

## Supporting Information

# Conjugating Micropatches to Living Cells Through Membrane Intercalation

*Yu Miao,<sup>a</sup> Hailing Liu,<sup>a</sup> Wenhao Cheng,<sup>a</sup> Yang Liu,<sup>b,c</sup> Sundol Kim,<sup>a</sup> Xuegang Yuan,<sup>a</sup> Aubrey Kusi-Appiah,<sup>d</sup> Steven Lenhart,<sup>d</sup> Teng Ma,<sup>a</sup> Yi Ren,<sup>c</sup> Hoyong Chung,<sup>a</sup> Jingjiao Guan<sup>a,e,\*</sup>*

<sup>a</sup> Department of Chemical and Biomedical Engineering, Florida A&M University-Florida State University College of Engineering, Tallahassee, Florida 32310, USA

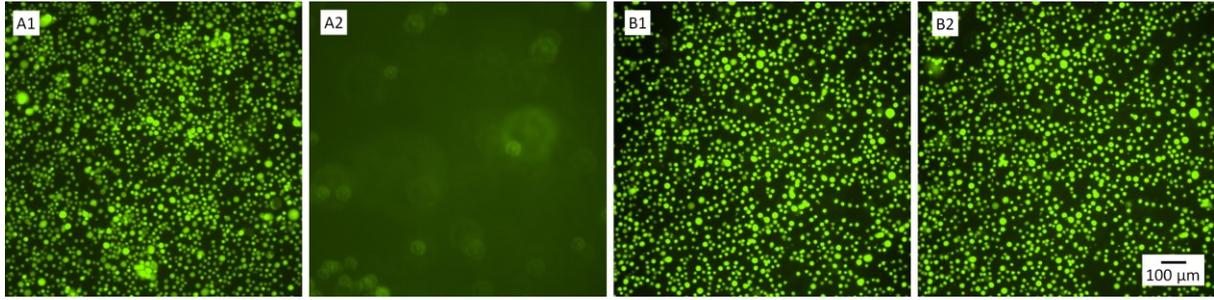
<sup>b</sup> Guizhou Medical University, Guiyang, Guizhou province, 550025, China

<sup>c</sup> College of Medicine, Florida State University, Tallahassee, Florida 32306, USA

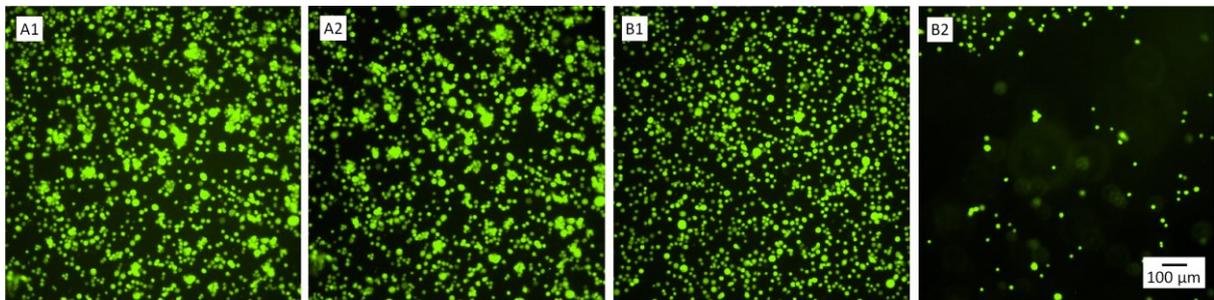
<sup>d</sup> Department of Biological Science, Florida State University, Tallahassee, Florida 32306, USA

<sup>e</sup> The Institute for Successful Longevity, Florida State University, Tallahassee, Florida 32306, USA

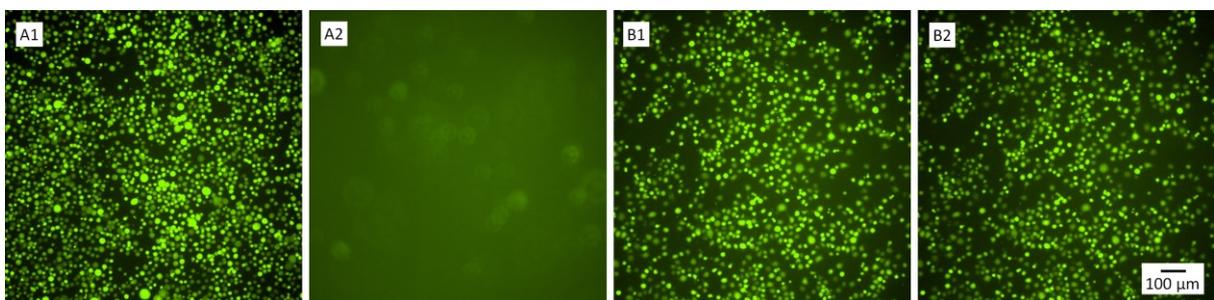
\* Corresponding Author: Email: [guan@eng.famu.fsu.edu](mailto:guan@eng.famu.fsu.edu)



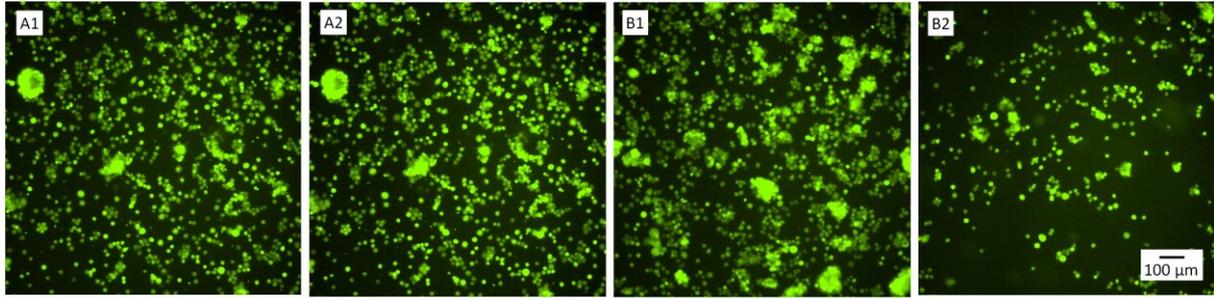
**Figure S1.** Fluorescence micrographs of N2a cells stained with calcein AM (green) on the PAH/PSS/PAH/BSA surface (A1, A2) and the PAH/PSS/PAH/BSA-PEG-C<sub>18</sub>H<sub>37</sub> surface (B1, B2) before (A1, B1) and after (A2, B2) being stirred following a 30 min-8 °C incubation.



**Figure S2.** Fluorescence micrographs of N2a cells stained with calcein AM (green) on the PPMA/PAH/PSS/PAH surface (A1, A2) and the PPMA/PAH/PSS/PAH-PEG surface (B1, B2) before (A1, B1) and after (A2, B2) being stirred following a 30 min-8 °C incubation.



**Figure S3.** Fluorescence micrographs of N2a cells stained with calcein AM (green) on the PAH/PSS/PAH/BSA surface (A1, A2) and the PAH/PSS/PAH/BSA-PEG-C<sub>18</sub>H<sub>37</sub> surface (B1, B2) before (A1, B1) and after (A2, B2) being stirred following a 30 min-8 °C plus 2 h-37 °C incubation.



**Figure S4.** Fluorescence micrographs of N2a cells stained with calcein AM (green) on the PPMA/PAH/PSS/PAH surface (A1, A2) and the PPMA/PAH/PSS/PAH-PEG surface (B1, B2) before (A1, B1) and after (A2, B2) being stirred following a 30 min-8 °C plus 2 h-37 °C incubation.