

Pyranoanthocyanins Interfering with the Quorum Sensing of *Pseudomonas aeruginosa* and *Staphylococcus aureus*

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Supplementary Materials

Table S1: Antimicrobial resistance pattern of the multidrug-resistant isolates used in this study.

Isolate	Antimicrobial resistance pattern
Pa3	FEP, GEN, CIP
PA004	CIP, GEN, IPM, PTZ, TOB
SA007*	CIP, CLI, ERI, FOX, GEN, LEV, MOX, OXA
SA011*	CIP, CLI, ERI, LEV, MOX, OXA

CIP: ciprofloxacin; CLI: clindamycin; ERI: erythromycin; FEP: cefepime; FOX: ceftiofur; GEN: gentamicin; IPM: imipenem; LEV: levofloxacin; MOX: moxifloxacin; OXA: oxacillin; PTZ: Piperacillin/tazobactam; TOB: Tobramycin. * These isolates are methicillin-resistant *S. aureus* (MRSA).

Table S2: Primers used in *P. aeruginosa* RT-qPCR analysis.

Gene	Sequence (5' -> 3')	Reference
<i>rpoS</i>	Forward: CTCCCCGGGCAACTCCAAAAG	[1]
	Reverse: CGATCATCCGCTTCCGACCAG	
<i>pqsA</i>	Forward: GTTCTGGTTCCTACCTGCC	
	Reverse: CAGCAGGATCTGGTTGTCGT	
<i>pqsE</i>	Forward: GGTGAAGGAGGGATCAGCC	
	Reverse: AGTGGTCGTAGTGCTTGTGG	
<i>pqsR</i>	Forward: GATAGCCTGGCGACGATCAA	
	Reverse: CACTGGTTGAAGCGGGAGAT	
<i>lasI</i>	Forward: CAGAACGACATCCAGACGCT	
	Reverse: TCGATGCCGATCTTCAGGTG	
<i>lasR</i>	Forward: AGATCCTGTTCCGCCTGTTG	

	Reverse: GGGTAGTTGCCGACGATGAA
<i>rhII</i>	Forward: CAGTTCGACCATCCGCAAAC
	Reverse: GACGTCCTTGAGCAGGTAGG
<i>rhIR</i>	Forward: GTTTGCGTAGCGAGATGCAG
	Reverse: GCGTAGTAATCGAAGCCCA

Table S3: Primers used in *S. aureus* RT-qPCR analysis.

Gene	Sequence (5' -> 3')	Reference
16S	Forward: CCATAAAGTTGTTCTCAGTT	[2]
rRNA	Reverse: CATGTCGATCTACGATTACT	
<i>agrA</i>	Forward: ACGTGGCAGTAATTCAGTGTATGTT	
	Reverse: GGCAATGAGTCTGTGAGATTTTGT	
<i>sarA</i>	Forward: GCTGTATTGACATACATCAGCGAAA	
	Reverse: CGTTGTTTGCTTCAGTGATTCGT	
<i>RNAIII</i>	Forward: GAATTTGTTCACTGTGTCGATAATCCATTT	
	Reverse: GAAGGAGTGATTTCATGGCACAAGATAT	
<i>ica</i>	Forward: TCGCACTCTTTATTGATAGTCGCTACGAG	
	Reverse: TGCGACAAGAACTACTGCTGCGTTAAT	
<i>hla</i>	Forward: ATGGCTCTATGAAAGCAGCAGA	
	Reverse: AAGGTGAAAACCCTGAAGA	

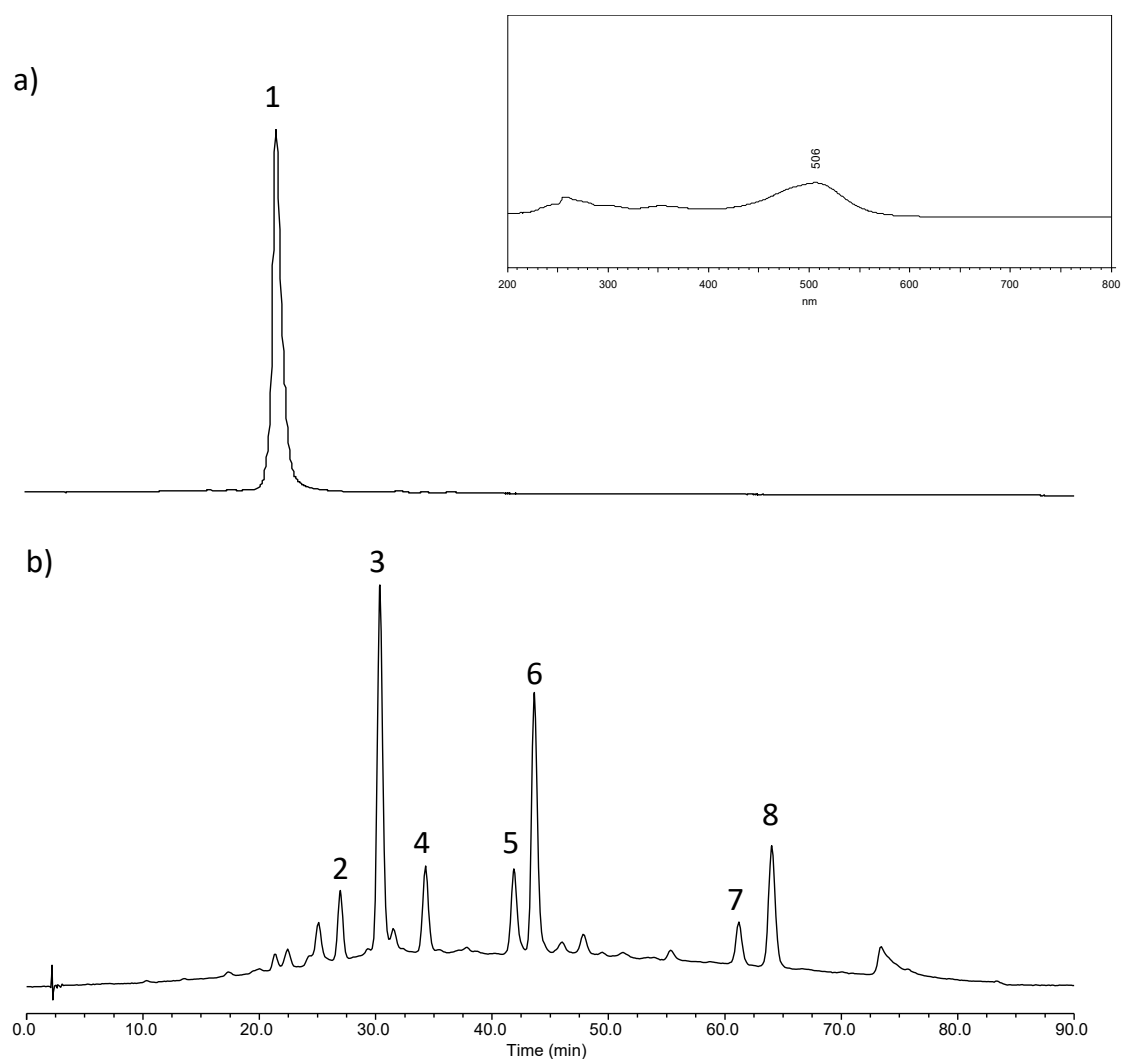


Figure S1. Chromatographic profile of a) 1: carboxypyranocyanidin-3-*O*-glucoside (carboxypyCy-3-glc), UV-vis spectra at the top right and b) red wine carboxypyrananthocyanins, at 520 nm. 2: Carboxypyranopeonidin-3-glucoside, 3: Carboxypyranomalvidin-3-glucoside; 4: Carboxypyranomalvidin-3-(6''-acetylglucoside); 5: Carboxypyranopeonidin-3-(6''-coumaroylglucoside); 6: Carboxypyranomalvidin-3-(6''-coumaroylglucoside); 7: Peonidin-3-(6''-coumaroylglucoside); 8: Malvidin-3-(6''-coumaroylglucoside).

References

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2. Chen, Y.; Liu, T.; Wang, K.; Hou, C.; Cai, S.; Huang, Y.; Du, Z.; Huang, H.; Kong, J.; Chen, Y. (2016). Baicalein inhibits *Staphylococcus aureus* biofilm formation and the quorum sensing system in vitro. *PLoS One* **2016**, 11(4):e0153468. <https://doi.org/10.1371/journal.pone.0153468>