

1 **Legends and References for Supplemental Material**

2

3 **Table S1.** Position of SNP differences between the published *C. perfringens* strain
4 SM101 sequences ((1), <http://www.ncbi.nlm.nih.gov/bioproject/58117>) and that
5 obtained in this report. The positions shown are relative to the published sequence
6 (1).

7

8 **Table S2.** Cell dimensions and other parameters for strains used in this report.

9

10 **Figure S1.** Representative growth curves for each strain shown. Note that different
11 inoculation methods were used for the SM101-SM124 based strains compared to
12 the SM102-SM127 strains (see Materials and Methods).

13

14 **Figure S2.** Amount of PG in the strains indicated. The values shown are the mean
15 and SEM of triplicates samples. *P* values were obtained using the student's double
16 tailed t-test.

17

18 **Figure S3.** Representative images showing cells of strain SM101 **(A)** and SM102
19 **(B)** after 18 h of growth on BHI medium with 0.1 µg/ml cephalixin. **(C).** Colony
20 morphology of strain SM101 plated on BHI medium with 0.1 µg/ml cephalixin for
21 40 h. **(D).** Colony morphology of strain SM102 plated on BHI medium with 0.1
22 µg/ml cephalixin for 40 h.

23

24 **Video S1.** Time lapse video showing strain SM101 on BHI medium with 1% agar.

25 Elapsed time is shown in the upper left, scale bar in the lower left of the image.

26

27 **Video S2.** Time lapse video showing strain SM102 on BHI medium with 1% agar.

28 Elapsed time is shown in the upper left, scale bar in the lower left of the image.

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30 **Video S3.** Time lapse video showing strain SM124 on BHI medium with 1% agar.

31 Elapsed time is shown in the upper left, scale bar in the lower left of the image.

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33 **Video S4.** Time lapse video showing strain SM127 on BHI medium with 1% agar.

34 Elapsed time is shown in the upper left, scale bar in the lower left of the image.

35

36 **Video S5.** Time lapse video showing strain SM124(pHLL59) on BHI medium with

37 0.5 mM lactose and 1% agar. Elapsed time is shown in the upper left, scale bar in

38 the lower left of the image.

39

40 **Video S6.** Time lapse video showing strain SM127(pHLL60) on BHI medium with

41 0.5 mM lactose and 1% agar. Elapsed time is shown in the upper left, scale bar in

42 the lower left of the image.

43

44 1. **Myers, G. S., D. A. Rasko, J. K. Cheung, J. Ravel, R. Seshadri, R. T. Deboy, Q.**

45 **Ren, J. Varga, M. M. Awad, L. M. Brinkac, S. C. Daugherty, D. H. Haft, R. J.**

46 **Dodson, R. Madupu, W. C. Nelson, M. J. Rosovitz, S. A. Sullivan, H. Khouri,**

47 **G. I. Dimitrov, K. L. Watkins, S. Mulligan, J. Benton, D. Radune, D. J.**
48 **Fisher, H. S. Atkins, T. Hiscox, B. H. Jost, S. J. Billington, J. G. Songer, B. A.**
49 **Mcclane, R. W. Titball, J. I. Rood, S. B. Melville, and I. T. Paulsen. 2006.**
50 Skewed genomic variability in strains of the toxigenic bacterial pathogen,
51 *Clostridium perfringens*. Genome Res **16**:1031-1040.

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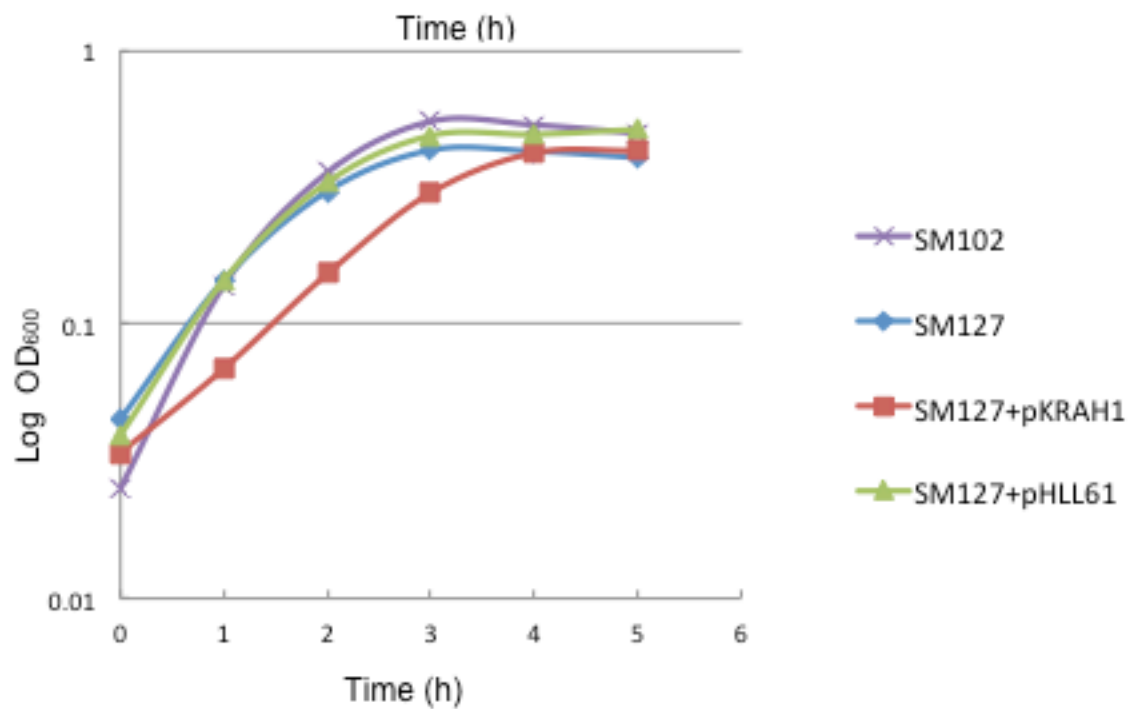
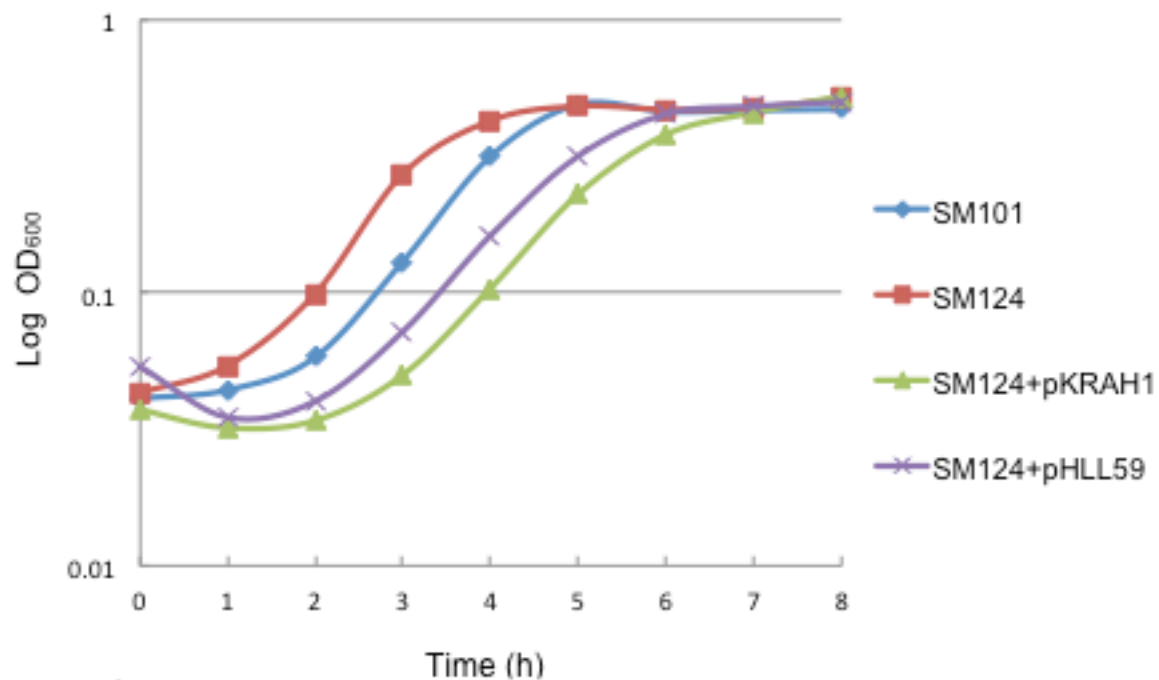
53

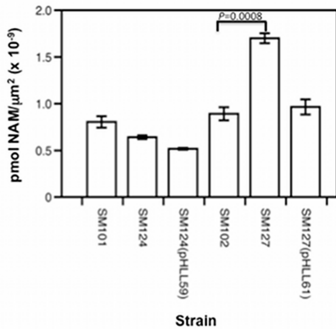
Position	gene	locus_tag	Amino Acid Change	Nucleotide Change
600,017		CPR_0505		TTA -> CTT
1,059,547		CPR_0924		(A)2 -> (A)3
1,155,221		CPR_1013	L -> F	G -> T
1,155,223		CPR_1013	T -> I	C -> T
1,334,542		CPR_1183		(T)3 -> (T)4
1,491,313		CPR_1320	W -> C	C -> G
1,491,562		CPR_1320		G -> T
1,493,614				T -> C
1,494,727		CPR_1323	A -> V	G -> A
1,502,023		CPR_1332	Q -> H	T -> A
1,642,387				+A
1,815,617		CPR_1624		+A
1,815,681		CPR_1624	YL -> FL	GAT -> AGA
1,815,685		CPR_1624	I -> IL	+ATA
1,818,982				G -> T
1,819,122				G -> A
1,819,140				(A)5 -> (A)6
1,819,252				C -> A
1,819,279				T -> G
1,828,829				(T)4 -> (T)3
1,877,193	rpIS	CPR_1680		(T)4 -> (T)5
1,877,279				A -> G
2,402,474	prfA	CPR_2176		G -> T
2,699,940		CPR_2484	F -> Y	A -> T
2,699,950		CPR_2484	F -> L	A -> G
2,700,211				G -> A
2,700,267		CPR_2485		-G
2,700,378		CPR_2485	S -> L	G -> A
2,798,075				+T
2,833,527		CPR_2598		-A
2,862,319				(T)3 -> (T)2

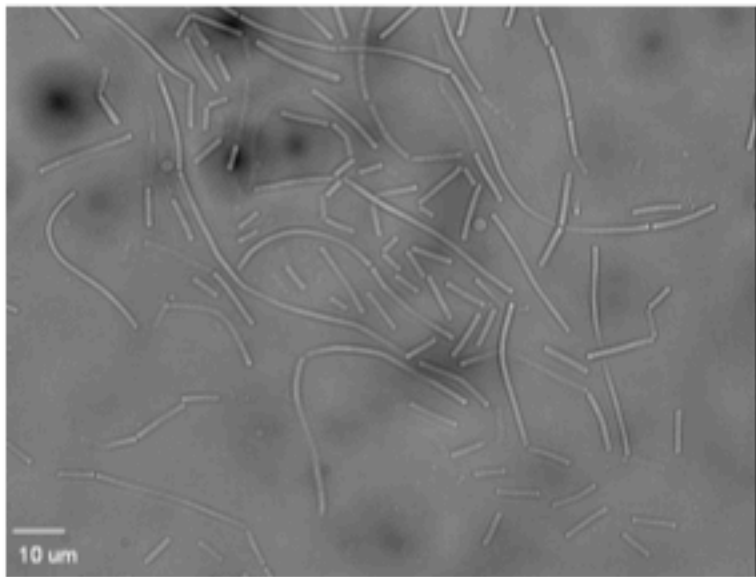
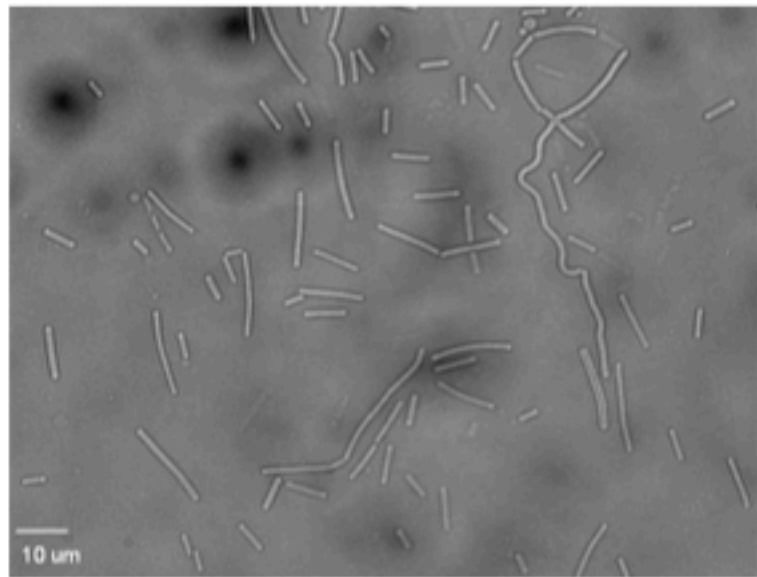
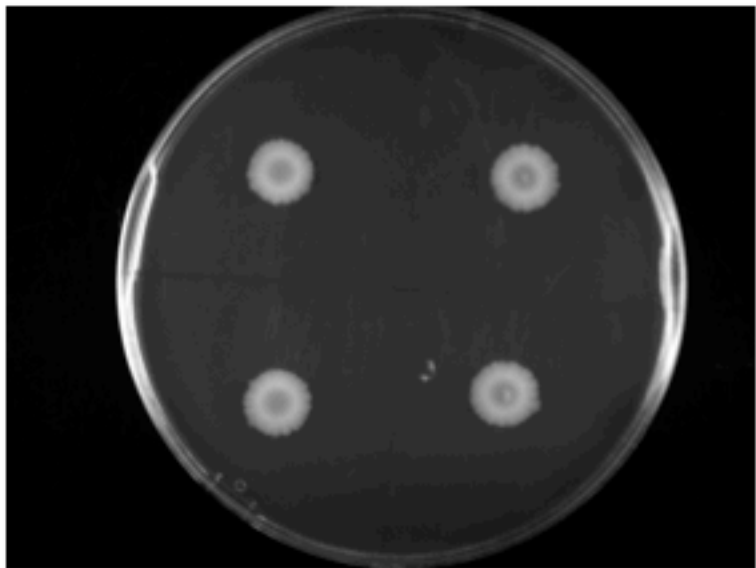
Table S2.

Strain	Bacteria/OD ₆₀₀ unit of 1.0	Avg length (μm) ¹	Volume of bacteria in OD ₆₀₀ unit of 1.0 (μm^3) ²	OD ₆₀₀ of colonies scraped off a plate ³	Volume of bacteria in colonies scraped off plates (μm^3)
SM101	9.51×10^8	3.59	3.24×10^9	0.652	2.11×10^9
SM124	5.46×10^8	6.30	3.26×10^9	0.717	2.34×10^9
SM124(pHLL59)	1.00×10^9	3.90	3.71×10^9	ND ⁴	ND
SM102	7.39×10^8	3.61	2.53×10^9	0.527	1.33×10^9
SM127	1.40×10^8	8.60	1.14×10^9	0.732	8.34×10^8
SM127(pHLL61)	4.90×10^8	3.97	1.85×10^9	ND	ND

1. Same data as in Fig. 2B.
2. Calculated using the formula for the volume of a cylinder ($V=\pi r^2 l$) x bacteria/OD₆₀₀ unit of 1.0. For each strain listed, the radius = 0.55 μm .
3. Mean values from 4 colonies placed on duplicate plates.
4. ND, not determined.





A.**B.****C.****D.**