

Supplementary Materials: Growth of Lactic Acid Bacteria on Gold—Influence of Surface Roughness and Chemical Composition

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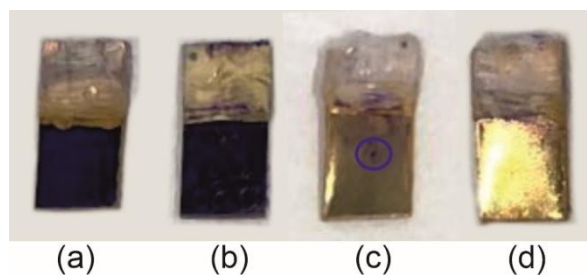


Figure S1. (a, c, d) Au(E) and (b) Au200 surfaces after Gram-staining measurements for (a, b) *L. rhamnosus* GG, (c) *L. plantarum* 299v, and (d) *L. acidophilus* cultivated 48 h.

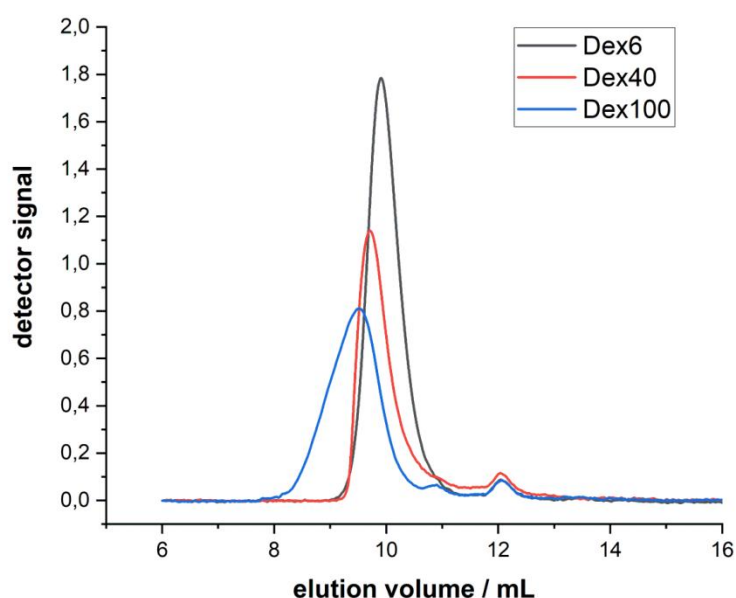


Figure S2. Results of GPC for dex6, dex40, and dex100. Experimental parameters were as follows: flow rate – 1 mL·min⁻¹; injection volume – 100 μL; polymer concentration in the eluent – 5 g·L⁻¹; eluent – 0.3 M Na₂SO₄ aqueous solution containing 0.5 M acetic acid; column – Phenomenex PolySep-SEC GFC-P Linear

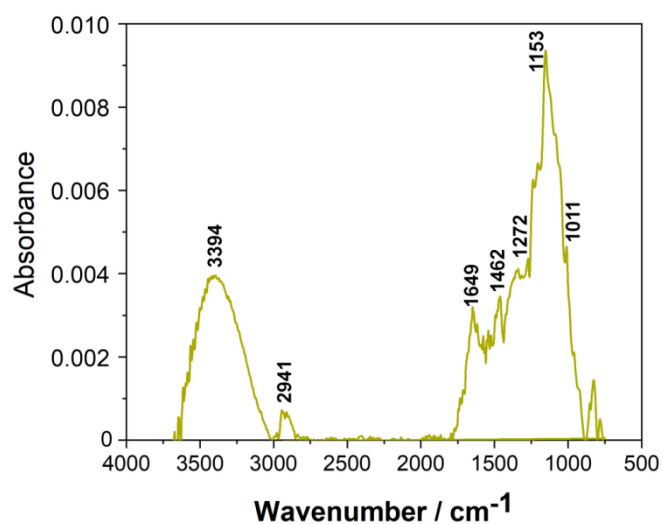


Figure S3. The IR spectra for the Au(E) sample after immersion in the cationic dextran derivative, dex100.

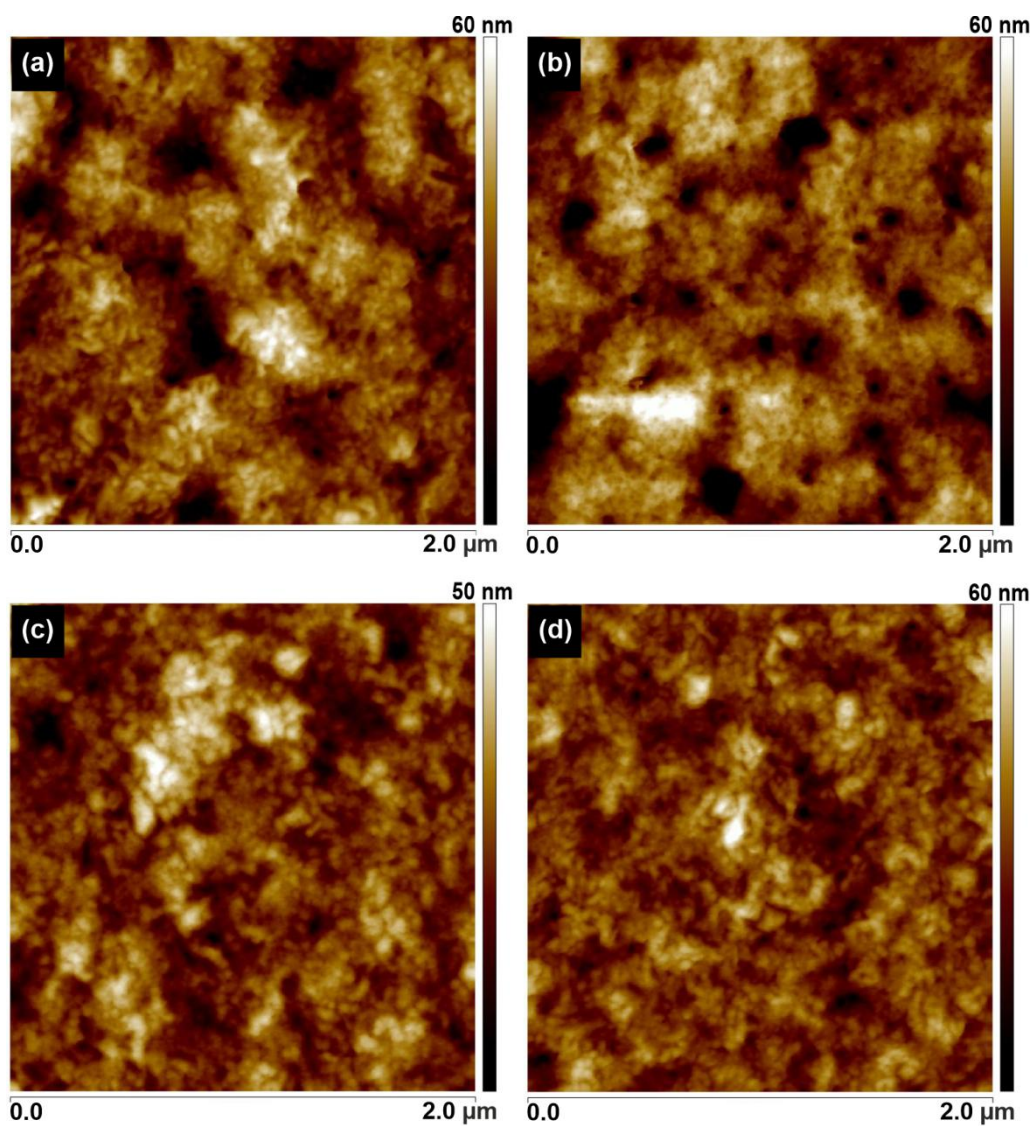


Figure S4. 2D AFM topography images of Au(E): (a) without the polymer layer and covered with (b) dex6, (c) dex40, and (d) dex100.

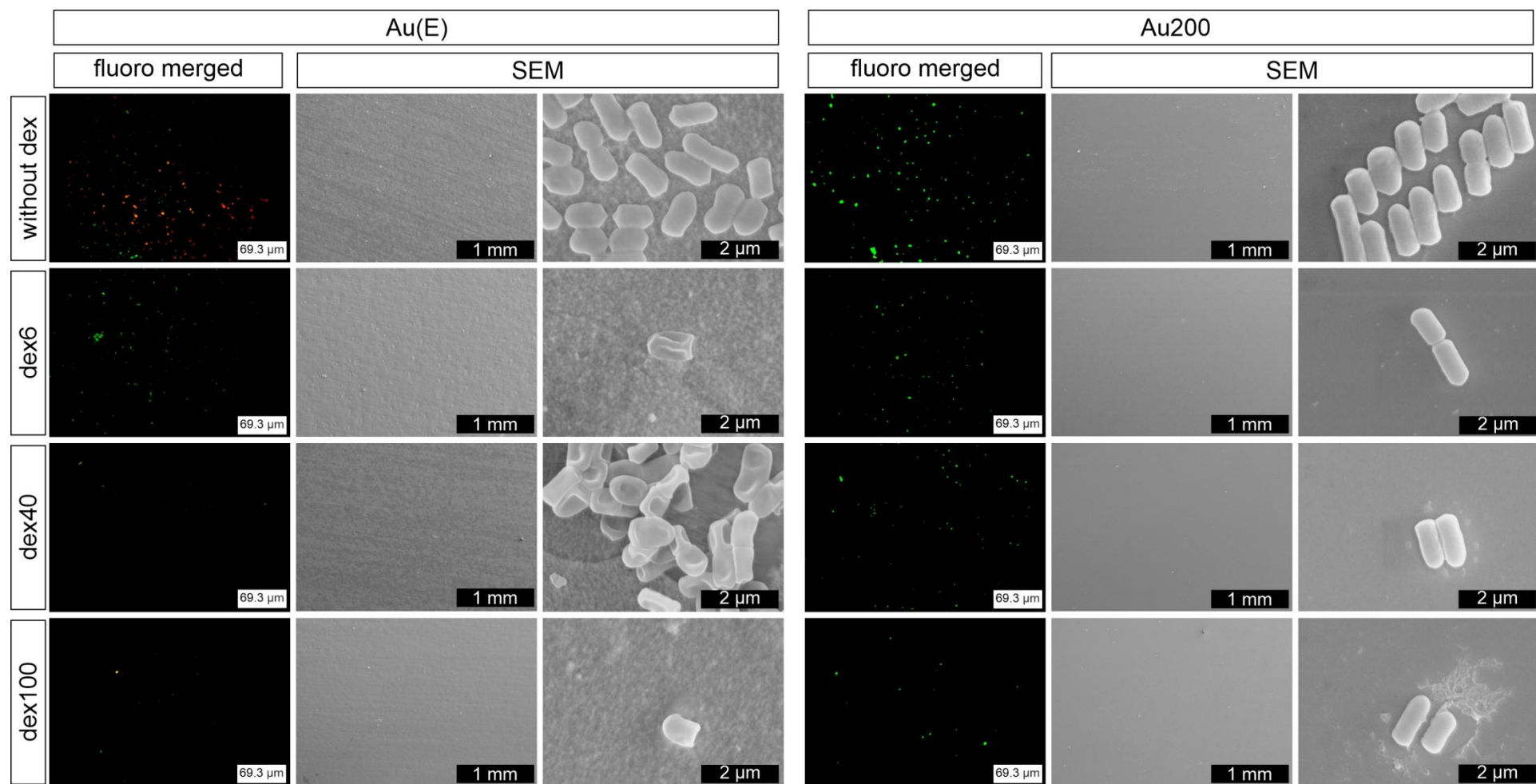


Figure S5. Fluorescence and SEM microphotographs of *Lactobacillus plantarum* 299v after 24 h of incubation at Au(E) and Au200 substrates with and without polymer modifications.

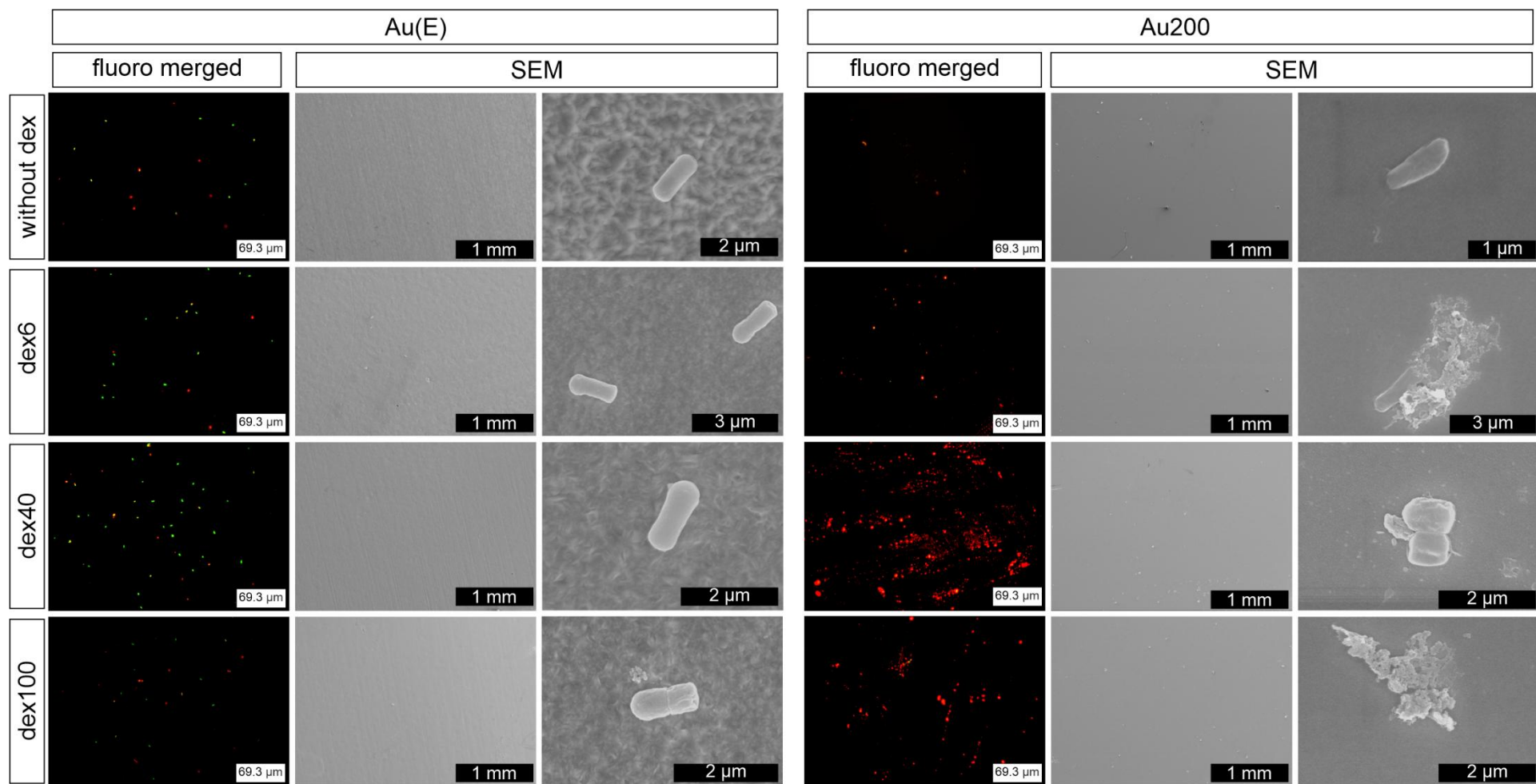


Figure S6. Fluorescence and SEM microphotographs of *Lactobacillus acidophilus* after 24 h of incubation at Au(E) and Au200 substrates with and without polymer modifications.

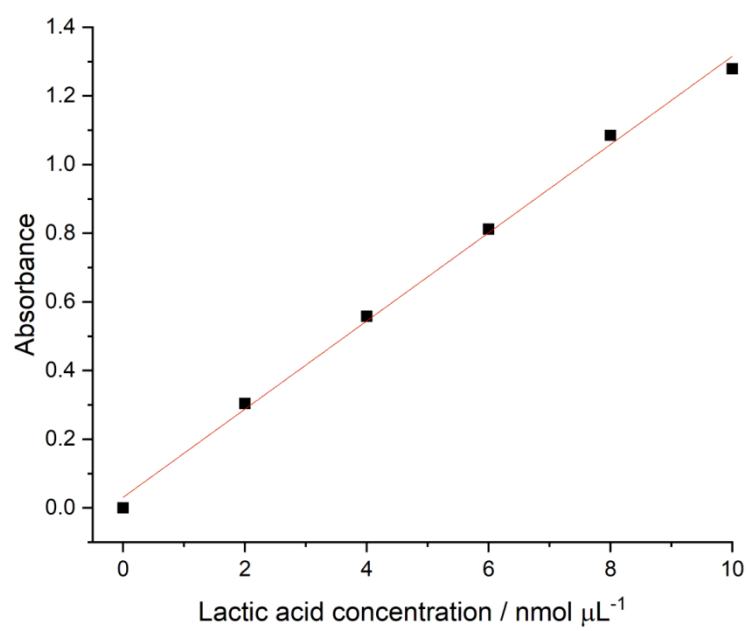


Figure S7. Calibration curve for a lactic acid determination. Red line – linear fitting; $y = 0.1285x + 0.0307$ ($R^2 = 0.997$).