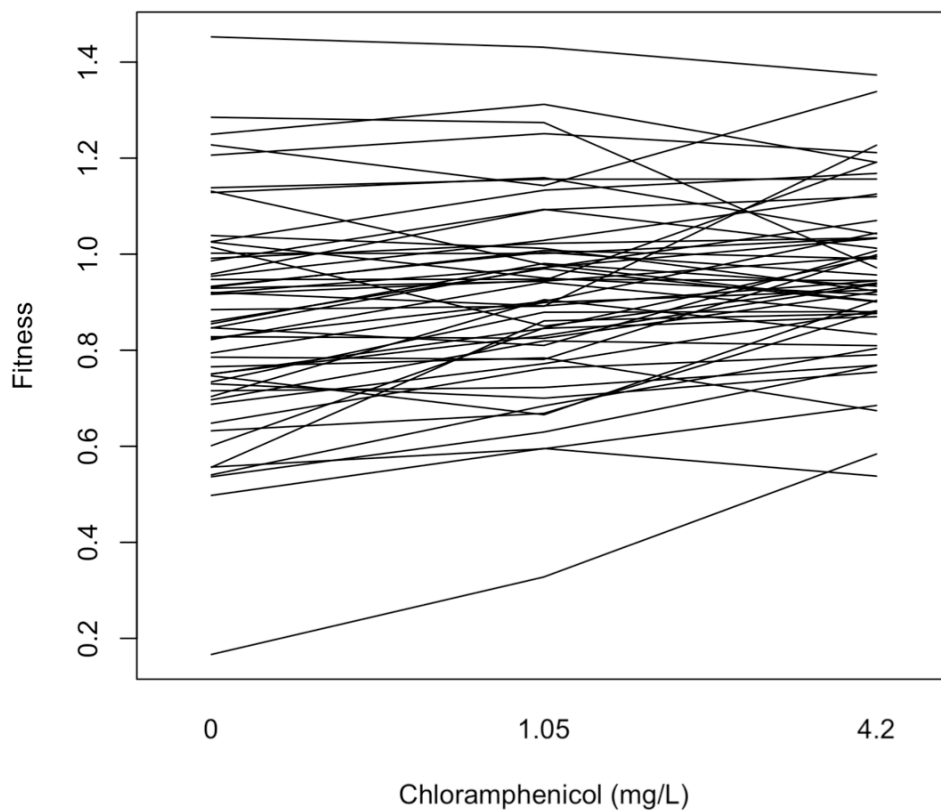
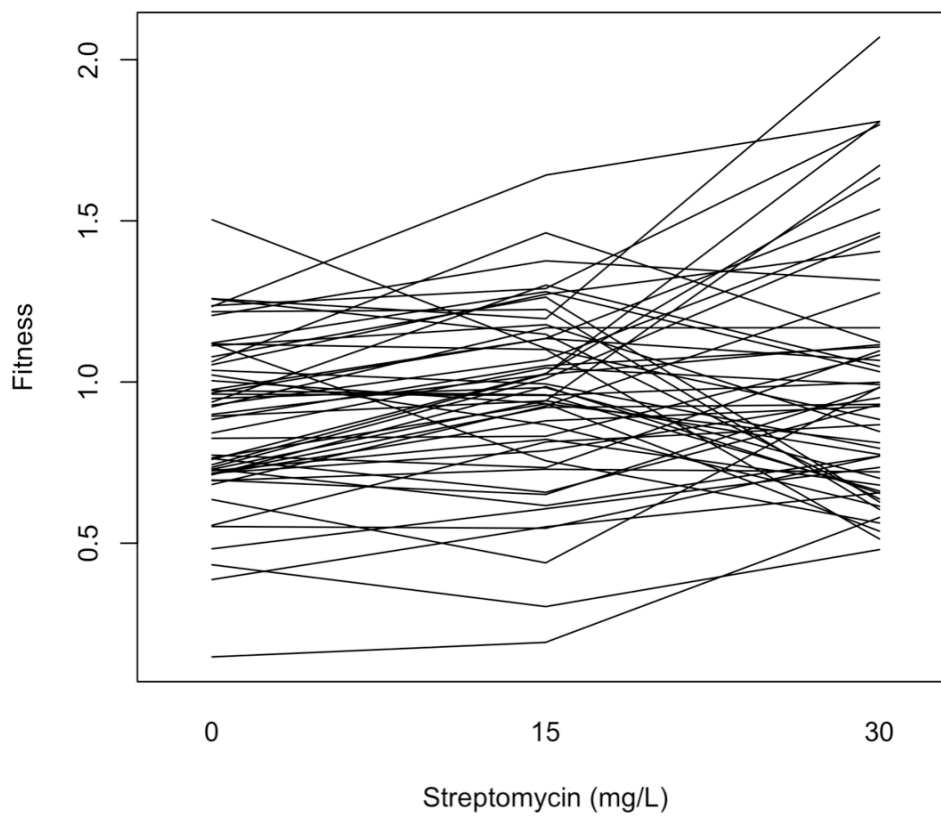


FIGURE S1.—Bacterial growth rates in different antibiotic treatments. The change in bacterial growth rate was statistically significant in each case (A, chloramphenicol: $F_{2,104} = 26.35$, $P < 0.0001$; B, streptomycin: $F_{2,104} = 177.08$, $P < 0.0001$; C, carbenicillin: $F_{2,104} = 39.25$, $P < 0.0001$; D, ciprofloxacin: $F_{2,104} = 159.56$, $P < 0.0001$).

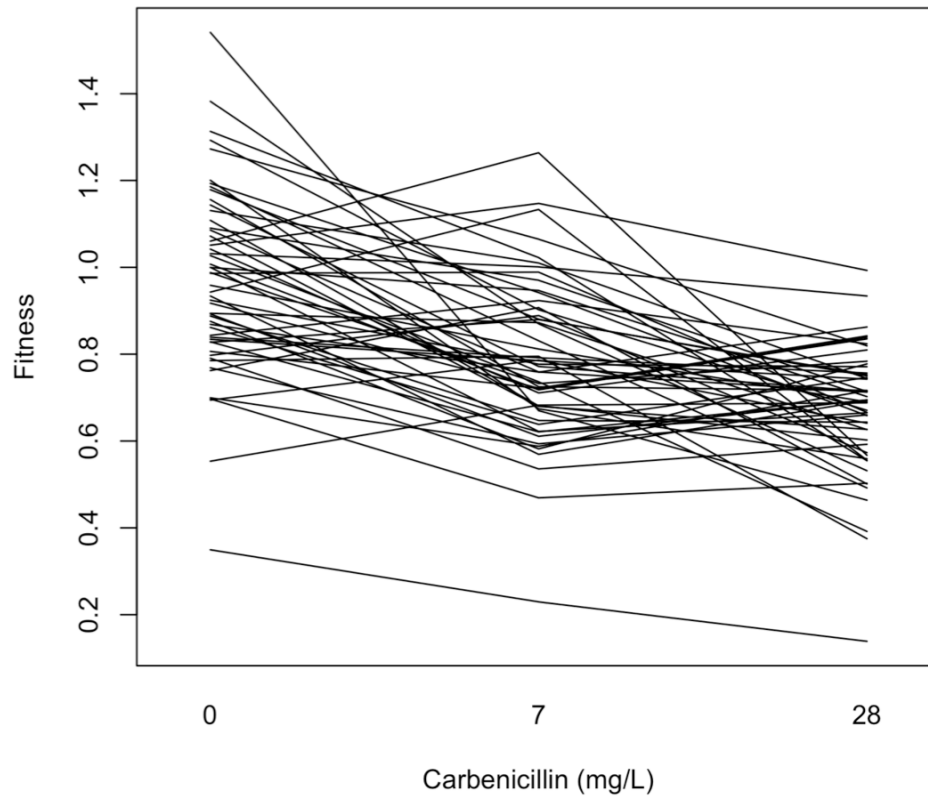
A



B



C



D

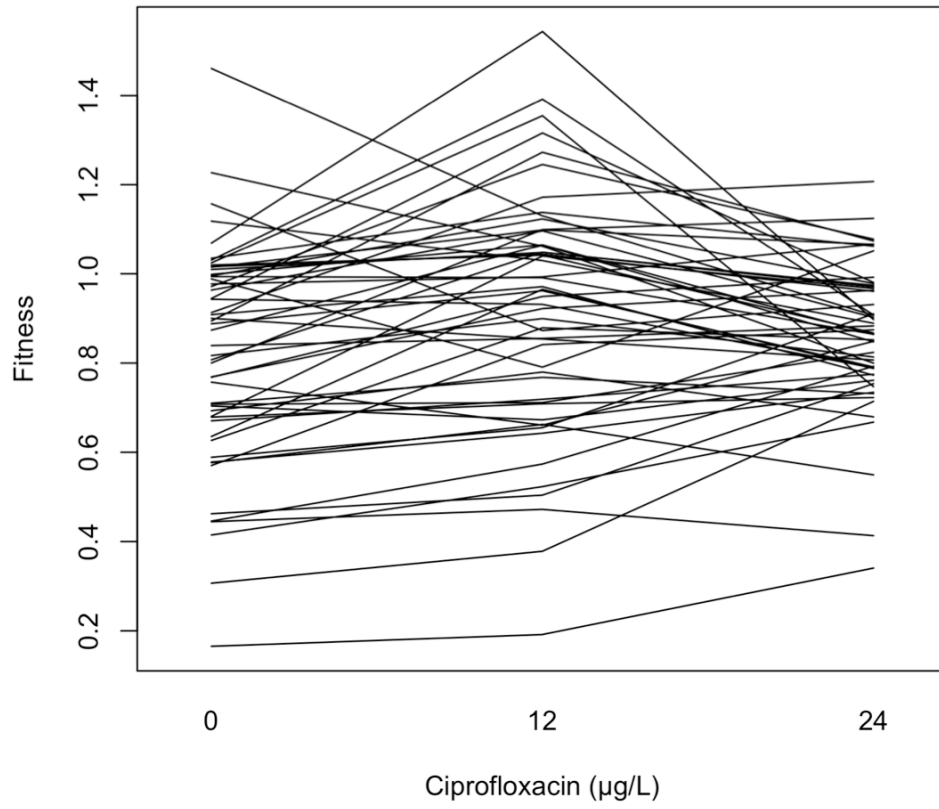


FIGURE S2.—Relative fitness of individual mutants in different antibiotic treatments. Each line shows fitness, measured as growth rate relative to wild type PA01 in the same conditions, for one of 53 different rifampicin-resistant genotypes across three concentrations of (A) chloramphenicol, (B) streptomycin, (C) carbenicillin, (D) ciprofloxacin.

FILE S1**Supporting Data**

File S1 is available for download as a compressed file (.zip) at <http://www.genetics.org/cgi/content/full/genetics.110.124628/DC1>.

TABLE S1
Rifampicin-resistant mutants used in this study

Nucleotide changes		Amino acid changes		Source
1	2	1	2	
A1553G	none	Q518R	none	<i>a</i>
A1553T	C1550T	Q518L	S517L	<i>b</i>
A1553T	none	Q518L	none	<i>a</i>
A1562T	A455G	D521V	Q152R	<i>b</i>
A1562T	none	D521V	none	<i>a</i>
A1592G	none	H531R	none	<i>a</i>
A455G	A1562G	Q152R	D521G	<i>b</i>
A455G	C1550T	Q152R	S517L	<i>b</i>
A455G	C1563A	Q152R	D521E	<i>b</i>
A455G	C1591G	Q152R	H531D	<i>b</i>
A455G	C1593A	Q152R	H531Q	<i>b</i>
A455G	C1736T	Q152R	S579F	<i>b</i>
A455G	G1724C	Q152R	G575A	<i>b</i>
A455G	none	Q152R	none	<i>a</i>
A455G	T1529C	Q152R	F510S	<i>b</i>
A455G	T1547C	Q152R	L516P	<i>b</i>
A455G	T1549G	Q152R	S517A	<i>b</i>
A455G	T449C	Q152R	V150A	<i>b</i>
A455T	A1553G	Q152L	Q518R	<i>b</i>
A455T	A1562G	Q152L	D521G	<i>b</i>
A455T	A1567G	Q152L	N523D	<i>b</i>
A455T	A1592T	Q152L	H531L	<i>b</i>
A455T	A1718G	Q152L	N573S	<i>b</i>
A455T	C1550T	Q152L	S517L	<i>b</i>
A455T	C1563G	Q152L	D521E	<i>b</i>
A455T	C1591T	Q152L	H531Y	<i>b</i>
A455T	C1607T	Q152L	S536F	<i>b</i>
A455T	C1736T	Q152L	S579F	<i>b</i>
A455T	C2296A	Q152L	Q766K	<i>b</i>
A455T	none	Q152L	none	<i>a</i>
A455T	T1549G	Q152L	S517A	<i>b</i>
A455T	T1731C	Q152L	I577T	<i>b</i>
A455T	T1731C	Q152L	I577T	<i>b</i>
C1542G	none	S514R	none	<i>c</i>
C1550T	A1553G	S517L	Q518R	<i>b</i>
C1550T	A1562G	S517L	D521G	<i>b</i>
C1550T	C1375T	S517L	R459C	<i>b</i>
C1550T	C1563G	S517L	D521E	<i>b</i>
C1550T	C1591T	S517L	H531Y	<i>b</i>
C1550T	C1607T	S517L	S536F	<i>b</i>
C1550T	C1610T	S517L	A537V	<i>b</i>
C1550T	C1619T	S517L	P540L	<i>b</i>
C1550T	C1736T	S517L	S579F	<i>b</i>

C1550T	G1561A	S517L	D521N	<i>b</i>
C1550T	G1622A	S517L	G541D	<i>b</i>
C1550T	G1624T	S517L	G542C	<i>b</i>
C1550T	none	S517L	none	<i>a</i>
C1550T	T1655G	S517L	V552G	<i>b</i>
C1563G	none	D521E	none	<i>a</i>
C1591T	A1592G	H531Y	H531R	<i>d</i>
C1591T	none	H531Y	none	<i>a</i>
C1607A	none	S536Y	none	<i>c</i>
C1607T	none	S536F	none	<i>a</i>

a. MacLean & Buckling (2009).

b. MacLean et al. (2010).

c. Fluctuation test using the same protocol as described in MacLean & Buckling (2009).

d. Hall et al. (2010). These substitutions combine to give a single amino acid change (H531C) relative to the wild type.