Supporting information for

Towards Elimination of Pin-tract Infections: Novel Antibacterial Coating on Orthopaedic Wires

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Supporting results:

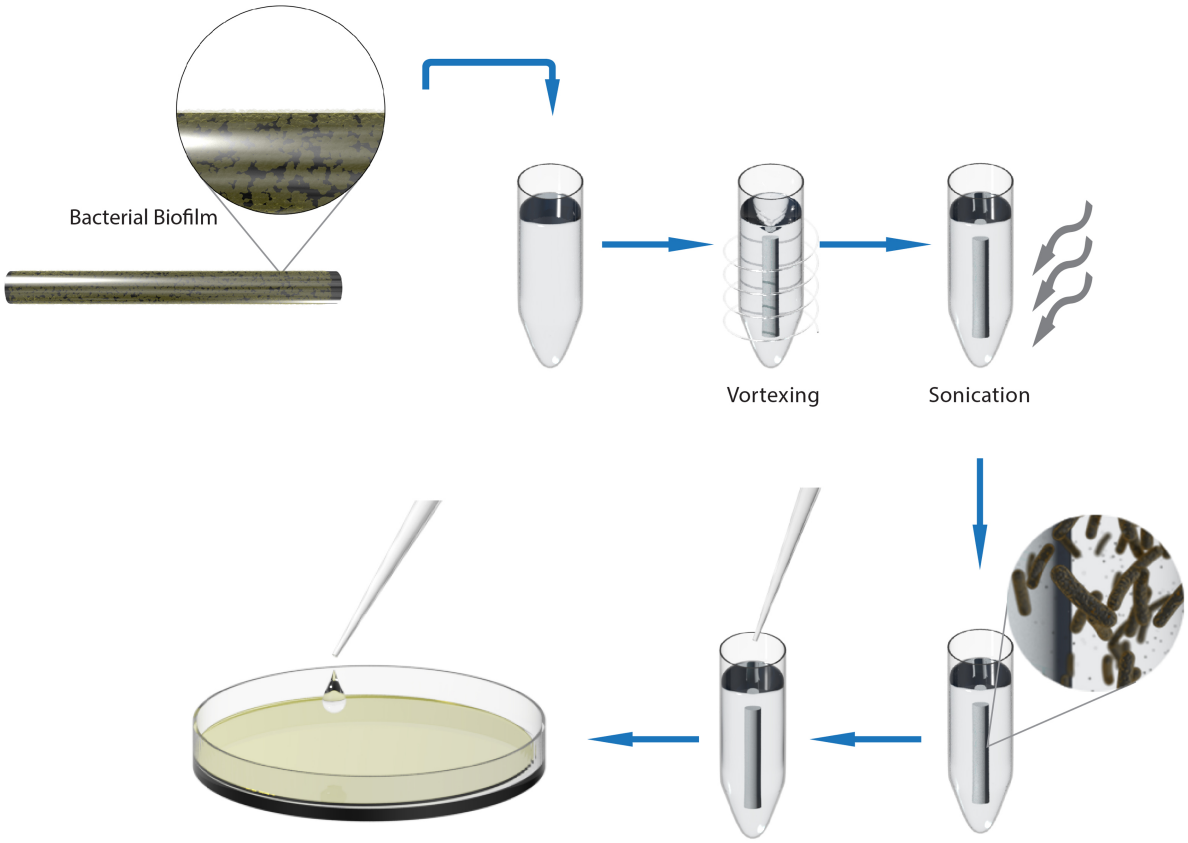

Figure S1. The protocol used to dislodge bacteria from the surface of the wires.

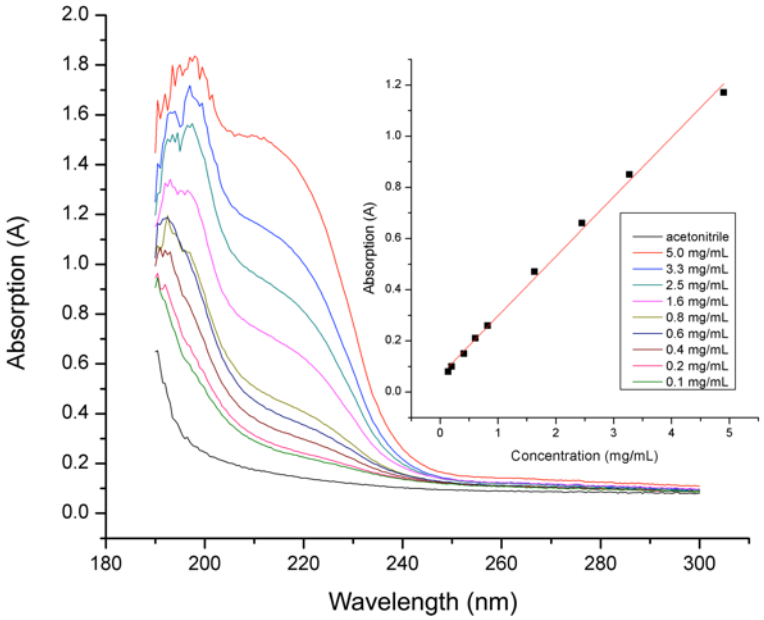

Figure S2. Calibration curve for monolaurin used in this study.

Table S1. Number of viable and dead osteoblasts lodging on plain and monolaurin-coated K-wires determined by Live/Dead® assay.

	Viable cells, log(cell number)	P-value	Dead cells, log(cell number)	P-value	Total number, log(cell number)	P-value
Plain wires	5.41±4.84	P=0.419, n=6	3.19±2.59	P=0.409, n=6	5.42±4.84	P=0.411, n=6
Coated wires	5.34±5.01		3.12±2.71		5.34±5.01	

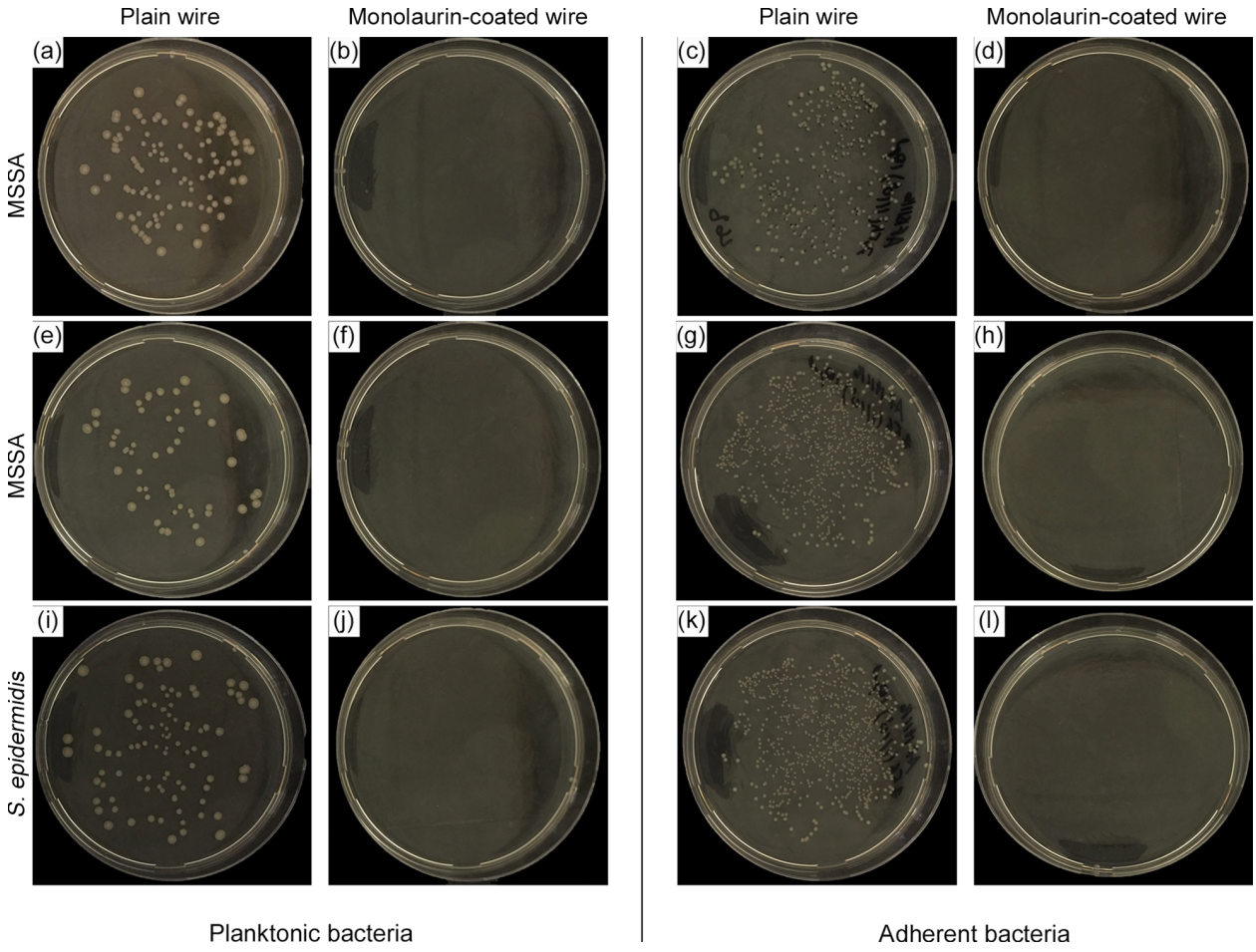

Figure S3. Representative photos of recultivated bacteria incubated with the plain and monolaurin-coated K-wires. (a), (c) MSSA incubated with plain wire; (b), (d) MSSA incubated with monolaurin-coated wire; (e), (g) MRSA incubated with plain wire; (f), (h) MRSA incubated with monolaurin-coated wire; (i), (k) *S. epidermidis* incubated with plain wire; (j), (l) *S. epidermidis* incubated with monolaurin-coated wire.

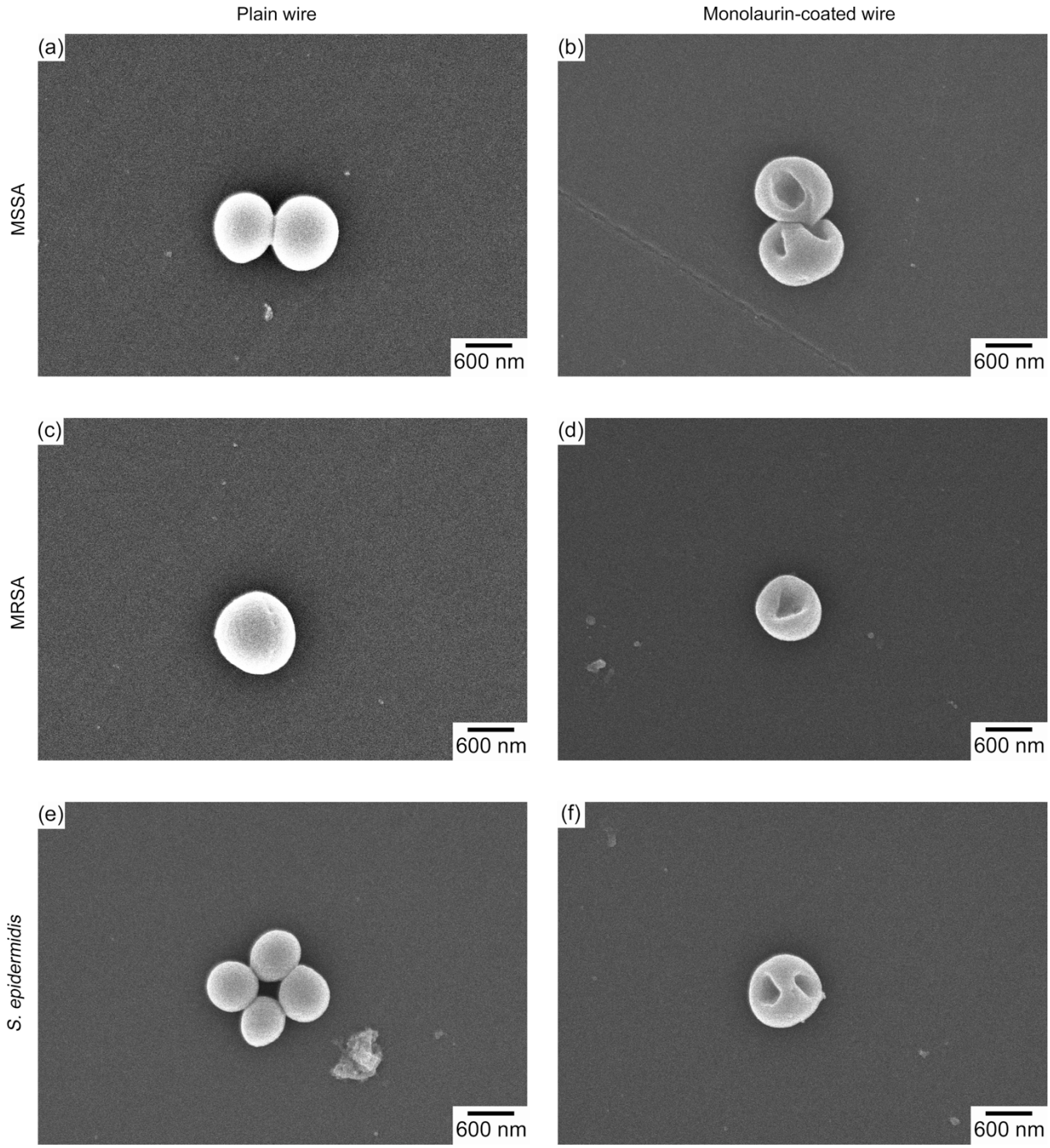

Figure S4. SEM micrographs of the bacteria adherent to plain and monolaurin-coated K-wires. (a) MSSA adherent to the plain wire; (b) MSSA adherent to the monolaurin-coated wire; (c) MRSA adherent to the plain wire; (d) MRSA adherent to the monolaurin-coated wire; (e) *S.*

epidermidis adherent to the plain wire; (e) *S. epidermidis* adherent to the monolaurin-coated wire.

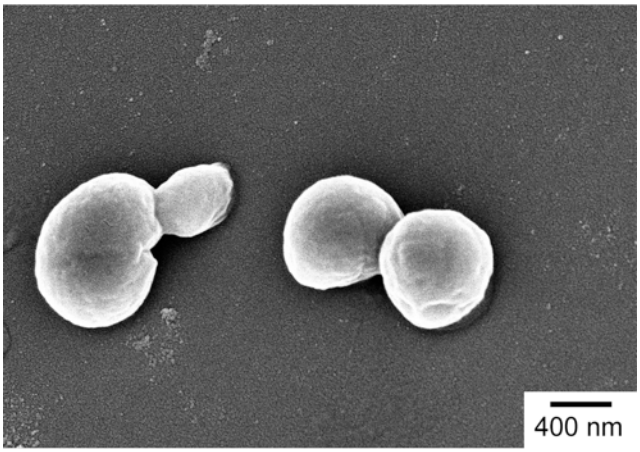

Figure S5. Higher resolution (30,000X) image of the left part of Fig. 7b. Evident of damage to microbial cell walls, which is not obvious at lower resolution.