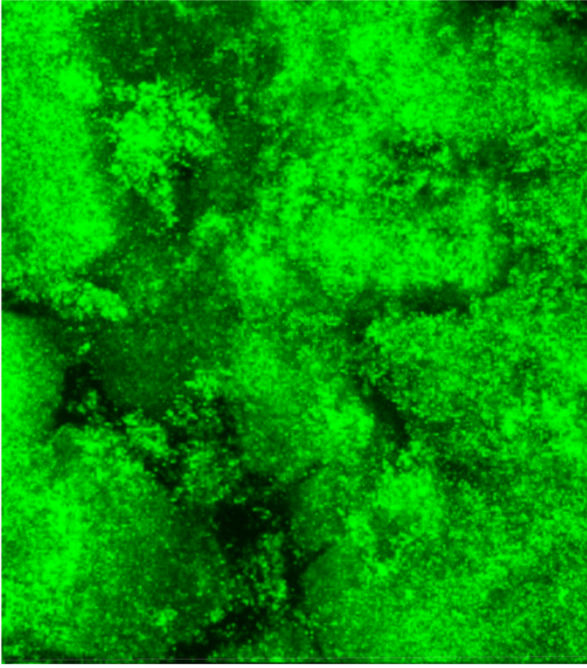
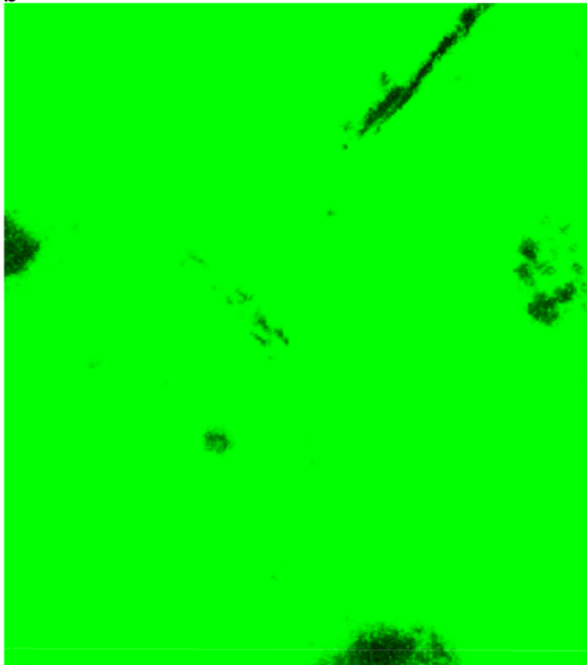


**Figure S1: Mean percent PrestoBlue reduction ( $\pm$  SE) by explants after 1, 4, and 7 days culture.** Nine dermal explants from three different ears were used for one-way analysis of variance. Each bar is significantly different from each other ( $P < 0.001$ ). Note that percent dye reduction refers to chemical reduction of PrestoBlue, a resazurin-based chemical reagent. The greater the magnitude of reduction, the greater the magnitude of metabolic activity and thus, presumably, the larger the number of viable cells.

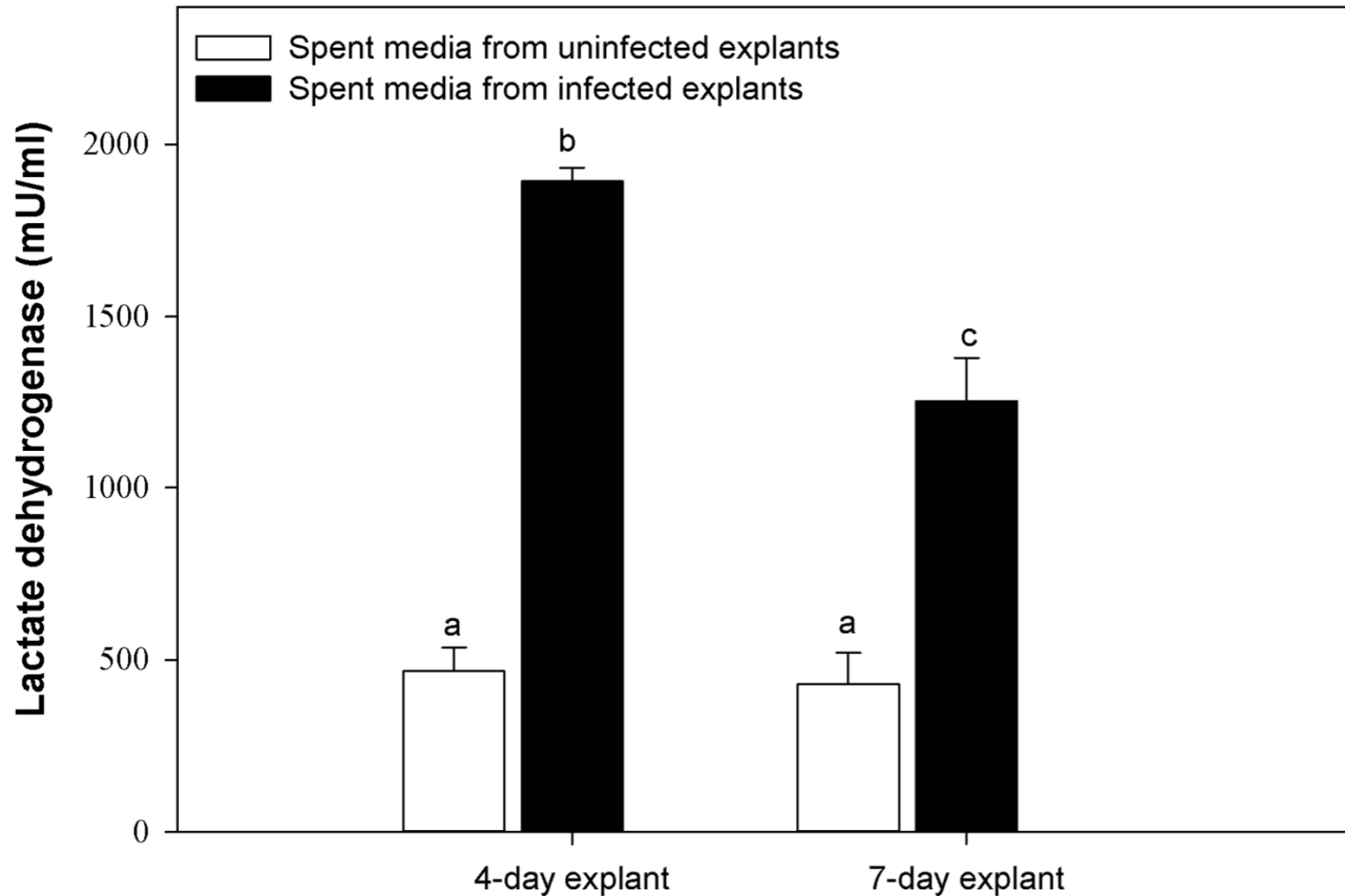
a



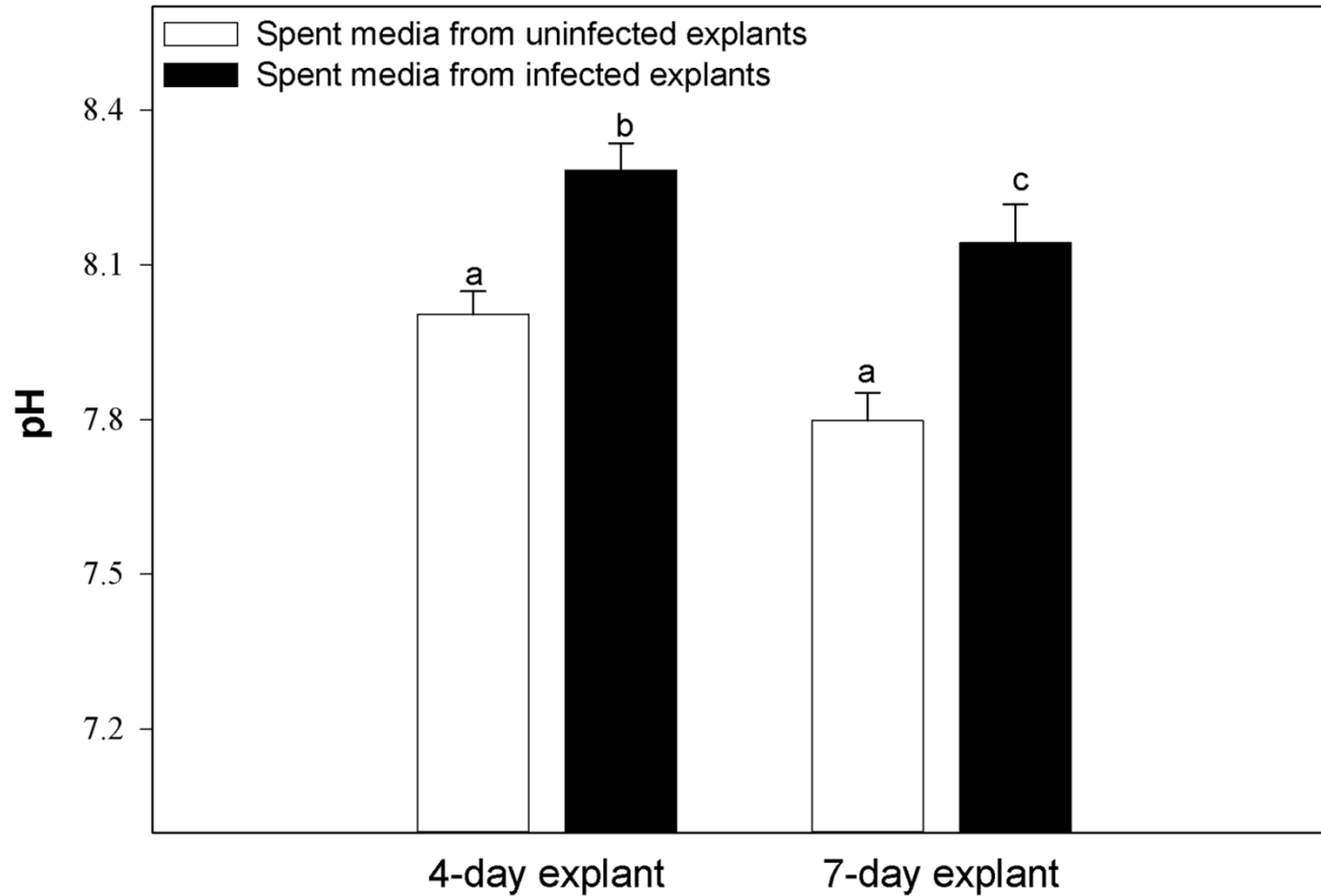
b



**Figure S2: CLSM images (10x) of 4- and 7- day biofilms grown on dermal explants. *S. aureus* strain ALC7559 was GFP-labeled and imaged after (a) 4-days, and (b) 7 days.**



**Figure S3: LDH release from *S. aureus*-infected dermal explants.** Values are given as mean OD  $\pm$  SE. Statistical analysis was carried out on 30 explants (15 uninfected control, and 15 *S. aureus*-infected explants) from 3 ears. The bars with different letters on top differ significantly ( $P < 0.001$ ) from each other.



**Figure S4: pH of the spent media from dermal explants infected with *S. aureus*.** pH values are given as mean  $\pm$  SE. Twenty-four samples of spent medium (12 from uninfected explants and 12 from *S. aureus*-infected explants) from three ears were used in the statistical analysis. The bars with different letters on top differ significantly from each other ( $P < 0.001$ ).