Supporting Information

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Table S1. Strains used in this study

Strains	Description	Ref.
S. aureus		
V329	Clinical strain	1
FRI-S6	Clinical strain	2
RF122	Clinical strain	3
Mu50	Clinical strain	4
COL	Clinical strain	5
LUG855	RN6390 ϕSLT	6
KS100	*kat*A-mutant	7
RN450	NCTC8325 cured of ϕ11, ϕ12 and ϕ13	8
RN4220	Restriction-defective derivative of RN450	8
RN451	RN450 lysogenic for ϕ11	8
RN1030	*recA*$^-$ mutant of RN451	9
RN10359	RN450 lysogenic for 80α	10
JP3592	RN10359 cI G130E	This work
JP3603	RN10359 (SaPIbov1 *tst*::*tetM)*	This work
JP3656	JP3592 (SaPIbov1 *tst*::*tetM*)	This work
JP3852	RN450 *kat*A-mutant	This work
JP3853	RN10359 *kat*A-mutant	This work
S. pneumoniae		
623	Lysogenic strain	
949	Lysogenic strain	
TIGR4	Clinical isolate	11
Pn-20	Nasopharyngeal human isolate	11
TIGR4 Δ*spx*B	Nonproducer H_2O_2 strain	11
Pn-20 Δ*spx*B	Nonproducer H_2O_2 strain	11

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Table S2. Phage titer and survival of H_2O_2-induced lysogenic staphylococcal strains

Donor strain	$[H_2O_2]$, mM	CFU*	Phage titer†
COL	NI	1.3×10^9	4.4×10^5
	0.05	1.3×10^9	4.6×10^5
	0.1	1.0×10^9	6.4×10^5
	0.5	4.1×10^4	7.4×10^8
	1	6.7×10^4	1.4×10^8
Mu50	NI	1.3×10^9	2.6×10^5
	0.05	1.7×10^9	3.8×10^5
	0.1	6.3×10^6	6.3×10^6
	0.5	6.9×10^4	5.1×10^8
	1	9.2×10^4	5.7×10^8
FRI-S6	NI	2.3×10^9	3.6×10^4
	0.05	4.6×10^8	1.4×10^5
	0.1	2.9×10^8	5.6×10^5
	0.5	3.6×10^6	4.0×10^7
	1	7.7×10^5	1.3×10^8
RF122‡	NI	6.0×10^7	ND
	0.05	9.0×10^6	ND
	0.1	6.3×10^6	ND
	0.5	7.5×10^3	ND
	1	5.9×10^3	ND
LUG855	NI	6.5×10^8	1.4×10^4
(PVL-positive)	0.05	8.0×10^8	1.9×10^4
	0.1	3.6×10^8	2.3×10^7
	0.5	6.3×10^4	3.3×10^9
	1	5.9×10^4	6.4×10^7

The means of results from 3 independent experiments are presented. Variation was within ± 5% in all cases. NI, not induced.
*Number of cells recovered after 4 h of incubation.
†No. plaque-forming phages per ml of induced culture, using RN4220 as recipient strain.
‡Phages from RF122 do not infect RN4220.

Table S3. Production of SaPI particles after incubation with *S. pneumoniae* strains

Donor strain	Phage	SaPI	Inducer*	SaPI titer†
JP3603	$\phi 80\alpha$	SaPIbov1	H_2O_2	3.8×10^8
			Pn-20	1.7×10^7
			Pn-20 Δ*spx*B	1.2×10^5
			TIGR4	8.0×10^6
			TIGR4 Δ*spx*B	1.1×10^5
			NI	1.1×10^5
JP JP3656 (JP3603 cI G130E)	$\phi 80\alpha$	SaPIbov1	H_2O_2	<10
			Pn-20	<10
			Pn-20 Δ*spx*B	<10
			TIGR4	<10
			TIGR4 Δ*spx*B	<10
			NI	<10

The means of results from 3 independent experiments are presented. Variation was within ± 5% in all cases.
*H_2O_2 (0.5 mM). NI, not induced.
†Number of SaPI particles per milliliter of induced culture, using RN4220 as recipient strain.