Regulation of gene transfection by cell size, shape and elongation on micropatterned surfaces

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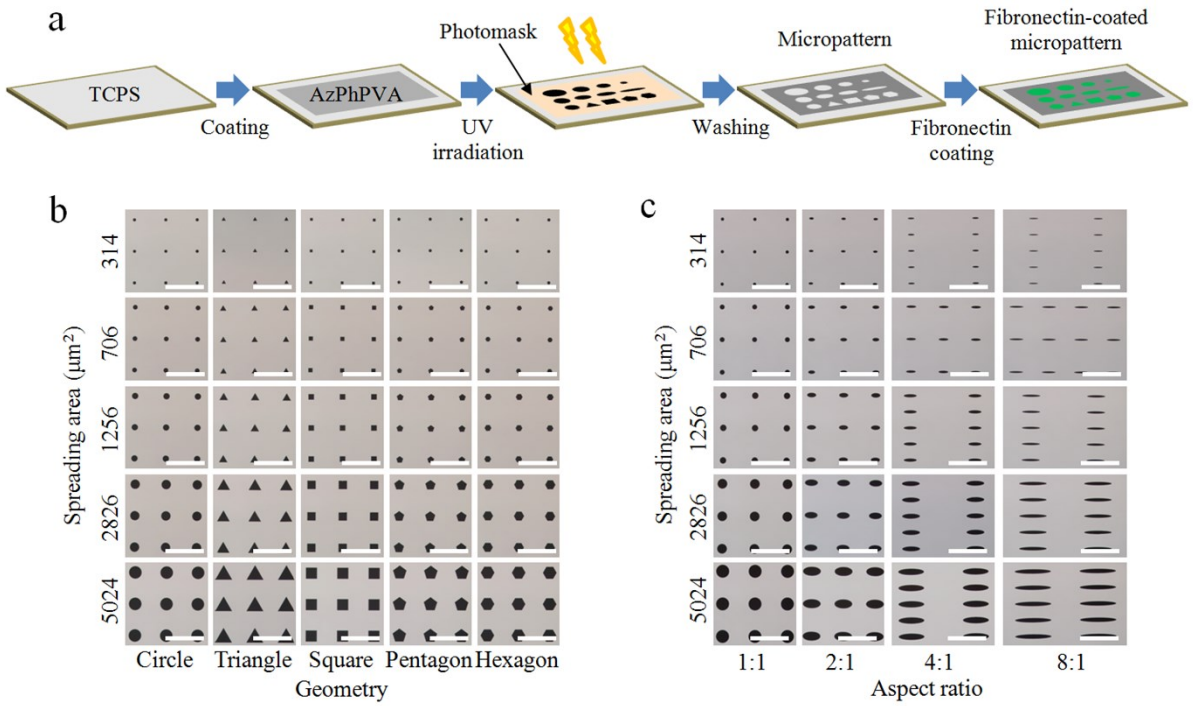

Fig. S1 (a) Preparation scheme of micropatterns using photoreactive AzPhPVA. (b, c) Representative phase-contrast photomicrographs of photomasks containing micropatterns with different shapes (b) and aspect ratios (c). Spreading area was 314, 706, 1256, 2826 and 5024 μm^2. Scale bar: 200 μm.

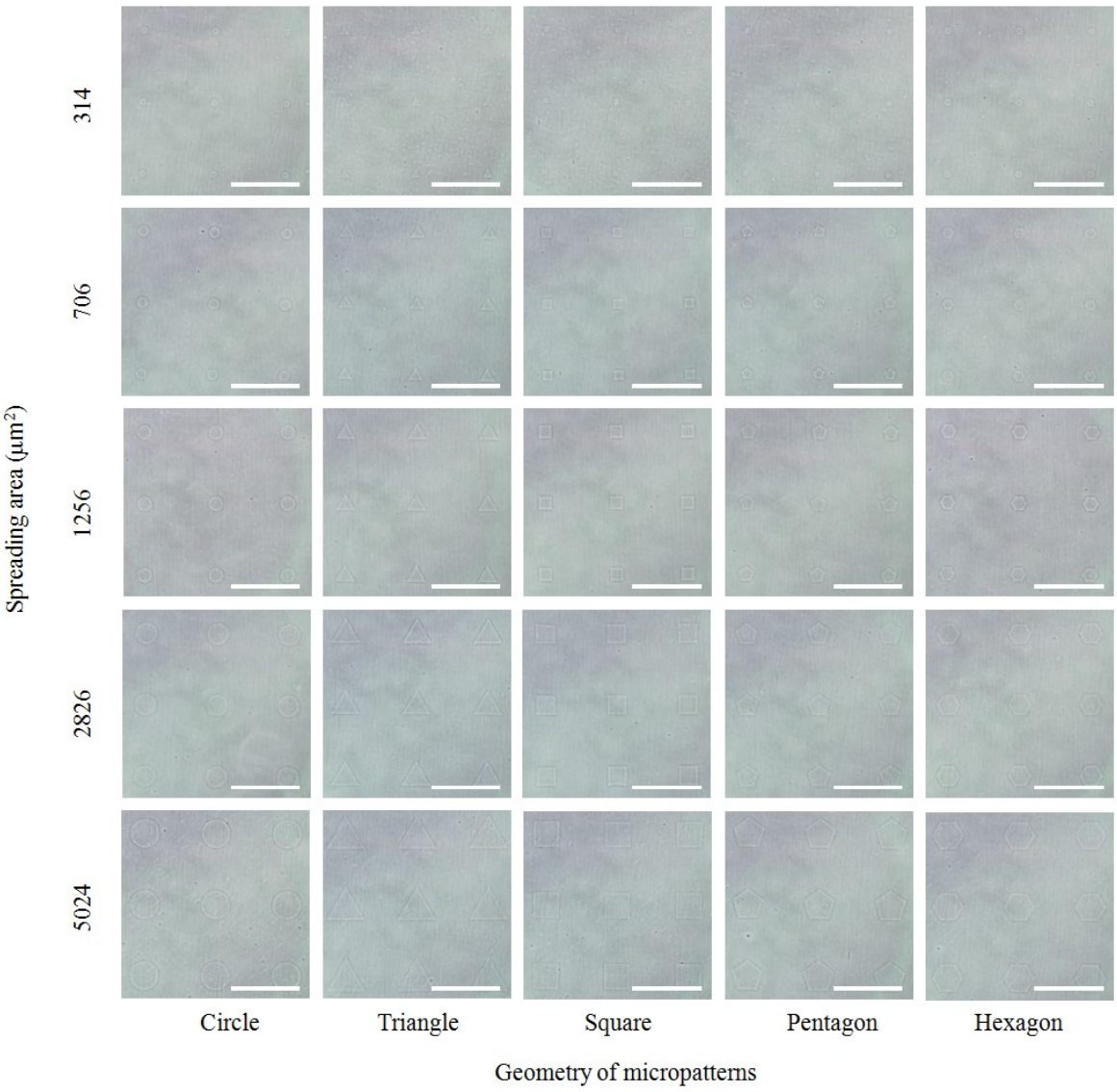

Fig. S2 Representative phase-contrast photomicrographs of micropatterned surfaces. Micropatterns had different sizes (spreading areas of 314, 706, 1256, 2826 and 5024 μm^2) and shapes (circles, triangles, squares, pentagons and hexagons). Scale bar: 200 μm.

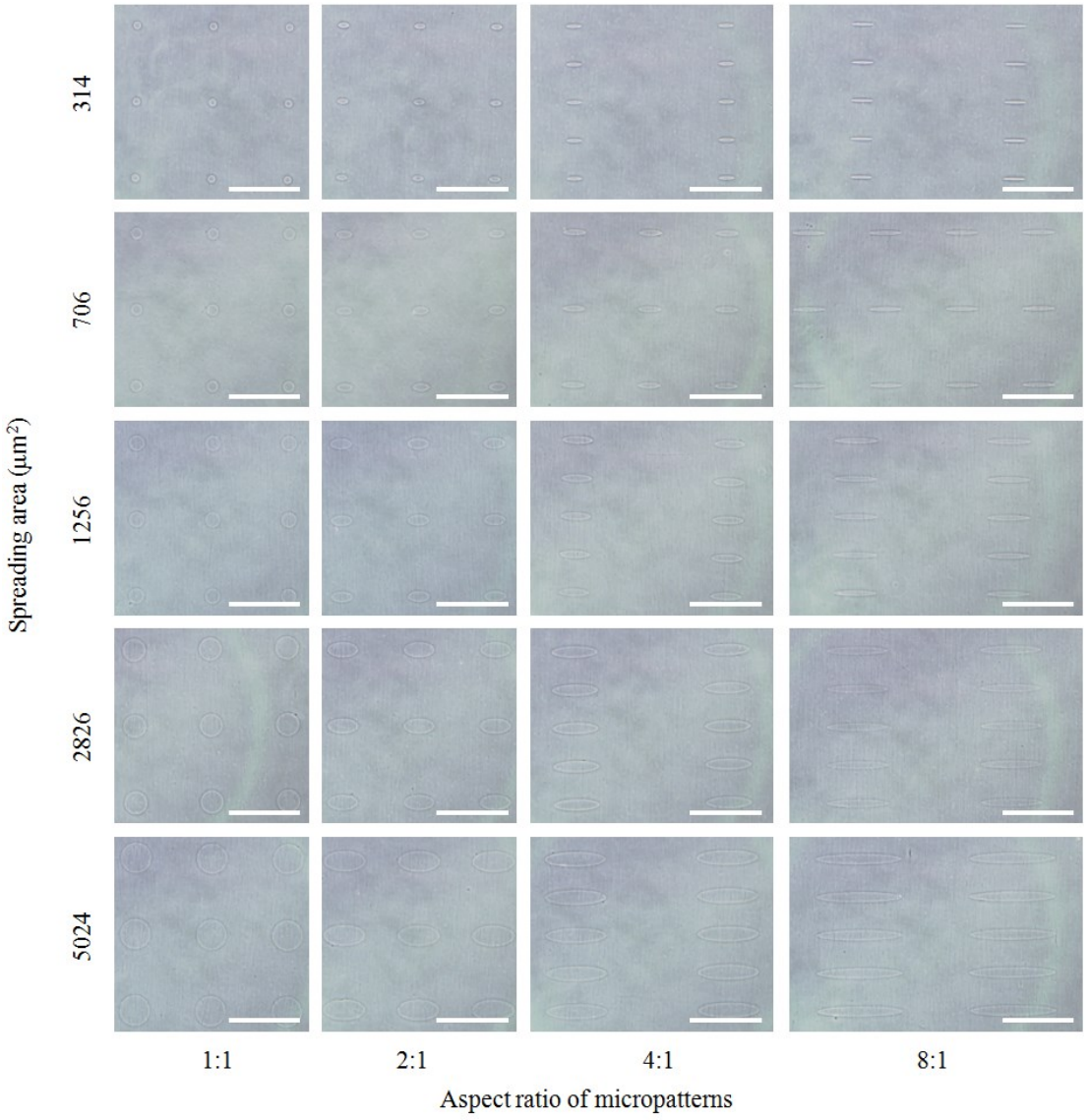

Fig. S3 Representative phase-contrast photomicrographs of micropatterned surfaces. Micropatterns had different sizes (spreading areas of 314, 706, 1256, 2826 and 5024 μm^2) and aspect ratios (1:1, 2:1, 4:1 and 8:1). Scale bar: 200 μm.

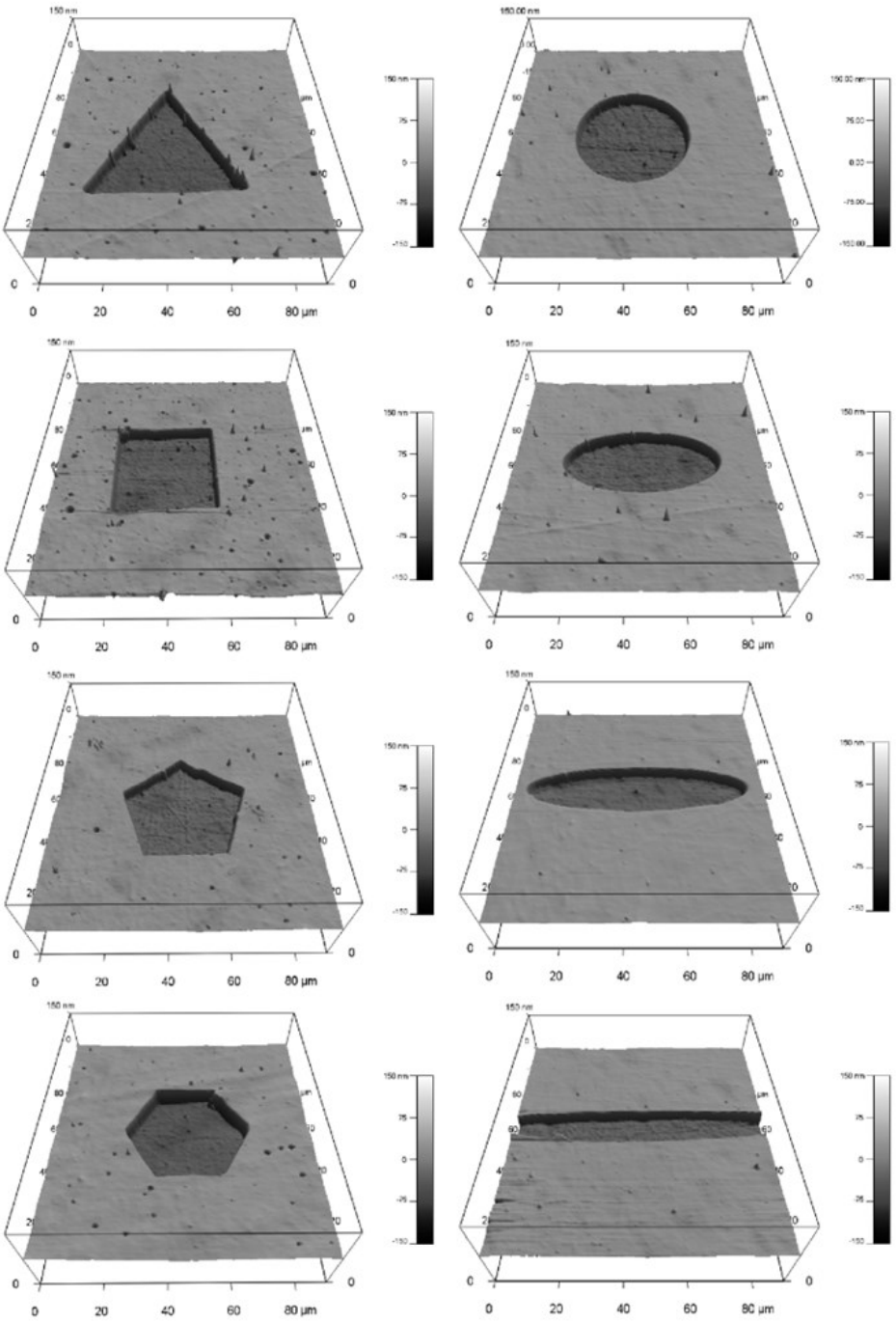

Fig. S4 3D images of the micropatterns obtained by AFM. The micropatterns shown here had an area of 1256 μm^2 and different shapes (triangles, squares, pentagons and hexagons) and aspect ratios (1:1, 2:1, 4:1 and 8:1).

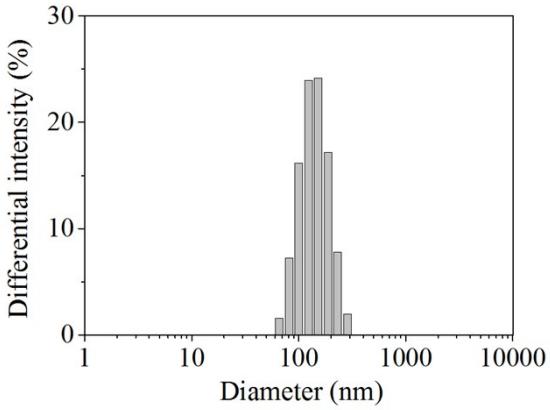

Fig. S5 Size distribution of cationic liposome/plasmid complexes.

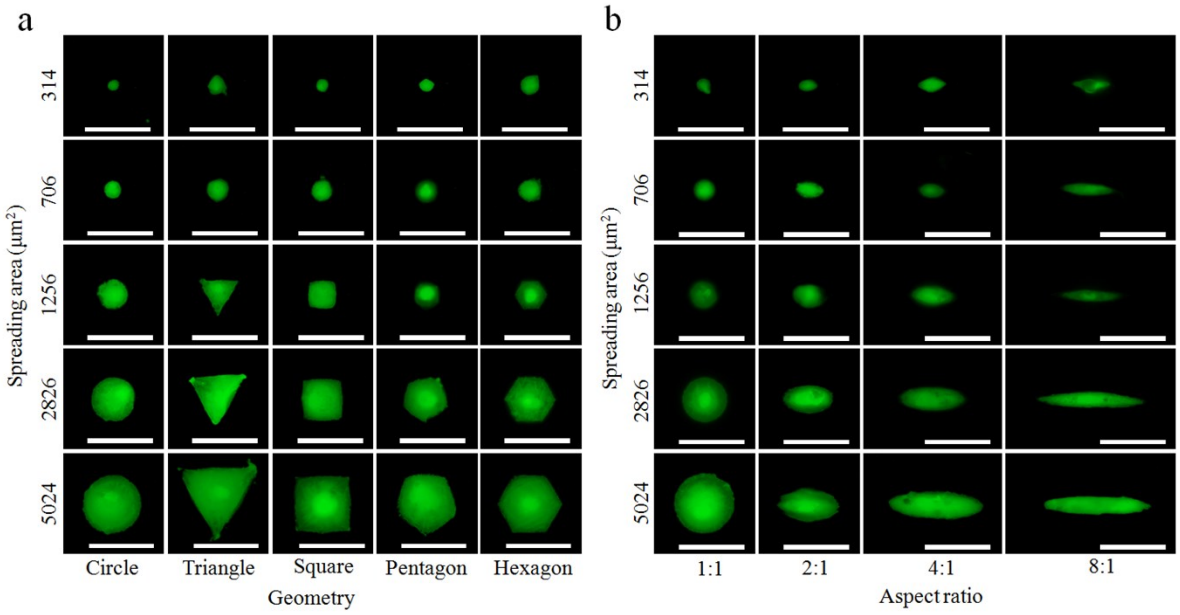

Fig. S6 Representative fluorescence photomicrographs of GFP-positive cells on micropatterns with different shapes (a) and aspect ratios (b). Spreading area was 314, 706, 1256, 2826 and 5024 μm^2. Scale bar: 100 μm.

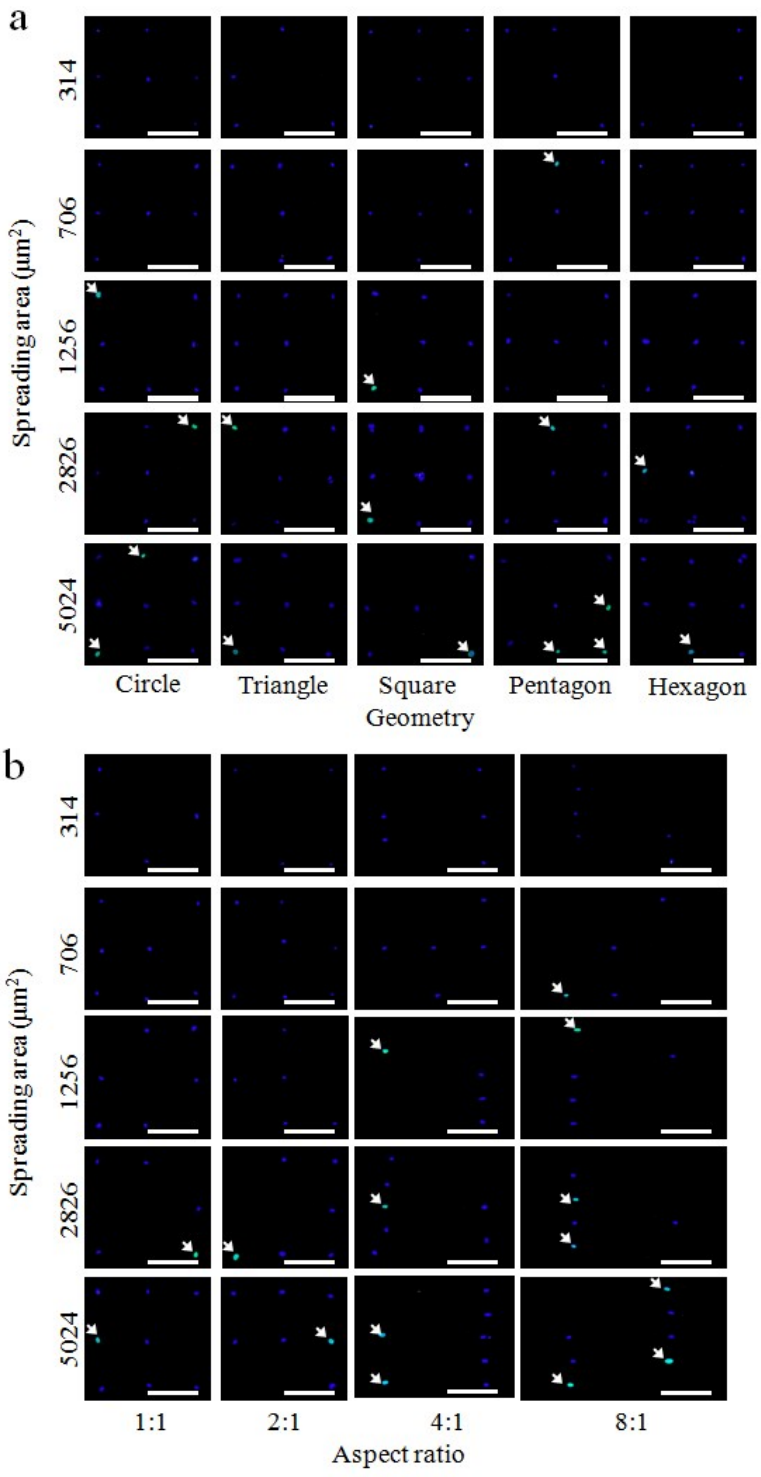

Fig. S7 Representative fluorescence photomicrographs of hMSCs on micropatterns after nuclear (blue) and BrdU (green, white arrow) staining. Scale bar: 200 μm.