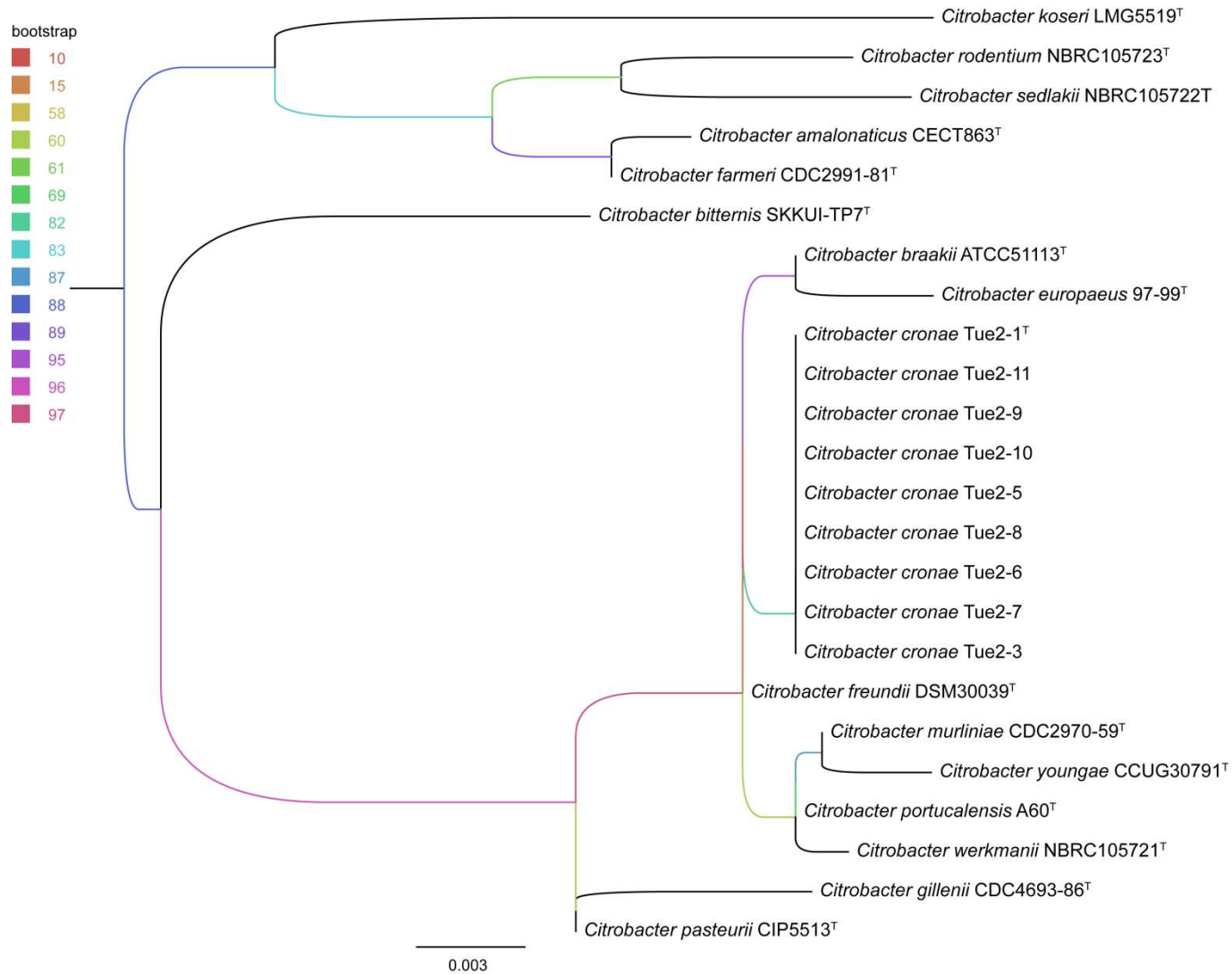
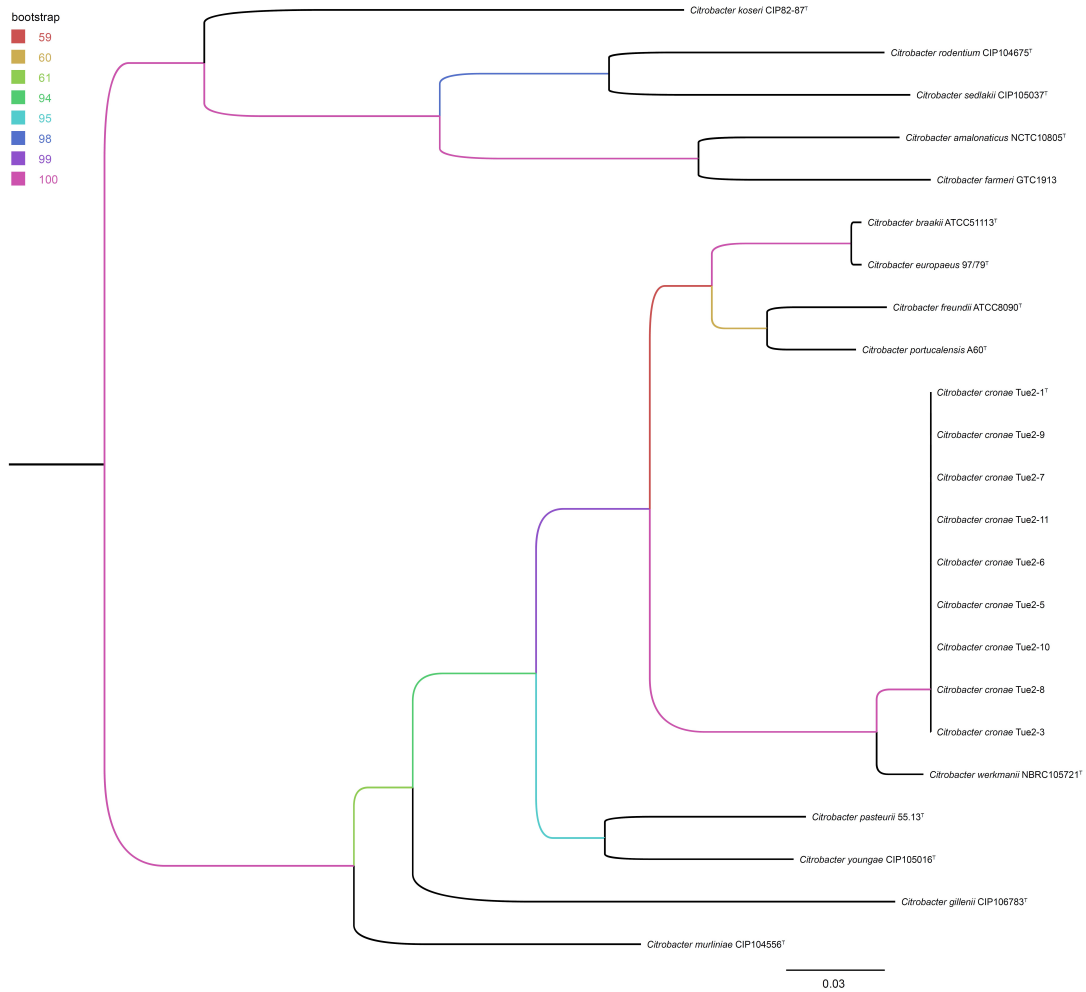


Taxonomic Description template

1 Supplementary Figures and Tables



3 **Supplementary Figure S1: Phylogenetic tree based on 16S rRNA sequences.** Calculation of phylogenetic relationship was performed with
4 1000 bootstrap replicates and the scale bar represents the expected number of changes per site. The tree was rooted at midpoint.



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6 **Supplementary Figure S2: Maximum-likelihood phylogeny based on *recN* gene.** DNA-sequences of *recN* were extracted from available
7 WGS data of *Citrobacter* type strains. Phylogeny was conducted using 1000 bootstrap replicates with a scale bar representing the expected
8 number of changes per site. The tree was rooted at midpoint.

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23 **Supplementary Table S1: Overview of *Citrobacter* species type strains, strain identification and corresponding nucleotide**
 24 **accession/Gen Bank/ENA numbers of the strains included in the study.**

<i>Citrobacter</i> species	Whole genome sequencing data		16S rRNA sequence	
	Strain ID	Gen Bank / ENA number	Strain ID	Accession number
<i>Citrobacter amalonaticus</i>	NTC10805 ^T	UFVN01000003.1	CECT863 ^T	FR870441
<i>Citrobacter bitternis</i>	n/a	n/a	SKKUI-TP7 ^T	KJ817168
<i>Citrobacter braakii</i>	ATCC51113 ^T	NZ_NAEW01000001.1	ATCC51113 ^T	NAEW01000064
<i>Citrobacter europaeus</i>	97/79 ^T	NZ_FLYB01000018.1	97/79 ^T	FLYB01000015
<i>Citrobacter farmeri</i>	GTC1319	NZ_BBMX01000006.1	CDC2991-81 ^T	AF025371
<i>Citrobacter freundii</i>	ATCC8090 ^T	NZ_JMTA01000001.1	DSM30039 ^T	AJ233408
<i>Citrobacter gillenii</i>	CIP106783 ^T	ERS574813	CDC4693-86 ^T	AF025367
<i>Citrobacter koseri</i>	NCTC10786 ^T	UAVY01000004.1	LMG5519 ^T	HQ992945
<i>Citrobacter murlinae</i>	CIP104556 ^T	ERS574814	CDC2970-59 ^T	AF025369
<i>Citrobacter pasteurii</i>	CIP55-13 ^T	NZ_CDHL01000039.1	CIP55.13 ^T	CDHL01000036
<i>Citrobacter portucalensis</i>	A60 ^T	NZ_MV FY01000001.1	A60 ^T	MV FY01000035
<i>Citrobacter rodentium</i>	NBRC105723 ^T	NZ_BBNA01000001.1	NBRC105723 ^T	BBNA01000105
<i>Citrobacter sedlakii</i>	NBRC105722 ^T	NZ_BBNB01000001.1	NBRC105722 ^T	BBNB01000023
<i>Citrobacter werkmanii</i>	NBRC105721 ^T	NZ_BBMW01000009.1	NBRC105721 ^T	BBMW01000025
<i>Citrobacter youngae</i>	CCUG30791 ^T	NZ_RPOI01000016.1	CCUG30791 ^T	RPOI01000045
<i>Citrobacter</i> species from this study				
<i>Citrobacter cronae</i>	Tue2-1 ^T	VOSQ00000000	Tue2-1 ^T	MN548424
<i>Citrobacter cronae</i>	Tue2-3	n/a	Tue2-3	n/a
<i>Citrobacter cronae</i>	Tue2-5	n/a	Tue2-5	n/a
<i>Citrobacter cronae</i>	Tue2-6	n/a	Tue2-6	n/a
<i>Citrobacter cronae</i>	Tue2-7	n/a	Tue2-7	n/a
<i>Citrobacter cronae</i>	Tue2-8	n/a	Tue2-8	n/a
<i>Citrobacter cronae</i>	Tue2-9	n/a	Tue2-9	n/a
<i>Citrobacter cronae</i>	Tue2-10	n/a	Tue2-10	n/a
<i>Citrobacter cronae</i>	Tue2-11	n/a	Tue2-11	n/a

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26 **Supplementary Table S2 (A and B): Percentage of average nucleotide identity (ANI) and calculation of digital DNA-DNA-hybridization**
 27 **(dDDH) for the nine study isolates (S2A) and for *Citrobacter* type strains (S2B).**

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29 **S2A**

Strain	<i>Citrobacter</i> species	1		2		3		4		5		6		7		8		9	
		ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH
1	<i>C. cronae</i> Tue2_1 ^T	*	*	99.96	99.8	99.97	100	99.67	98.6	99.67	98.3	99.97	99.9	99.97	100	99.97	99.8	99.97	100
2	<i>C. cronae</i> Tue2_3			*	*	99.96	100	99.67	98.6	99.66	98.3	99.98	99.9	99.98	100	99.96	99.7	99.96	100
3	<i>C. cronae</i> Tue2_5					*	*	99.78	99.5	99.78	99.2	99.98	99.9	99.98	99.9	99.97	99.6	99.97	100
4	<i>C. cronae</i> Tue2_6							*	*	99.86	99.6	99.51	99.3	99.56	99.5	99.65	99.6	99.65	99.6
5	<i>C. cronae</i> Tue2_7									*	*	99.46	99.1	99.5	99.3	99.59	99.4	99.57	99.3
6	<i>C. cronae</i> Tue2_8											*	*	99.99	100	99.91	99.6	99.91	100
7	<i>C. cronae</i> Tue2_9													*	*	99.91	99.7	99.91	100
8	<i>C. cronae</i> Tue2_10															*	*	99.99	99.9
9	<i>C. cronae</i> Tue2_11																	*	*

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32 **S2B**

Strain	<i>Citrobacter</i> species	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15	
		ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH	ANI	dDDH
1	<i>C. cronae</i> Tue2_1 ^T	*	*	81.71	25.4	90.21	42.7	90.53	43	81.35	25	90.03	41.7	85.85	31.7	82.75	26.9	85.85	31.4	87.93	36.2	90.11	42.4	80.97	24.9	80.88	24.7	95.92	70	92.48	51.3
2	<i>C. amalonaticus</i> NTC10505 ^T			*	*	81.75	25.3	81.85	25.2	91.08	44.6	81.8	25.3	81.89	25.4	83.05	27	81.46	24.9	81.83	25.1	81.8	25.4	83.99	28.6	83.88	27.9	81.75	25.3	81.98	25.8
3	<i>C. braakii</i> ATCC51113 ^T					*	*	92.57	52.9	81.5	25.1	91.87	48	85.98	31.7	82.77	26.9	86.05	31.6	88.86	38.8	91.64	48.5	80.86	24.8	80.95	24.5	90.35	42.8	90.31	43.1
4	<i>C. europaeus</i> 97/79 ^T							*	*	81.27	25	91.92	49	85.68	31.6	82.76	26.9	85.87	31.6	88.76	38.5	91.92	50.3	80.81	24.7	80.66	24.6	90.45	43.4	90.2	42.9
5	<i>C. fameri</i> GTC1319									*	*	81.49	25.1	81.62	25.2	82.78	26.6	81.29	24.7	81.43	24.9	81.52	25.1	83.6	28	83.61	27.5	81.51	25.1	81.76	25.5
6	<i>C. freundii</i> ATCC8090 ^T											*	*	86.08	31.7	82.79	26.6	86.08	31.4	89.66	40.3	94.16	58.4	81.11	24.8	81.05	24.5	90.33	41.9	90.12	41.6
7	<i>C. gillenii</i> CIP106783 ^T													*	*	82.84	26.8	86.48	32.3	86.4	32	86.2	31.7	81.23	25	81.11	24.6	86.08	31.6	86.04	31.5
8	<i>C. koseri</i> NCTC10786 ^T															*	*	82.81	26.4	82.92	26.4	83.14	26.8	82.7	26.9	82.51	26.1	83.01	26.9	83.27	27.2
9	<i>C. murlinae</i> CIP104556 ^T																	*	*	86.39	31.9	86	31.6	80.61	24.2	80.47	24	85.94	31.3	85.86	31.5
10	<i>C. pasteurii</i> CIP55-13 ^T																	*	*	*	*	88.86	38.4	81.03	24.7	80.97	24.5	88.31	36.3	88.29	36.5
11	<i>C. portucalensis</i> A60 ^T																					*	*	81.22	25	81.12	24.6	90.47	42.6	90.3	42.4
12	<i>C. rodentium</i> NBRC105723 ^T																						*	*	85.94	31.7	81.29	25.1	81.59	25.5	
13	<i>C. sedlakii</i> NBRC105722 ^T																								*	*	81.07	24.7	81.45	25	
14	<i>C. werkmanii</i> NBRC105721 ^T																									*	*	92.29	50.1		
15	<i>C. youngae</i> CCUG30791 ^T																										*	*			

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