Supporting Information

Fabrication and Selective Functionalization of Amine-Reactive Polymer Multilayers on Topographically Patterned Microwell Cell Culture Arrays

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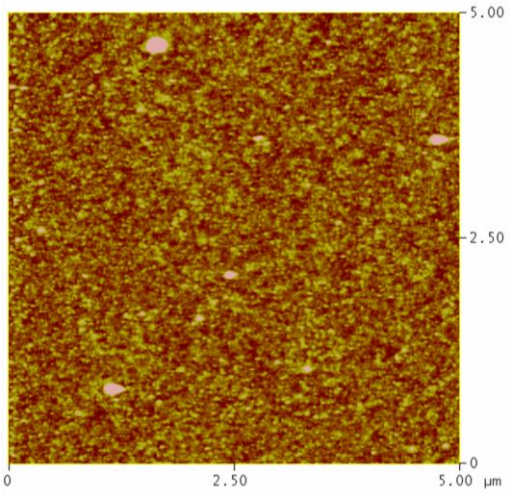

Figure S1: Tapping mode AFM image (5 µm × 5 µm) of a 10 bilayer PEI/PVDMA film deposited on a polyurethane microwell substrate. Image was taken from exposed surface outside the wells. Measured RMS roughness of this image was 2.8 nm; scale in z direction is 20 nm. Inspection of the image shows a uniformly smooth coating over the surface with no holes or other defects.

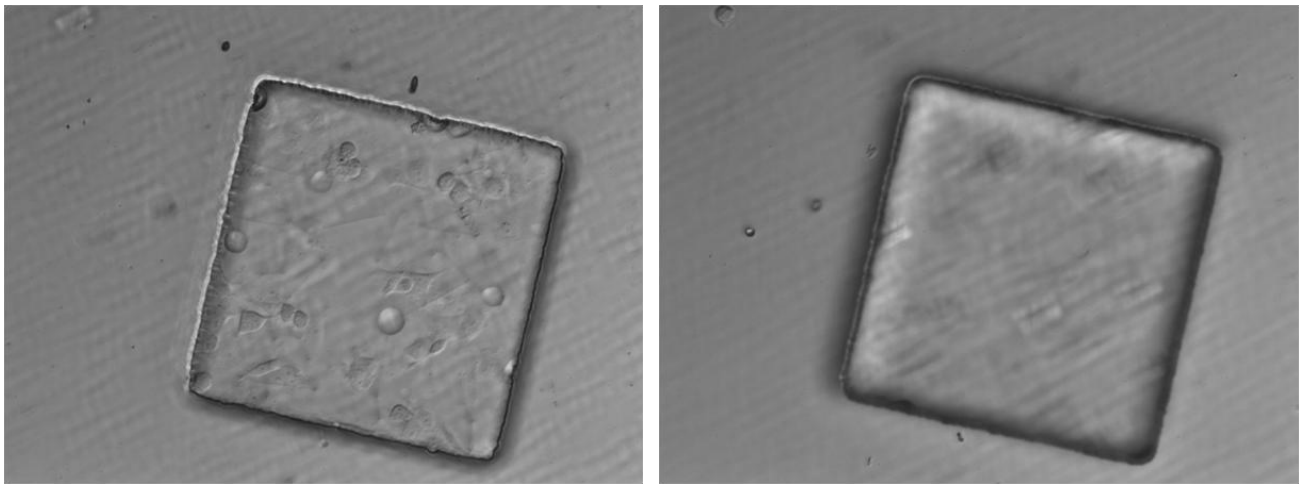

Figure S2: Phase contrast images (10X) of a single microwell 4 hours after seeding COS-7 cells on the substrate. Both images are of the same microwell, and differ only in the plane of focus, the left image focused at the bottom of well and the right image on the top surface outside the well. From these images, it can clearly been seen that some cells in the well are beginning to adopt a morphology typical of attached and healthy cells, while outside the well there are virtually no cells. These observations support our general conclusions a) that the azlactone functionalized wells readily promote cell attachment and spreading and b) that the lack of cells outside the wells at later time points is due to the glucamine-functionalized surface resisting initial cell attachment, rather than allowing cells to attach and then later detach or die.