Table S1

Supplementary Material Table 1
***Borrelia burgdorferi* genome sequences**

Strain[a]	B31	64b	72a	94a	118a	156a	297	29805	Bol26	CA-11.2A	JD1	N40	WI91-23	ZS7
Location	NY	NY	NY	NY	NY	NY	NY	CT	Italy	CA	MA	NY	WI	Germany
B. burgdorferi rRNA lineage[b]	1	3	9	8	5	2	2	6	1	5	5	9	7	3
OspC type[c]	A	B	G	U	J	H	K	M	S	D	C	E	I	B-2
GPID[d]	3	28633	21003	20999	21001	19835	39123	28621	19837	28629	39121	39119	28627	19839
chromosome	AE000783	ABKA02000001-6[e]	ABGJ0000001-6[e]	ABGK020001-9[e]	ABGI02000001-8[e]	ABCV0200001	ND	ABJX02000001-38[e]	ABCW00000 1-4[e]	ABJY02000001-14[e]	CP002312	CP002228	ABJW02000001-31[e]	CP001205
lp5	AE001583	–	–	–	–	–	–	–	–	–	–	–	CP001462	–
lp17	AE000793	CP001413	CP001382	CP001497	CP001527	CP001258	CP002264	CP001551	CP001564	CP001481	CP002313	CP002241	CP001461	CP001204
lp21	AE000782	–	–	–	–	ABCV02000003-13[e,f]	–	–	–	–	–	–	–	–
lp25	AE000785	–	–	–	CP001532	CP001265	κ	CP001553	–	–	CP002308	CP002234	CP001459	CP001198
lp28-1	AE000794	CP001423	–	–	–	CP001273	CP002265	–	CP001566	–	CP002306	–	CP001456	CP001210
lp28-2	AE000786	CP001420	–	–	–	–	–	CP001559	–	–	–	CP002232	–	CP001209
lp28-3	AE000784	CP001417	–	CP001502	CP001540	CP001256	CP002253	CP001547	CP001573	CP001482	CP002314	κ	CP001452	CP001203
lp28-4	AE000789	CP001428	CP001380	CP001490	CP001541	CP001272	CP002266	CP001552	CP001569	CP001480	CP002318	CP002236	CP001454	CP001207
lp28-5	–	CP001412	–	–	CP001529	CP001274	CP002267	–	–	–	CP002317	CP002233	–	–
lp28-6	–	–	–	–	CP001531	CP001262	CP002259	CP001555	–	–	CP002324	–	CP001455	–
lp28-7	–	–	–	–	–	–	–	–	–	–	CP002319	–	–	–
lp28-8	–	–	–	ABGK02000010-13[e,f]	–	–	–	–	–	–	–	–	–	–
lp36	AE000788	CP001425	CP001374	CP001494	CP001537	CP001260	CP002256	CP001557	CP001567	fused to lp28-4	CP002315	CP002230	CP001448	CP001201
lp38	AE000787	CP001419	CP001377	–	CP001539	CP001267	CP002258	CP001548	–	CP001476	CP002325	CP002237	CP001458	–
lp54	AE000790	CP001421	CP001370	CP001500	CP001542	CP001257	CP001653	CP001554	CP001571	CP001473	CP001652	CP001651	CP001447	CP001199
lp56	AE001584	–	–	CP001495	–	–	–	–	–	CP001474	–	–	CP001443	–
cp9-1	AE000791	–	–	CP001501[h]	–	–	–	–	–	–	–	CP002232	ABJW02000 0032-34[e,f]	–
cp9-3	–	–	–	–	CP001533[h]	–	–	–	–	–	–	–	CP001460[h]	–
cp26	AE000792	CP001422	CP001375	CP001493	CP001535	CP001271	CP002268	CP001550	CP001568	CP001484	CP002316	CP002239	CP001446	CP001212
cp32-1	AE001575	CP001414	CP001381	–	–	CP001261	CP002254	–	–	CP001479	CP002310	–	CP001445	CP001206
cp32-3	AE001576	CP001418	CP001378[i]	–	CP001530[i]	CP001264	CP002269	–	–	CP001483	CP002320	–	–	CP001202
cp32-4	AE001577	CP001411	–	–	CP001538	CP001263	CP002270	CP001556	ABCW02000 007[e]	–	–	CP002235	CP001444	CP001208
cp32-5	–	CP001415	CP001376	CP001496	CP001536	–	CP002261	CP001546	CP001572	CP001475	fused to cp32-1[g]	CP002227	CP001453	–
cp32-6	AE0001578	CP001427	–	CP001499	CP001528	CP001259	CP002263	–	–	–	CP002307	–	CP001450	–
cp32-7	AE0001579	CP001416	CP001373	CP001492	CP001526	CP001268	CP002257	CP001558	–	–	–	CP002229	CP001457	–
cp32-8	AE0001589	fused to cp32-3[g]	–	–	CP001525	CP001269	–	–	–	–	CP002311	–	–	–
cp32-9	AE0001581	CP001424	–	–	fused to cp32-7[g]	–	CP002262	CP001549	CP001570	–	CP002322	CP002242	–	CP001211
cp32-10	fused to lp56[g]	–	CP001379	CP001498	CP001534	–	–	–	ABCW02000 010[e]	CP001477	CP002323	CP002240	CP001449	fused to cp32-3[g]
cp32-11	–	CP001426	–	CP001491	–	CP001270	CP002260	–	ABCW02000 006 & 9[e,f]	–	CP002309	–	CP001451	–
cp32-12	–	–	CP001372	–	–	CP001266	CP002255	CP001545	CP001565	–	CP002321	CP002238	–	CP001200
cp32-13	–	–	CP001371	–	CP001543	–	–	–	–	CP001478	–	–	–	–
unknown	–	–	–	–	–	–	–	–	ABCW02000 005 & 9[f]	–	–	–	–	–

	B31	64b	72a	94a	118a	156a	297	29805	Bol26	CA-11.2A	JD1	N40	WI91-23	ZS7	Total
cp32s	7	8	6	5	7	8	9	5	6	5	8	6	7	5	92
Other circles	2	1	1	2	2	1	1	1	1	1	1	2	3	1	20
Linear plasmids	12	9	6	7	10	11	9	9	6	7	11	8	11	8	124
Total Plasmids	21	18	13	14	19	20	19	15	13	13	20	16	21	14	236

SUPPLEMENTARY MATERIAL TABLE FOOTNOTES

a. Each line in the table represents the chromosome or a plasmid type (indicated in leftmost column). Plasmid types are defined by their PFam32 protein's sequence type as described in Casjens *et al. (4)*. The B31 genome sequence has been previously published; the remaining thirteen genomes are presented in this report. All sequences are closed except for those which are indicated otherwise; note that because sequencing required cloning into a circular plasmid vector, all linear chromosome and plasmid ends are likely to have some terminal bp whose sequence was not determined (by analogy with other *Borrelia* strains we have sequenced, this is usually less than a few hundred bp).

The source s of *B. burgdorferi* strains are as follows:

Isolate	Origin	Source	Reference
297	human/CT	J. Radolf	Steere *et al.* (13)
29805	tick/CT	J. Anderson	Zingg *et al.*(16)
64b	human/NY	M. Schriefer	Qiu *et al.*(10)
72a	human/NY	M. Schriefer	Qiu *et al.*(10)
94a	human/NY	M. Schriefer	Qiu *et al.*(10)
118a	human/NY	M. Schriefer	Qiu *et al.*(10)
156a	human/NY	M. Schriefer	Qiu *et al.*(10)
Bol26	human/Italy	I. Livey	Qiu et al.(9)
CA-11.2A	tick/CA	P. Rosa	Schwan *et al.* (11)
JD1	tick/MA	T. Schwan	Piesman *et al.* (8)
N40	tick/NY	S. Barthold	Barthold *et al.* (2)
WI91-23	bird/WI	R. Johnson	McLean *et al.* (6)
ZS7	tick/Germany	I. Livey	Simon *et al.* (12)

b. rRNA lineages from Bunikis *et al.*(3), Attie *et al.(1)* and Travinsky *et al.*(14).

c. OspC type from Wang *et al.* (15) and Travinsky *et al.*(14).

d. NCBI Genome Project Identification number <http://www.ncbi.nlm.nih.gov/genomeprj/GPiD>

e. Draft sequence; contigs not joined.

f. By similarity with other plasmids, these contigs likely fit together into the indicated plasmid, but this has not been shown experimentally.

g. Plasmids lp56 in strain B31 and JD1 have been shown by experimental analysis to be fused. The other putative fused plasmids are deduced purely from the assembly of the sequencing runs.

h. The cp9 plasmids do not have a PFam32 gene and so cannot be categorized in this fashion like the other plasmids. However, their PFam57 genes (5) vary and are present as two types which we name cp9-1 and cp9-3 (cp9-2 has been used previously for a putative cp9 plasmid whose PFam57 gene has not been characterized (7)) .

i. These are "lp32" plasmids which are apparently linear and which have little in common with the cp32s beyond their partition gene cluster.

j. Unclosed contig with cp32-like sequences that do not include a PFam32 gene which can be used to determine the cp32 type.

k. Present in some cultures of this strain but it was absent in the culture whose DNA was sequenced.

Note from the authors

The authors suggest that primary inquiries related to clinical aspects of this document be addressed to Dr. Steven Schutzer and inquiries related to the technical aspects, regarding strains and sequencing be directed to Dr. Sherwood Casjens.

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