

Supporting Information for:

Gyramides inhibit bacterial growth by inhibiting DNA gyrase and altering chromosome topology

*Manohary Rajendram,^{1^} Katherine A. Hurley,^{2^} Marie H. Foss,¹ Kelsey M. Thornton,¹
Jared T. Moore,³ Jared T. Shaw,³ and Douglas B. Weibel^{1, 4*}*

*1. Department of Biochemistry, University of Wisconsin-Madison, Madison, WI 53706,
USA*

*2. Department of Pharmaceutical Sciences, University of Wisconsin-Madison, Madison,
WI 53706, USA*

3. Department of Chemistry, University of California-Davis, Davis, CA 95616, USA

*4. Department of Chemistry, University of Wisconsin-Madison, Madison, WI 53706,
USA*

[^] denotes equal contribution

*Author to whom correspondence should be addressed:

Douglas B. Weibel

Departments of Biochemistry, Chemistry, and Biomedical Engineering

6424A Biochemical Sciences Building

440 Henry Mall

Madison WI 53706 SUA

Phone: (608) 890-1342

E-mail: weibel@biochem.wisc.edu

Figure S1. Brightfield A) and DAPI-labeled B) image of *E. coli* BW25113 Δ *tolC* treated with **3** showing filamentous cells and compacted, irregularly arranged nucleoids, respectively. Brightfield (C–G) and DAPI-labeled (H–L) images of spontaneous mutants resistant to **3** without treatment. Brightfield (M–Q) and DAPI-labeled (R–V) cells of the same mutants after treatment with **3**. The lettering on the top left of each panel refers to the corresponding amino acid mutation in DNA gyrase from the isolated spontaneous mutants.

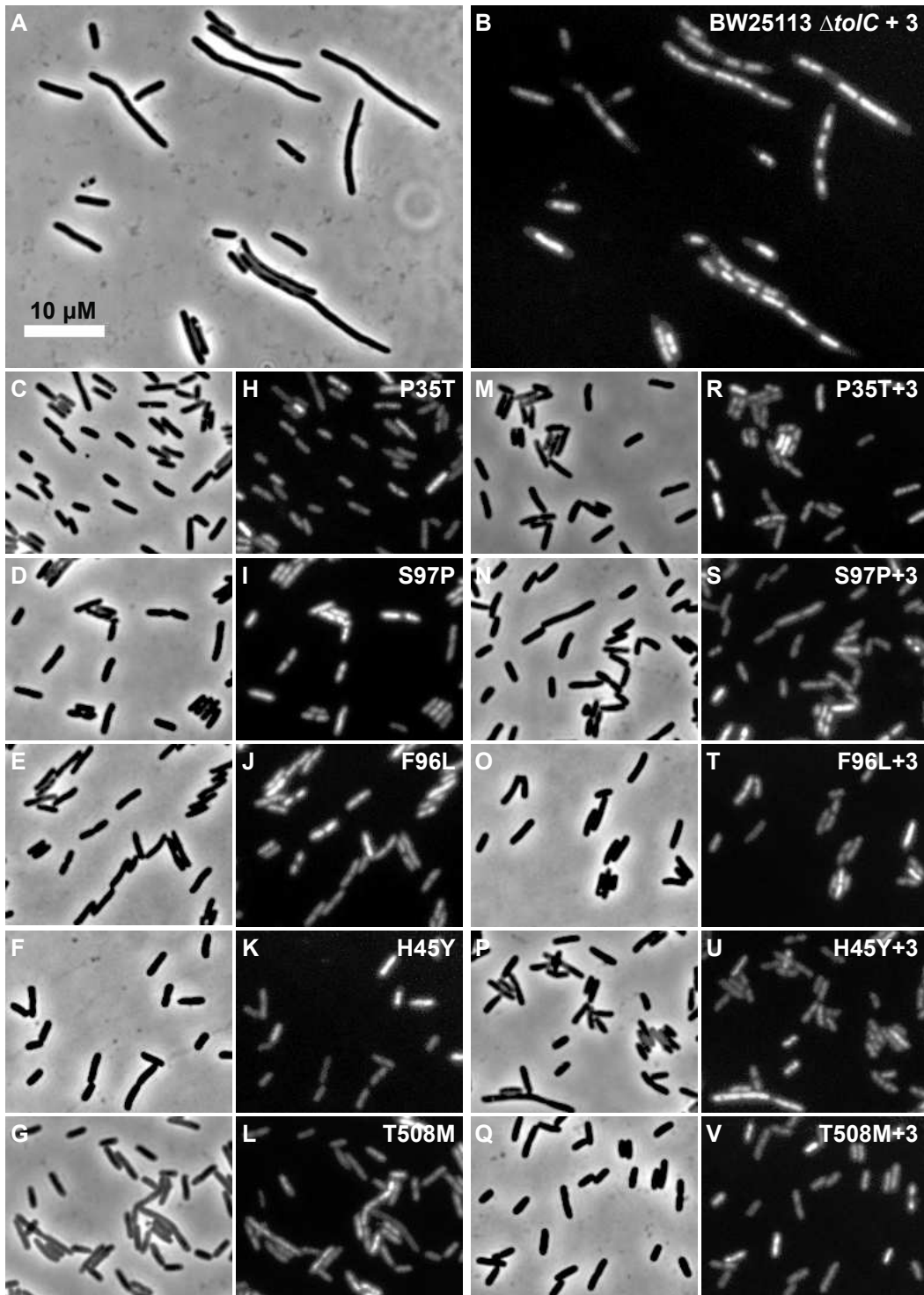


Figure S1

Table S1: MICs for **1**, **2**, and **3** against *E. coli* BW25113 $\Delta tolC$ and spontaneous mutants conferring resistance to **3**.

Strain		3 MIC ($\mu\text{g mL}^{-1}$) [μM]	2 MIC ($\mu\text{g mL}^{-1}$) [μM]	1 MIC ($\mu\text{g mL}^{-1}$) [nM]
<i>E. coli</i> BW25113 $\Delta tolC$ (parent strain)		4.1 [10]	0.77 [1.25]	0.002 [5]
3 ^R isolates	GyrA Pro35Thr	>41 [>100]	0.77 [1.25]	0.002 [5]
	GyrA Ser97Pro	>41 [>100]	0.77 [1.25]	0.002 [5]
	GyrA Phe96Leu	>41 [>100]	0.77 [1.25]	0.004 [10]
	GyrA His45Tyr	>41 [>100]	0.77 [1.25]	0.004 [10]
	GyrB Thr508Met	>41 [>100]	0.77 [1.25]	0.004 [10]