Electronic Supplementary Material (ESI) for Lab on a Chip
This journal is © The Royal Society of Chemistry 2012

Supplementary Information

Label-free detection of a bacterial pathogen using an immobilized siderophore, deferoxamine

Youngsoon Kim[a], David Lyvers[a], Alexander Wei[a], Ronald G. Reifenberger[b], and Philip S. Low[a]*

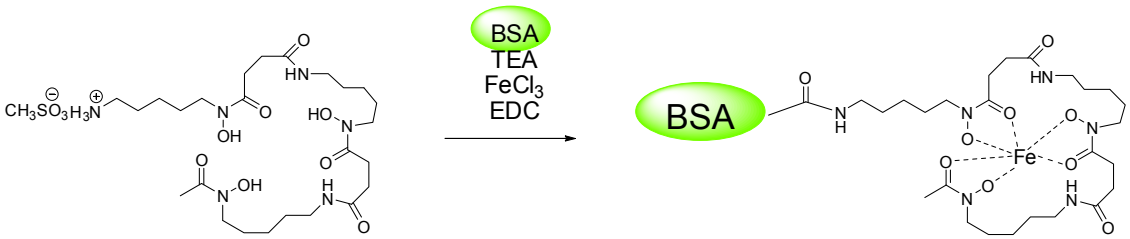

Figure S1. Preparation of the ferrioxamine–BSA (FO-BSA) conjugate.

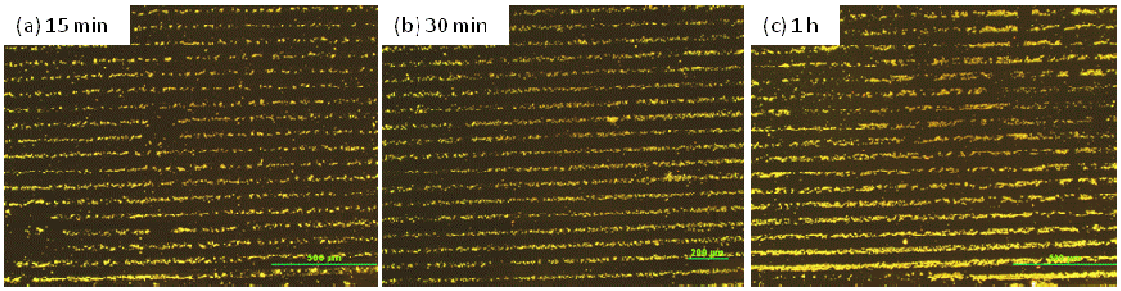

Figure S2. Dependence of bacterial capture on exposure time. *Y.enterocolitica* (10^8 cfu/ml) was incubated with the FO-BSA printed gold-coated glass chips for: (a) 15 min, (b) 30min, or (c) 1h prior to imaging by darkfield microscopy.

This journal is © The Royal Society of Chemistry 2012

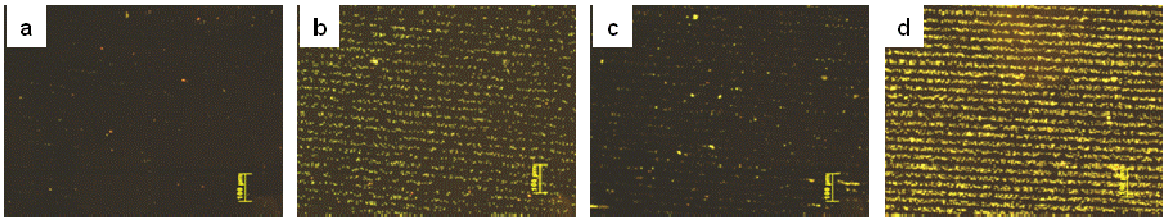

Figure S3. Suppresion of background noise by filtration of FO-BSA solutions through a 0.45□m filter. FO-BSA solutions were either filtered (a, b) or not filtered (c, d) through a 0.45 □m filter prior to printing onto gold-plated chips. After printing, the chips were either imaged before (a, c) or after (b, d) 1h exposure to *Y.enterocolitica (*10^8 cfu/ml) prior to imaging by darkfield microscopy.

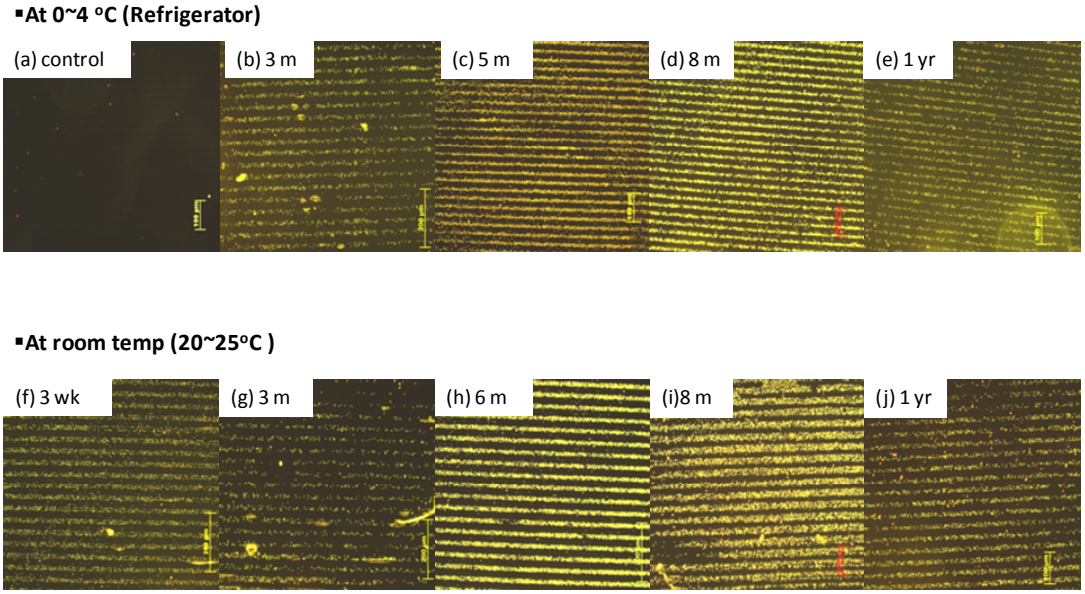

Figure S4. **Analysis of the stability of FO-BSA printed gold-plated glass chips during storage at either 4 °C (top panels) or room temperature (bottom panels) in the dark.** Printed chips were stored for the times indicated in the figure (wk= week; m= month; yr= year). Control was not incubated with *Yersinia*.

This journal is © The Royal Society of Chemistry 2012

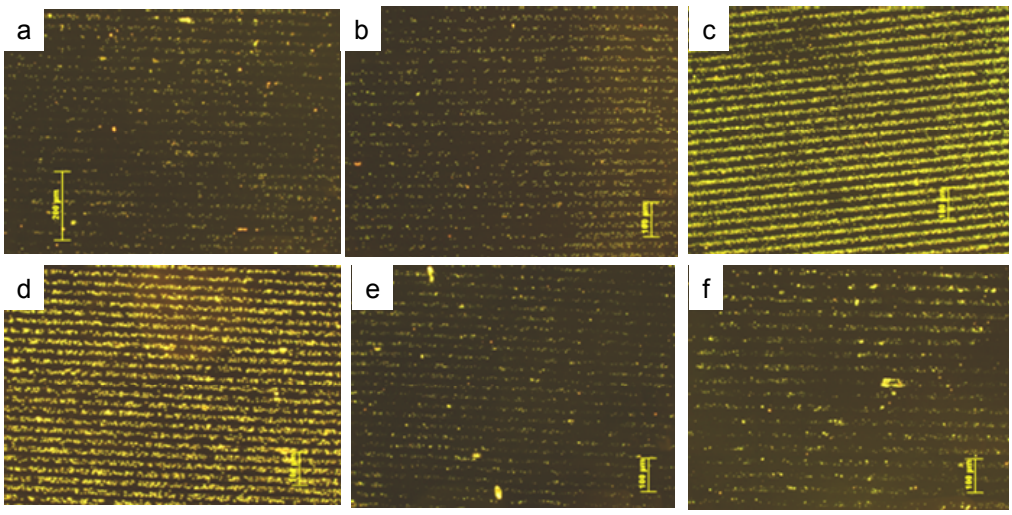

Figure S5. Impact of siderophore density on bacteria capture. FO was conjugated onto BSA at different weight percentages (wt%) prior to analysis of *Y.enterocolitica* (10^8 cfu/ml) capture: (a) 5 wt%, (b) 10 wt%, (c) 20 wt%, (d) 30 wt%, (e) 40 wt%, (f) 50 wt% relative to BSA.