

1 **Supplementary Materials and Methods**

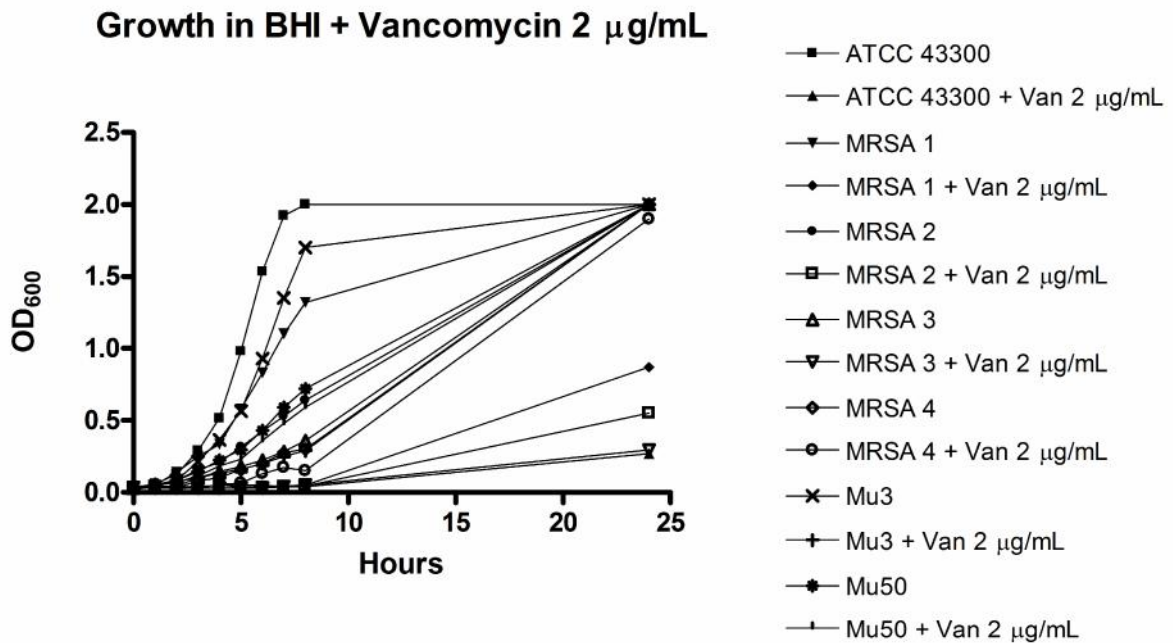
2 **Measurement of bacterial growth by standard spectrophotometry**

3 Bacterial growth of MRSA 1, MRSA 2, MRSA 3 and MRSA 4 was monitored in parallel by
4 optical density at 600 nm (OD₆₀₀) using an Ultrospec 10 cell density meter (Amersham
5 Biosciences). In brief, tubes containing prewarmed BHI alone or supplemented with 2 µg/mL
6 of vancomycin were inoculated with 10⁷ CFU (as in microcalorimetric studies) of either
7 isolate, and incubated at 37°C. MRSA ATCC 43300, Mu3 and Mu50 were used as controls. All
8 experiments were performed in duplicate.

9 **Supplementary Figure 1**

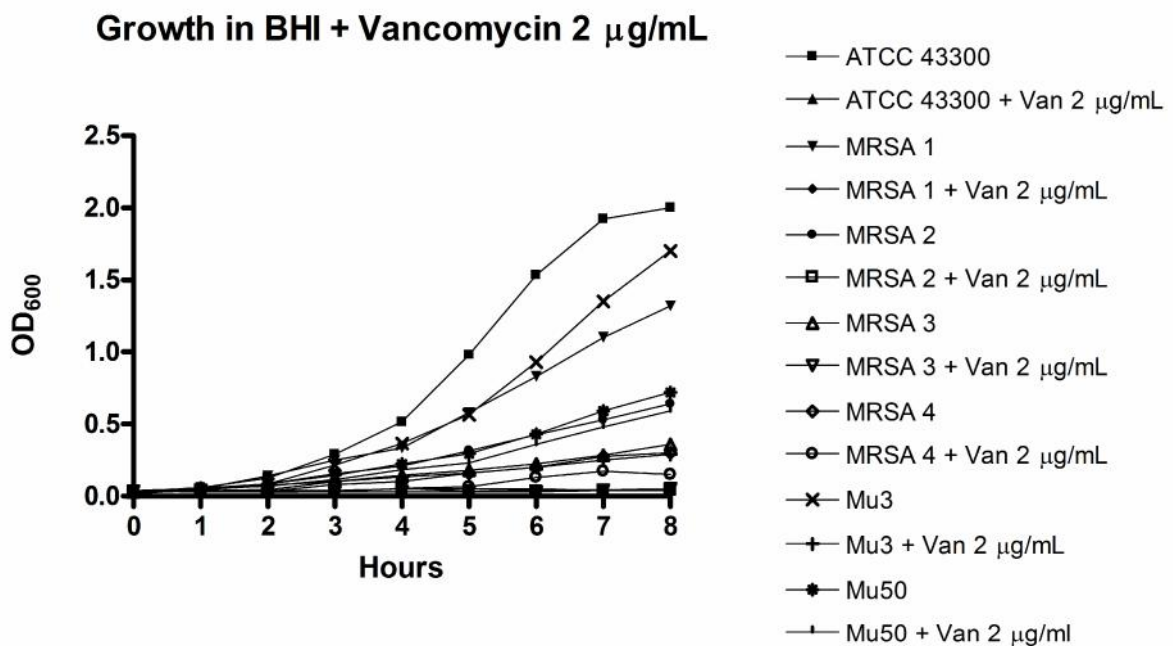
10 Spectrophotometric growth of selected *S. aureus* strains in BHI with or without 2 µg/mL of
 11 vancomycin over 24 h (panel A) or in the first 8 h (panel B).

12 **(A)**



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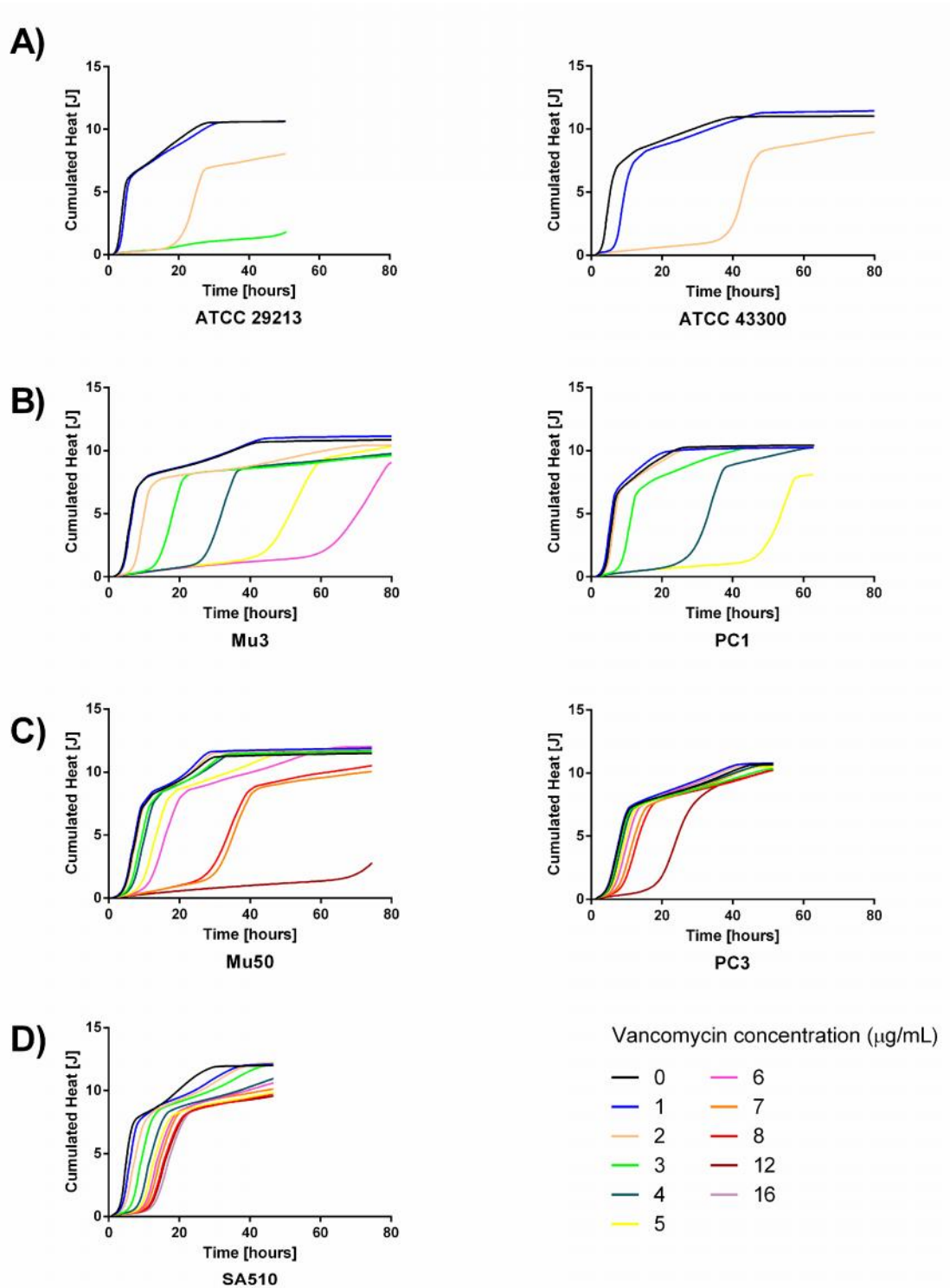
14 **(B)**



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16 **Supplementary Figure 2**

17 Typical cumulative heat curves for the seven tested *S. aureus* reference strains in the
18 presence of increasing concentrations of vancomycin (0 to 8, 12 and 16 $\mu\text{g}/\text{mL}$) recorded for
19 up to 72 h of incubation.



21 **Supplementary Table 1**

22 Mean time to detection (in hours) of bacterial growth for the additional clinical strains (VSSA = 20, hVISA = 4, VISA = 5) used in this study in the
 23 presence of increasing concentrations of vancomycin (0, 2 and 4 µg/mL).

Vancomycin phenotype by PAP	Strain	Mean time to detection of heat production		
		Vancomycin concentration (µg/mL)		
		0	2	4
VSSA	LY 1	<1	29.1	47.0
VSSA	LY 2	<1	22.2	35.5
VSSA	LY 3	<1	10.3	25.0
VSSA	LY 4	<1	8.4	26.4
VSSA	LY 8	1.8	6.2	36
VSSA	LY 9	1.5	8.4	35.5
VSSA	LY 11	<1	30.9	45.0
VSSA	LY 12	<1	8.6	47.0
VSSA	LY 13	<1	16.0	36.0

VSSA	LY 14	<1	28.4	>48
VSSA	LY 15	<1	9.7	33.2
VSSA	LY 16	<1	21.8	47.0
VSSA	LY 17	<1	18.7	35.5
VSSA	LY 18	<1	30.9	47.0
VSSA	LY 19	<1	22.8	46.5
VSSA	LY 20	<1	18.6	36.5
VSSA	BE 1	<1	11.8	>48
VSSA	BE 2	<1	16.7	26.3
VSSA	DE 1	<1	9.5	47.2
VSSA	DE 2	<1	15.7	29.4
hVISA	LY 5	2.8	3.4	13.2
hVISA	LY 6	<1	3.0	11.3
hVISA	LY 7	1.8	4.4	18.2
hVISA	LY 10	<1	2.7	13.1
VISA	JO 1	<1	4.1	7.7

VISA	JO 2	<1	4.3	7.8
VISA	JO 3	<1	3.8	4.9
VISA	JO 4	<1	4.0	5.4
VISA	JO 5	<1	4.0	6.3
