



**Supplementary Figure S1.** Statistical distribution of the subsystems in strain 2014LM annotated on the RAST server. Numbers in brackets indicate coding sequences (CDSs) of each subsystem.

**Supplementary Table S1.** Summary of general information for the reference *Legionella* strains in this study

Strain	GenBank accession No.	Isolation source	Country	Collection time	Species	Genome		G+C content (%)	Prophages
						Size (bp)	CDSs		
2014LM	JABTVM000000000.1	Homo sapiens	China	2014	<i>L. micdadei</i>	3.37M	3,178	40.6	7.7K
LMI	NZ_LN614830	Homo sapiens	USA	1943	<i>L. micdadei</i>	3.31M	3,055	40.5	20.3K, 9.7K
NZ2015	CP020614	Homo sapiens	New Zealand	2015	<i>L. micdadei</i>	3.28M	3,082	40.5	19.8K
NZ2016	CP020615	Homo sapiens	New Zealand	2016	<i>L. micdadei</i>	3.25M	3,054	40.5	9.6K, 12.1K, 21.6K
Philadelphia-1	AE017354	Homo sapiens	USA	1977	<i>L. pneumophila 1</i>	3.40M	3,210	38.3	30.7K, 7.1K, 36.1K

**Supplementary Table S2.** List of *Legionella* spp. strains in phylogenetic analysis

Accession No	Species	Strain
JABTVM000000000	<i>L. micdadei</i>	2014LM
CP020614	<i>L. micdadei</i>	NZ2015
CP020615	<i>L. micdadei</i>	NZ2016
LN614830	<i>L. micdadei</i>	LMI
AB233209	<i>L. impletisoli</i>	OA1-1
AB233212	<i>L. yabuuchiae</i>	OA1-4
LR134424	<i>L. adelaidensis</i>	NCTC12735
AE017354	<i>L. pneumophila</i>	Philadelphia_1
CP000675	<i>L. pneumophila</i>	Corby
FR799695	<i>L. pneumophila</i>	Corby41_HC4_2009
CP001828	<i>L. pneumophila</i>	2300_99_Alcoy
CP014759	<i>L. pneumophila</i>	F4468
CP014760	<i>L. pneumophila</i>	F4469
CP015342	<i>L. pneumophila</i>	D-7632
CP015343	<i>L. pneumophila</i>	D-7631
CP015344	<i>L. pneumophila</i>	D-7630
CP021266	<i>L. pneumophila</i>	Knoxville_1_D-7468
CP021269	<i>L. pneumophila</i>	Bellingham_1_D-7473
LS483410	<i>L. pneumophila</i>	NCTC11404
LT906476	<i>L. pneumophila</i>	NCTC11286
FQ958211	<i>L. pneumophila</i>	HL06041035
CP003192	<i>L. pneumophila</i>	ATCC_43290
CP003885	<i>L. pneumophila</i>	LPE509
CP012019	<i>L. pneumophila</i>	Toronto-2005
CP013742	<i>L. pneumophila</i>	Philadelphia-1
CP015925	<i>L. pneumophila</i>	E10_P
CP015926	<i>L. pneumophila</i>	E11_U
CP015927	<i>L. pneumophila</i>	Philadelphia_1_ATCC
CP015928	<i>L. pneumophila</i>	Philadelphia_1_CDC_
CP015929	<i>L. pneumophila</i>	Philadelphia_2
CP015930	<i>L. pneumophila</i>	Philadelphia_3
CP015931	<i>L. pneumophila</i>	Philadelphia_4
CP015932	<i>L. pneumophila</i>	C1_S
CP015933	<i>L. pneumophila</i>	C2_S
CP015934	<i>L. pneumophila</i>	C3_O
CP015935	<i>L. pneumophila</i>	C4_S
CP015936	<i>L. pneumophila</i>	C5_P
CP015937	<i>L. pneumophila</i>	C6_S
CP015938	<i>L. pneumophila</i>	C7_O
CP015941	<i>L. pneumophila</i>	C9_S

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Accession No	Species	Strain
CP015944	<i>L. pneumophila</i>	C10_S
CP015945	<i>L. pneumophila</i>	C11_O
CP015946	<i>L. pneumophila</i>	E1_P
CP015949	<i>L. pneumophila</i>	E3_N
CP015950	<i>L. pneumophila</i>	E4_N
CP015951	<i>L. pneumophila</i>	E5_N
CP015953	<i>L. pneumophila</i>	E6_N
CP015954	<i>L. pneumophila</i>	E7_O
CP015955	<i>L. pneumophila</i>	E8_O
CP015956	<i>L. pneumophila</i>	E9_O
CP016029	<i>L. pneumophila</i>	Pontiac
CP021267	<i>L. pneumophila</i>	Burlington_1_D-7841
CP021268	<i>L. pneumophila</i>	Birmingham_1 D-7470
CP040987	<i>L. pneumophila</i>	FDAARGOS_779
CP045974	<i>L. pneumophila</i>	AUSMDU00010536_SBT211
CP048618	<i>L. pneumophila</i>	ERS1305867
LR133933	<i>L. pneumophila</i>	NCTC12180_
LR134332	<i>L. pneumophila</i>	NCTC11193
LT598657	<i>L. pneumophila</i>	Lpm7613
LT632614	<i>L. pneumophila</i>	ST62
LT632616	<i>L. pneumophila</i>	ST37
CP021283	<i>L. pneumophila</i>	Allentown_1_D-7475
CR628337	<i>L. pneumophila</i>	Lens
LT632617	<i>L. pneumophila</i>	ST42
CP016030	<i>L. pneumophila</i>	OLDA
CP021281	<i>L. pneumophila</i>	Flint_2_D-7477
CP021286	<i>L. pneumophila</i>	Albuquerque_1_D-7474
CR628336	<i>L. pneumophila</i>	Paris
EU054324	<i>L. pneumophila</i>	Alcoy 2300/99
LT632615	<i>L. pneumophila</i>	ST23
FQ958210	<i>L. pneumophila</i>	Lorraine
LT906452	<i>L. pneumophila</i>	NCTC11985
LR134176	<i>L. pneumophila</i>	NCTC12179
CP003023	<i>L. pneumophila</i>	Lp02
CP011105	<i>L. pneumophila</i>	L10-023
CP015939	<i>L. pneumophila</i>	C8_S
CP015947	<i>L. pneumophila</i>	E2_N
CP003730	<i>L. pneumophila</i>	Thunder Bay
DQ408661	<i>L. pneumophila</i>	DGGE band 4
HQ287902	<i>L. pneumophila</i>	Los Angelos-1
AJ496383	<i>L. pneumophila</i>	serogroup 6

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Accession No	Species	Strain
LT906442	<i>L. waltersii</i>	NCTC13017
LN614827	<i>L. fallonii</i>	LFA_J
CM001371	<i>L. dumoffii</i>	Tex-KL
CM001373	<i>L. dumoffii</i>	NY 23
NR_171519	<i>L. qingyii</i>	km488
FN650140	<i>L. longbeachae</i>	NSW150
LN899829	<i>L. saoudiensis</i>	LH-SWC
NR_152697	<i>L. saoudiensis</i>	LS-1
AP022839	<i>Legionella sp.</i>	TUM19329
X97362	<i>Legionella sp.</i>	LLAP11
AM747393	<i>L. dresdenensis</i>	W03-356
JF779685	<i>L. massiliensis</i>	LegA
JF779686	<i>L. tunisiensis</i>	LegM
DQ667196	<i>L. taurinensis</i>	ATCC 700508
CP016397	<i>L. clemsonensis</i>	CDC-D5610
HE613855	<i>Legionella sp.</i>	W10-070
HF937256	<i>L. Lansingensis</i>	DSM 19556
LT906451	<i>L. Lansingensis</i>	NCTC12830
LN681225	<i>L. hackeliae</i>	LHA_
LR134383	<i>L. jordanis</i>	NCTC11533
AB571648	<i>L. oakridgensis</i>	KFYY-2
CP004006	<i>L. oakridgensis</i>	ATCC_33761__
AB597175	<i>Legionella sp.</i>	HYMO-6
AB936314	<i>Legionella sp.</i>	L-50
AB514842	<i>L. londiniensis</i>	JCM 16338
AY598719	<i>L. jeonii</i>	