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# Guiding Cell Migration with Nanoscale Regulation of Cell Adhesions

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4  $\mu\text{m}$

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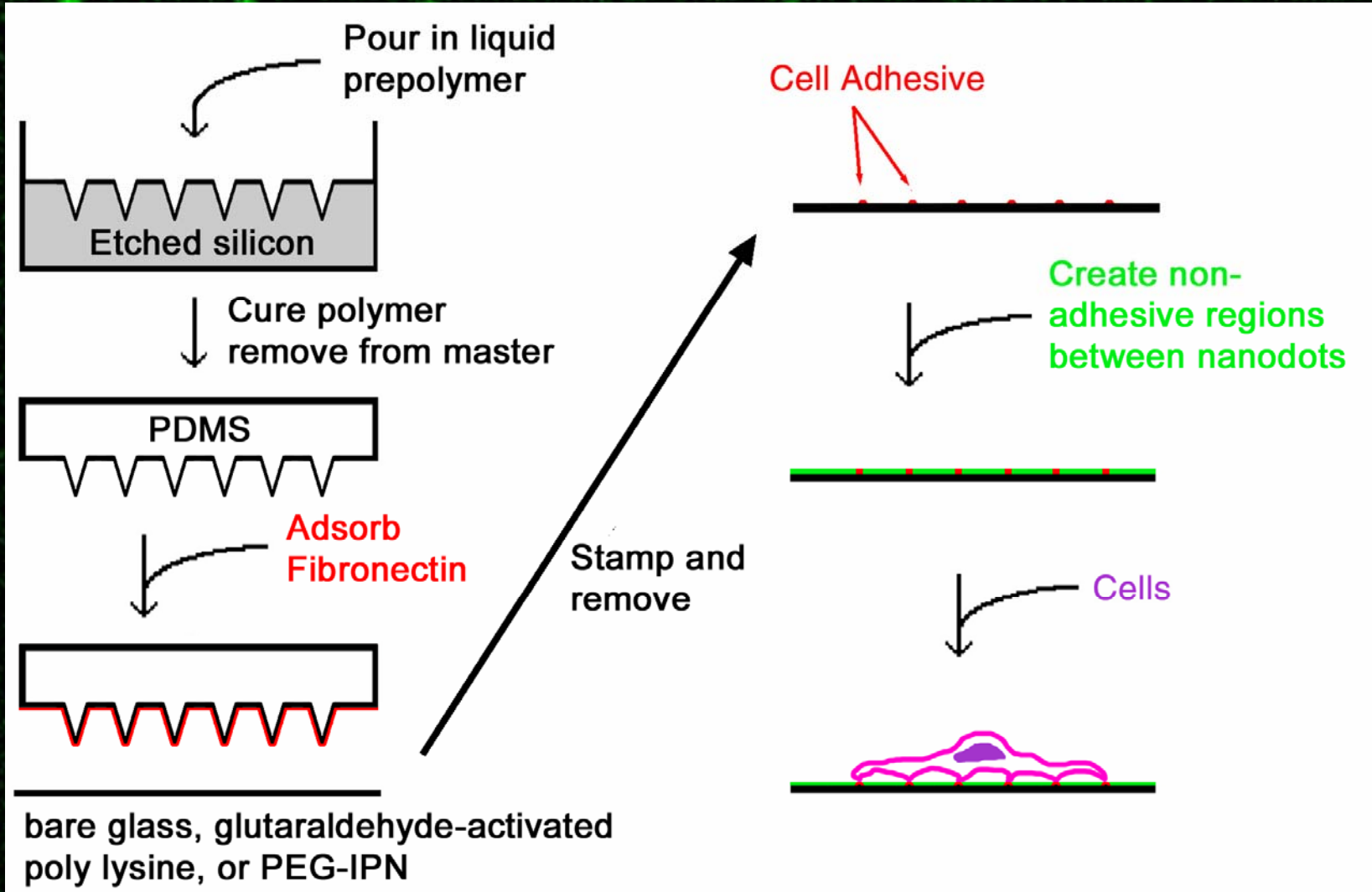
Cell-substratum adhesions smaller than 1  $\mu\text{m}$  are particularly important for migrating cells. How can we design the presentation of small adhesions on surfaces so that we can gain an understanding and control of cell migratory behavior?



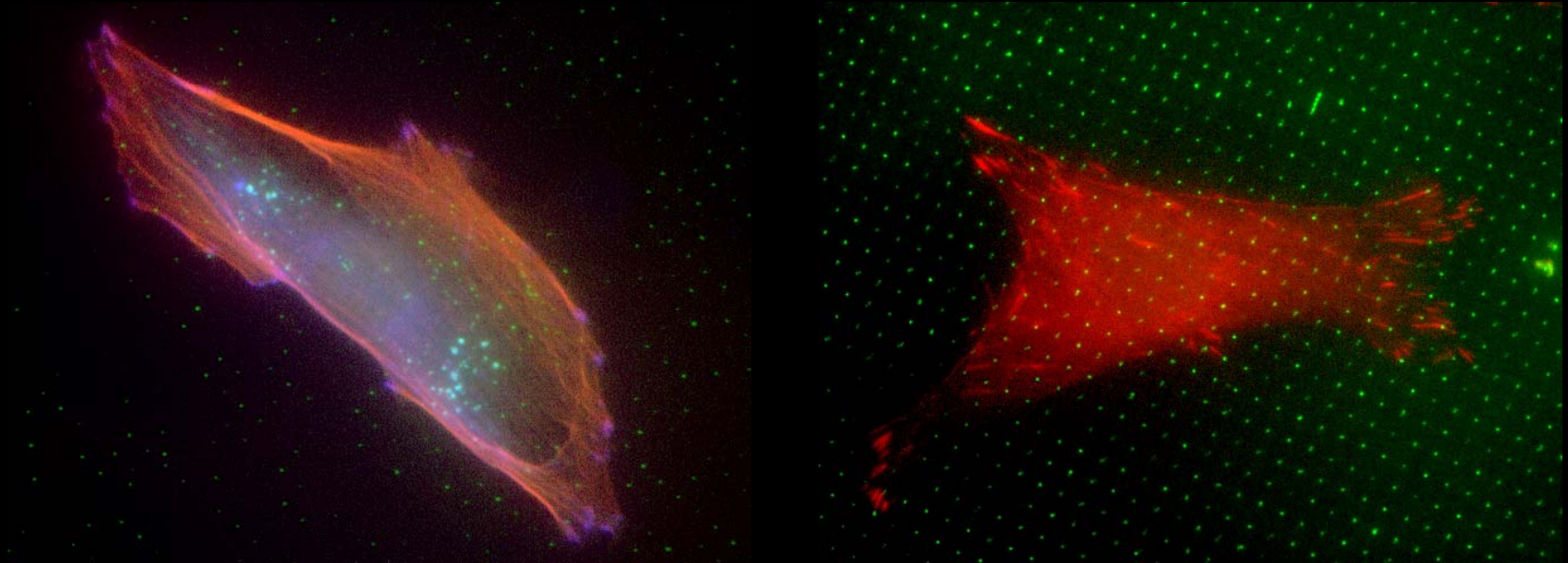
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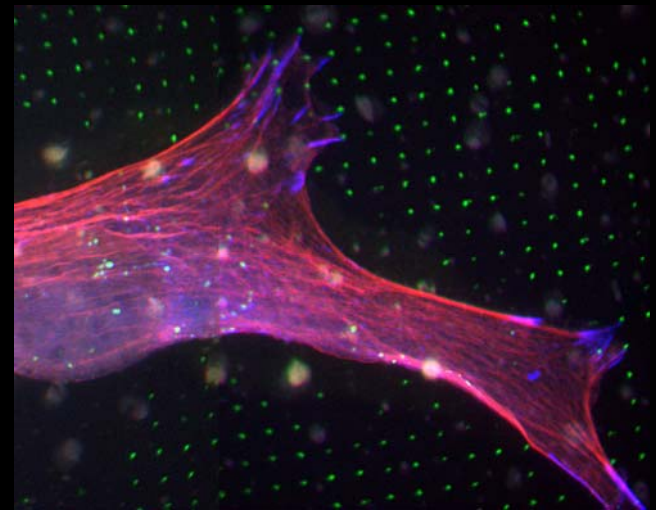
# Research Approaches



# Accomplishments



- Rigid PDMS structures necessary to prevent stamp sagging
- Cells adhere to nanodots but easily pull them off of bare glass surfaces (above left)
- Crosslinking the dots to the surface prevents removal (above right, right)
- Adhesion structures correlate with FN dot pattern, but specificity is not perfect



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