	CP012004	3,857,743	1	148,955	4,006,698
AYE	CU459141	3,936,291	4	94,413; 9,661; 5,644; 2,726	4,048,735
BJAB07104	CP003846	3,951,920	2	70,170; 20,139	4,042,229

BJAB0715	CP003847	4,001,621	1	52,268	4,053,889
BJAB0868	CP003849	3,906,795	3	70,167; 20,139; 8,721	4,005,822
CIP70.10	LN865143	3,928,513	1	7,742	3,936,255
D36	CP012952	4,063,596	4	47,457; 9,276; 6,078; 4,754	4,131,161
D1279779	CP003967	3,704,284	1	7,416	3,711,700
IOMTU433	AP014649	4,000,970	1	189,354	4,190,324
KBN10P02143	CP013924	4,086,879	1	52,517	4,139,396
MDR-TJ	CP003500	3,964,912	2	110,967; 77,528	4,153,407
MDR-ZJ06	CP001937	3,991,133	1	20,301	4,011,434
NCGM 237	AP013357	4,021,920	-	-	4,021,920
PKAB07	CP006963	4,233,806	1	8,805	4,242,611
R2090	LN868200	3,819,158	-	-	3,819,158
R2091	LN997846	3,939,746	1	7,742	3,947,488
SDF	CU468230	3,421,954	3	25,014; 24,922; 6,106	3,477,996

TCDC-AB0715	CP002522	4,138,388	2	70,894; 8,731	4,218,013
TYTH-1	CP003856	3,957,368	1	65,890	4,023,258
XH386	CP010779	4,087,157	1	112,157	4,199,314
YU-R612	CP014217	4,075,545	2	74,241; 5,465	4,155,251
ZW85-1	CP006768	3,763,012	2	113,866; 48,368	3,925,246
1656-2	CP001921	3,940,614	2	74,451; 8,041	4,023,106
6200	CP010397	3,902,527	3	114,848; 47,274; 9,327	4,073,976
average value	-	3,939,942	2	-	4,018,426