

Figure S1. SDS-PAGE patterns of supernatants from *P. aeruginosa* cultures in human serum (HS). HS after digestion with proteinase K and uninoculated HS have been included as controls. M, protein molecular weight marker. Strong HS hydrolyzers are reported in bold. The figure is assembled from different merged images.

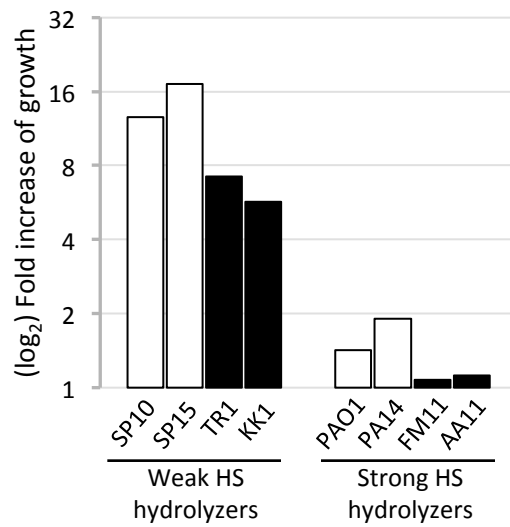


Figure S2. Growth stimulation of a selected panel of *P. aeruginosa* strains in pre-digested HS. The fold increase in bacterial growth is relative to the growth in undigested HS. Black and white bars represent CF and non-CF isolates, respectively.

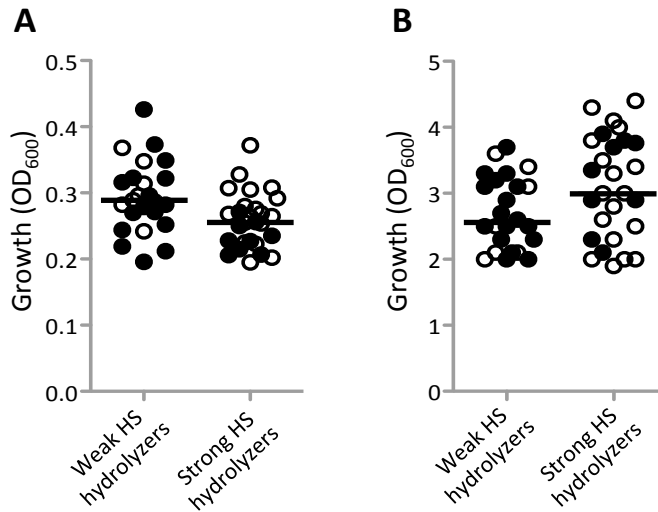


Figure S3. (A) Growth (OD₆₀₀) of *P. aeruginosa* clinical isolates in DCAA after 24 h at 37°C. (B) Growth (OD₆₀₀) of *P. aeruginosa* clinical isolates in HS supplemented with both FeCl₃ [640 μM] and Ga(NO₃)₃ [128 μM] (Fe(III):Ga(III) molar ratio 5:1). For each isolate the mean value of two independent assays is reported. Isolates were grouped according to their ability to hydrolyze HS proteins (see Fig. 1A). The line bar is the median for each group. Black and white dots represent CF and non-CF isolates, respectively.

TABLE S1 *P. aeruginosa* clinical isolates used in this study

Strain	Origin	Source	Serum hydrolysis ^a	PVD production ^b	3OC ₁₂ -HSL production ^c	C ₄ -HSL production ^c	Ga(NO ₃) ₃ MIC (μM) in HS	Ga(NO ₃) ₃ MIC (μM) in DCAA	Ref.
BT2	CF	rs	-	+	+	+	32	8	45
BT73	CF	rs	-	+	+	+	16	16	45
KK1	CF	rs	-	+	+	+	32	8	45
KK2	CF	rs	+	+	+	+	64	8	45
KK27	CF	rs	-	+	+	+	64	8	45
KK28	CF	rs	-	+	+	-	32	4	45
KK71	CF	rs	-	+	+	+	8	2	45
KK72	CF	rs	-	+	+	+	8	2	45
TR1	CF	rs	-	+	+	+	8	8	45
TR66	CF	rs	-	+	+	+	8	8	45
AA2	CF	rs	+	+	+	+	64	8	45
AA11	CF	rs	+	+	+	+	64	8	45
AA12	CF	rs	+	+	+	+	64	8	45
AA43	CF	rs	-	+	+	+	16	1	45
AA44	CF	rs	-	+	+	+	16	8	45
FM1	CF	rs	nd	-	-	-	nd	nd	27
FM2	CF	rs	-	+	-	-	2	2	27
FM4	CF	rs	+	+	+	+	64	4	27
FM11	CF	rs	+	+	+	+	64	8	27
FM12	CF	rs	+	+	+	-	64	8	27
FM13	CF	rs	-	+	+	+	16	16	27
FM14	CF	rs	-	+	+	+	32	16	27
FM15	CF	rs	-	+	+	+	32	16	27
FM17	CF	rs	-	+	+	-	32	8	27
FM19	CF	rs	-	+	+	+	32	8	27
FM20	CF	rs	+	+	+	+	64	16	27
FM21	CF	rs	+	+	+	+	64	8	6
SP1	non-CF	ws	+	+	+	+	32	32	This work
SP2	non-CF	ulcer	+	+	+	+	64	16	This work
SP3	non-CF	ws	+	+	+	+	64	8	This work
SP4	non-CF	ws	+	+	+	+	64	16	This work
SP5	non-CF	ws	-	+	+	+	16	4	This work
SP6	non-CF	blood	+	+	+	+	64	8	This work
SP7	non-CF	blood	+	+	+	+	64	8	This work
SP8	non-CF	wd	+	+	+	+	32	8	This work
SP9	non-CF	cvc	+	+	+	+	64	8	This work
SP10	non-CF	blood	-	+	+	+	8	1	This work
SP11	non-CF	ascites	-	+	-	-	32	16	This work
SP12	non-CF	pe	-	+	+	+	32	8	This work
SP13	non-CF	blood	-	+	+	+	64	8	This work
SP14	non-CF	wd	+	+	+	+	32	8	This work
SP15	non-CF	pe	-	+	+	+	4	1	This work
SP16	non-CF	bile	-	+	+	+	16	8	This work
SP17	non-CF	ws	+	+	+	+	32	8	This work

SP18	non-CF	bile	nd	-	+	+	nd	nd	This work
SP19	non-CF	pe	+	+	+	+	64	8	This work
SP20	non-CF	blood	nd	-	+	-	nd	nd	This work
SP21	non-CF	pe	nd	-	+	+	nd	nd	This work
SP22	non-CF	ws	+	+	+	+	64	8	This work
SP23	non-CF	wd	+	+	+	+	32	16	This work
SP24	non-CF	bile	+	+	+	+	64	32	This work
SP25	non-CF	wd	+	+	+	-	64	8	This work
C1	non-CF	blood	+	+	+	-	32	16	46
PA14	non-CF	burn	+	+	+	+	64	8	16
PAO1	non-CF	ATCC	+	+	+	+	64	8	ATCC

Abbreviations: CF, cystic fibrosis; PVD, pyoverdine; 3OC₁₂-HSL, N-3-oxododecanoyl homoserine lactone; C₄-HSL, N-butanoyl-l-homoserine lactone; rs, respiratory secretions; cvc, central venous catheter; ws, wound swab; wd, wound drainage; pe, pleural exudate; HS: complement-free human serum; nd, not determined due to the inability of the strain to grow in HS.

^a Isolates which hydrolyze ≥ 10 % of serum proteins are marked with (+).

^b Production of PVD was assessed in DCAA according to ref. 19

^c Production of HSL signal molecules was measured according to ref. 27.

Additional references not include in the main text:

45. **Bragonzi A, Paroni M, Nonis A, Cramer N, Montanari S, Rejman J, Di Serio C, Döring G, Tümmler B.** 2009. *Pseudomonas aeruginosa* microevolution during cystic fibrosis lung infection establishes clones with adapted virulence. *Am. J Respir Crit Care Med* **180**: 138-145.
46. **Lanini S, D'Arezzo S, Puro V, Martini L, Imperi F, Piselli P, Montanaro M, Paoletti S, Visca P, Ippolito G.** 2011. Molecular epidemiology of a *Pseudomonas aeruginosa* hospital outbreak driven by a contaminated disinfectant-soap dispenser. *PLoS One* **6**: e17064.