

Supplementary material for manuscript:

Isolation and characterization of lytic phage TUN1 specific for *Klebsiella pneumoniae* K64 clinical isolates from Tunisia

Simone Eckstein ^{1,†}, Jana Stender ^{1,†}, Sonia Mzoughi ^{2,3,†}, Kilian Vogele ⁴, Jana Kühn ¹, Daniela Friese ¹, Christina Bugert ¹, Susann Handrick ¹, Mustapha Ferjani ⁵, Roman Wölfel ¹, Andrew Millard ⁶, Mohamed Ben Moussa ², and Joachim J Bugert ^{1,*}

¹ Bundeswehr Institute of Microbiology, Munich, Germany

² Department of Virology, Military Hospital of Instruction of Tunis, Tunisia

³ Faculty of Pharmacy, Monastir, Tunisia

⁴ Department of Physics, Technical University of Munich, Garching, Germany

⁵ Department of Anesthesiology and Reanimation, Military Hospital of Instruction of Tunis, Tunisia

⁶ Department of Genetics and genome Biology, University of Leicester, UK

† These authors contributed equally

* Correspondence: Joachim1Bugert@bundeswehr.org

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Supplementary Table S1. Gene localizations (nucleotides), lengths (bp) and products of predicted phage TUN1 ORFs.

ORF	Gene product	Start	End	Length	Direction
ORF_1	S-adenosyl-L-methionine hydrolase	658	1,125	468	forward
ORF_2	hypothetical protein	1,125	1,313	189	forward
ORF_3	hypothetical protein	1,291	1,488	198	forward
ORF_4	hypothetical protein	1,472	1,642	171	forward
ORF_5	kinase	1,674	2,780	1,107	forward
ORF_6	RNA polymerase	2,850	5,570	2,721	forward
ORF_7	hypothetical protein	5,670	5,846	177	forward
ORF_8	hypothetical protein	5,850	6,107	258	forward
ORF_9	ATP-dependent DNA ligase	6,208	7,266	1,059	forward
ORF_10	hypothetical protein	7,376	7,726	351	forward
ORF_11	hypothetical protein	7,719	8,147	429	forward
ORF_12	HNH Endonuclease	8,134	8,523	390	forward
ORF_13	inhibitor of host bacterial RNA polymerase	8,600	8,764	165	forward
ORF_14	ssDNA-binding protein	8,831	9,529	699	forward
ORF_15	hypothetical protein	9,529	9,948	420	forward
ORF_16	endonuclease I	9,929	10,375	447	forward
ORF_17	endolysin (lysozyme/N-acetylmuramoyl-L-alanine amidase)	10,378	10,833	456	forward
ORF_18	hypothetical protein	10,983	11,099	117	forward
ORF_19	hypothetical protein	11,096	11,215	120	forward
ORF_20	HNH Endonuclease	11,212	11,577	366	forward
ORF_21	primase/helicase protein	11,552	13,270	1,719	forward
ORF_22	hypothetical protein	13,335	13,544	210	forward
ORF_23	hypothetical protein	13,545	13,727	183	forward
ORF_24	hypothetical protein	13,740	14,051	312	forward
ORF_25	hypothetical protein	14,124	14,525	402	forward
ORF_26	DNA polymerase	14,542	16,659	2,118	forward
ORF_27	hypothetical protein	16,674	16,979	306	forward
ORF_28	hypothetical protein	16,983	17,273	291	forward
ORF_29	hypothetical protein	17,270	17,479	210	forward
ORF_30	hypothetical protein	17,476	17,760	285	forward
ORF_31	exonuclease	17,753	18,658	906	forward
ORF_32	hypothetical protein	18,640	18,750	111	forward
ORF_33	hypothetical protein	18,836	19,081	246	forward
ORF_34	hypothetical protein	19,084	19,305	222	forward
ORF_35	tail assembly protein	19,307	19,567	261	forward
ORF_36	head-tail connector protein	19,591	21,198	1,608	forward
ORF_37	capsid assembly protein	21,302	22,255	954	forward

ORF_38	major capsid protein	22,410	23,441	1,032	forward
ORF_39	predicted minor capsid protein	23,498	23,719	222	forward
ORF_40	tail tubular protein A	23,788	24,366	579	forward
ORF_41	endonuclease VII	24,392	24,832	441	forward
ORF_42	tail tubular protein B	24,829	27,204	2,376	forward
ORF_43	internal virion protein A	27,277	27,687	411	forward
ORF_44	internal virion protein B	27,690	28,280	591	forward
ORF_45	internal virion protein C	28,280	30,535	2,256	forward
ORF_46	internal virion protein D	30,552	34,517	3,966	forward
ORF_47	tail fiber protein	34,579	37,632	3,054	forward
ORF_48	class II holin	37,643	37,852	210	forward
ORF_49	terminase small subunit	37,886	38,143	258	forward
ORF_50	i-spanin	38,240	38,689	450	forward
ORF_51	terminase large subunit	38,682	40,439	1,758	forward
ORF_52	hypothetical protein	40,449	40,556	108	forward
ORF_53	hypothetical protein	40,780	40,929	150	forward

Supplementary Table S2. Correlation of Kp capsule types and sample origin. List of the different capsule types for the 163 *Klebsiella pneumoniae* strains analyzed in this study sorted by sample origin. Capsule types were predicted by partial *wzi* sequencing.

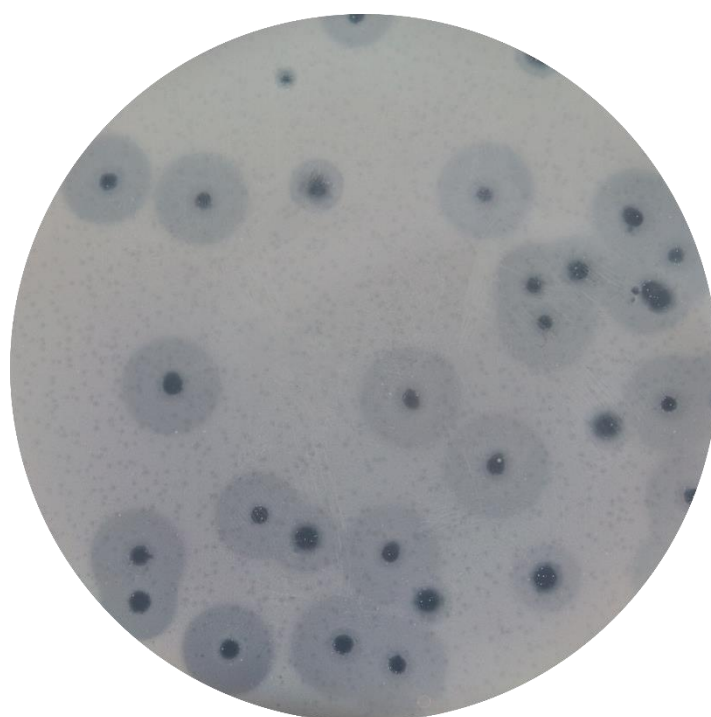
Sample origin	Capsule type (Total No. / percentage [%])
Anal swabs	32 / 19.6 K13 (1 / 3.1) K17 (3 / 9.4) K25 (2 / 6.3) K27 (4 / 12.5) K64 (22 / 68.8)
Axillary sampling	2 / 1.2 K27 (2 / 100)
BAL	5 / 3.1 K17 (1 / 20.0) K27 (1 / 20.0) K52 (1 / 20.0) K64 (2 / 40.0)
Blood culture	41 / 25.2 K17 (11 / 26.8) K27 (2 / 4.9) K43 (1 / 2.4) K52 (1 / 2.4) K55 (2 / 4.9) K62 (1 / 2.4)

	K64 (22 / 53.7) KN2 (1 / 2.4)
CBES	5 / 3.1 K17 (1 / 20.0) K27 (1 / 20.0) K64 (2 / 40.0) KN2 (1 / 20.0)
CSF	1 / 0.6 K64 (1 / 100)
Ear exudates	2 / 1.2 K25 (1 / 50.0) K64 (1 / 50.0)
Endotracheal tube	2 / 1.2 K17 (2 / 100)
Gastric levy	1 / 0.6 K17 (1 / 100)
Catheter	18 / 11.0 K3 (1 / 5.6) K17 (2 / 11.1) K27 (2 / 11.1) K52 (2 / 11.1) K64 (11 / 61.1)
Oral swab	1 / 0.6 K17 (1 / 100)
PTS	10 / 6.1 K2 (1 / 10.0) K17 (1 / 10.0) K27 (2 / 20.0) K55 (1 / 10.0) K64 (5 / 50.0)
PUS	15 / 9.2 K17 (6 / 40.0) K27 (2 / 13.3) K52 (1 / 6.7) K64 (5 / 33.3) KL 105 (1 / 6.7)
Medical device	1 / 0.6 K64 (1 / 100)
Urine	26 / 16.0 K17 (9 / 34.6)

K24 (1 / 3.8)
K25 (1 / 3.8)
K27 (1 / 3.8)
K52 (1 / 3.8)
K54 (1 / 3.8)
K55 (1 / 3.8)
K64 (9 / 34.6)
KN2 (2 / 7.7)

Undefined

1 / 0.6
K64 (1 / 100)



Supplementary Figure S1. Plaque assay of *Kp* 7984 with phage TUN1 assembled in *E. coli* NEBstable cells. After being assembled in a non-replicative host, phage TUN1 causes plaques on *Kp* 7984.