Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Material for

Title: Importance of the biofilm matrix for the erosion stability of *Bacillus subtilis* NCIB 3610 biofilms

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Supplementary Tables and Figures

Supplementary Tables

Table S1

Linear fit	a+b x			
	a	b		
3610	0 ± 0	1.28 ± 0.03		
Sigmoidal fit	base+{ max/(1+exp((xhalf-x)/rate))}			
	base	max	xhalf	rate
tasA	0 ± 0	100 ± 0	18.31 ± 0.46	6.02 ± 0.41
bslA	0 ± 0	100 ± 0	9.13 ± 0.26	2.09 ± 0.25
Exponential fit	y0+A*exp(invTau*x)			
	y0	A	invTau	
epsA-O	100 ± 0	-98.19 ± 2.94	0.15 ± 0.01	

In this table, the fit parameter for Figure 1b are given. The wild-type strain shows a linear erosion kinetic. The mutants *tasA* and *bslA* show a sigmoidal erosion kinetic. The mutant *epsA-O* shows an exponential erosion kinetic.

Table S2

	tasA	***bslA***	***epsA-O***
wt	**	**	**

	wt(Cipro)	***tasA*(Cipro)**	***bslA*(Cipro)**	***epsA-O*(Cipro)**
strain H_2O	**	n.s.	*	n.s.

Significance of biofilm detachment in the absence and presence of the antibiotic ciprofloxacin. Siginficance levels from high to low significance: ** α=0.01, * α=0.05 and not signigicane: n.s. Top: significance between wild-type and mutants in the

presence of ciprofloxacin. Bottom: significance between each strain in the absence of ciprofloxacin and in the presence of the antibiotic.

Supplementary Figures

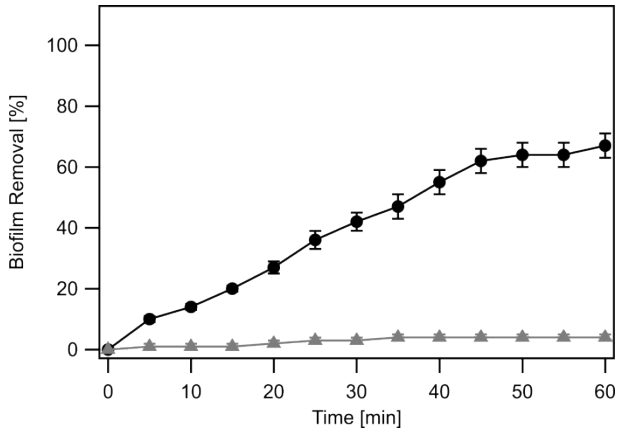

Fig S1: BD630 erosion over time. Biofilm detachment in water (black circles) and Fe^{3+} solution (grey triangles).

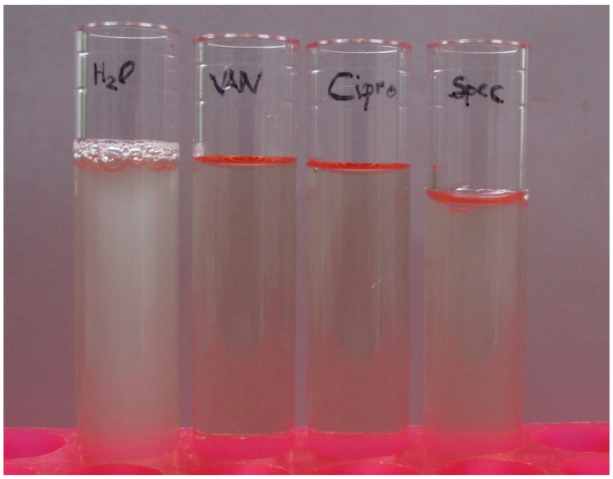

Fig S2: Antibiotics tested in this study kill the bacteria in solution as long as no biofilm is formed. Overnight cultures of NCIB 3610 in LB medium with water or antibiotic agent added in concentrations used for erosion experiments (from left to right: H_2O, VAN: 0.75µg/ml; Cipro: 64µg/ml; Spec: 0.25µg/ml).

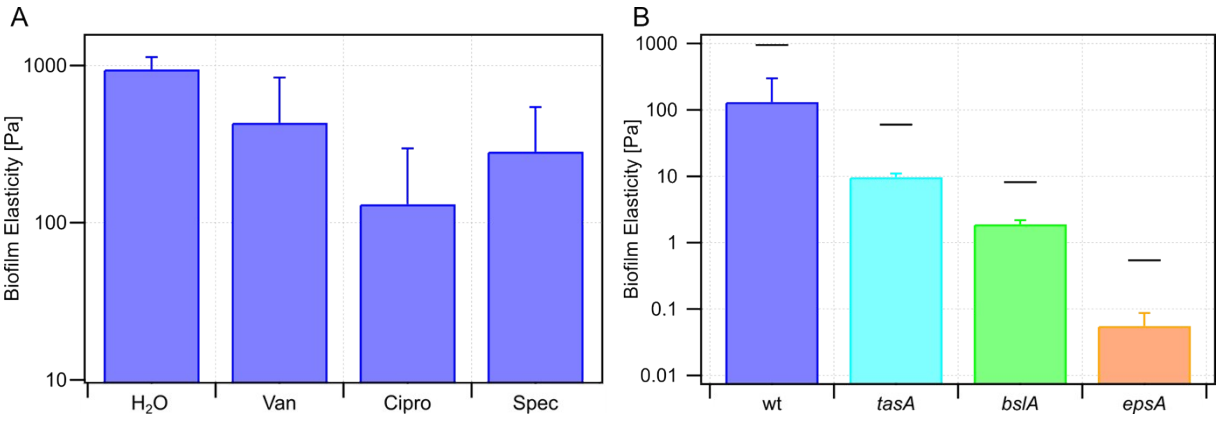

Fig S3: Stiffness of biofilms does not change significantly with antibiotic treatment. A) Storage modulus of NCIB 3610 treated with water and 3 antibiotics. B) Storage modulus of NCIB 3610 wildtype and mutants treated with ciprofloxacin. Black lines indicate corresponding treatment values of elasticity measured in water.