Supporting Information

Tracking Mesenchymal Stromal Cells using an Ultra-Bright TAT-Functionalized Plasmonic-Active Nanoplatform

Hsiangkuo Yuan[1†], Jose A. Gomez[2†], Jennifer S. Chien[2], Lunan Zhang[2], Christy M. Wilson[3], Shuqin Li[3], Andrew M. Fales[1], Yang Liu[1,4], Gerald A. Grant[3], Maria Mirotsou[2], Victor J. Dzau[2], Tuan Vo-Dinh[1,4]*

*Corresponding Author: tuan.vodinh@duke.edu

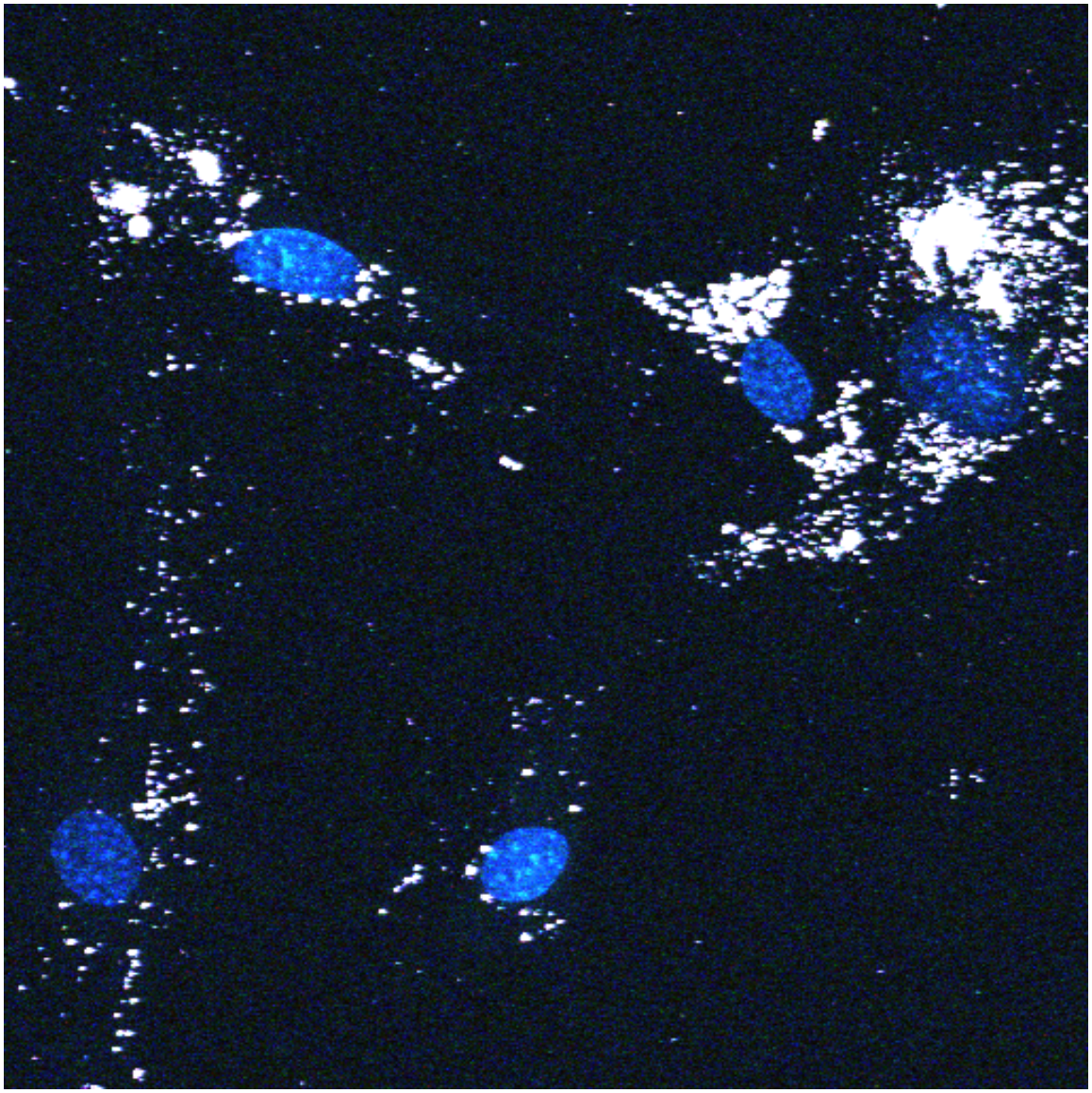

Figure S1. Chase 4 experiment (Q-Tracker and TAT-GNS co-incubated) at day 4. GNS signal was predominant. There may still be Q-Tracker but just too difficult to distinguish its signal from GNS signal (white). Nuclei were stained blue. Image size 256x256 μm.

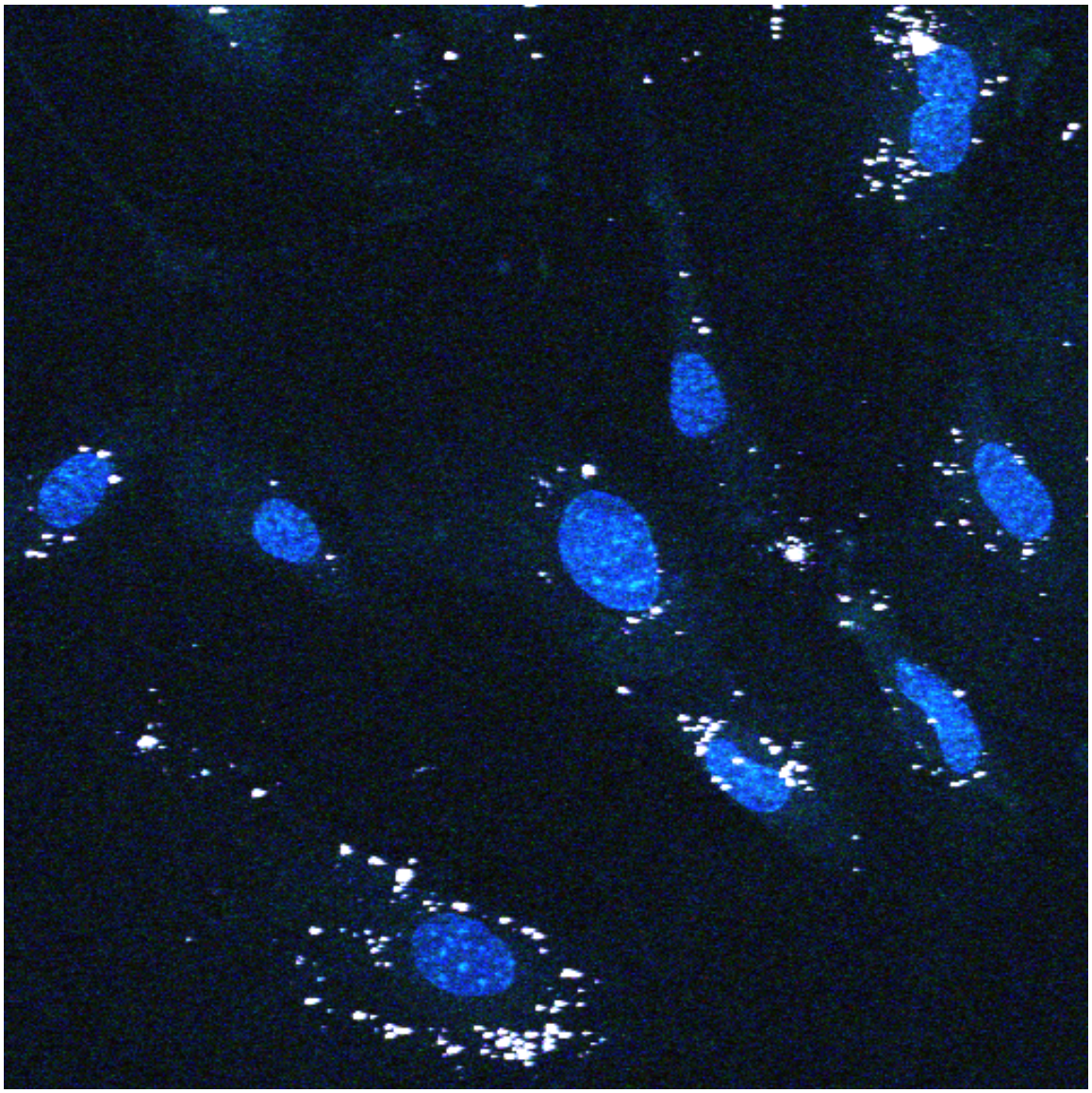

Figure S2. Chase 2 experiment (Q-Tracker-MSC and TAT-GNS-MSC co-cultured) at day 4. GNS signal (white) predominated. Nuclei were stained blue. Image size 256x256 µm.

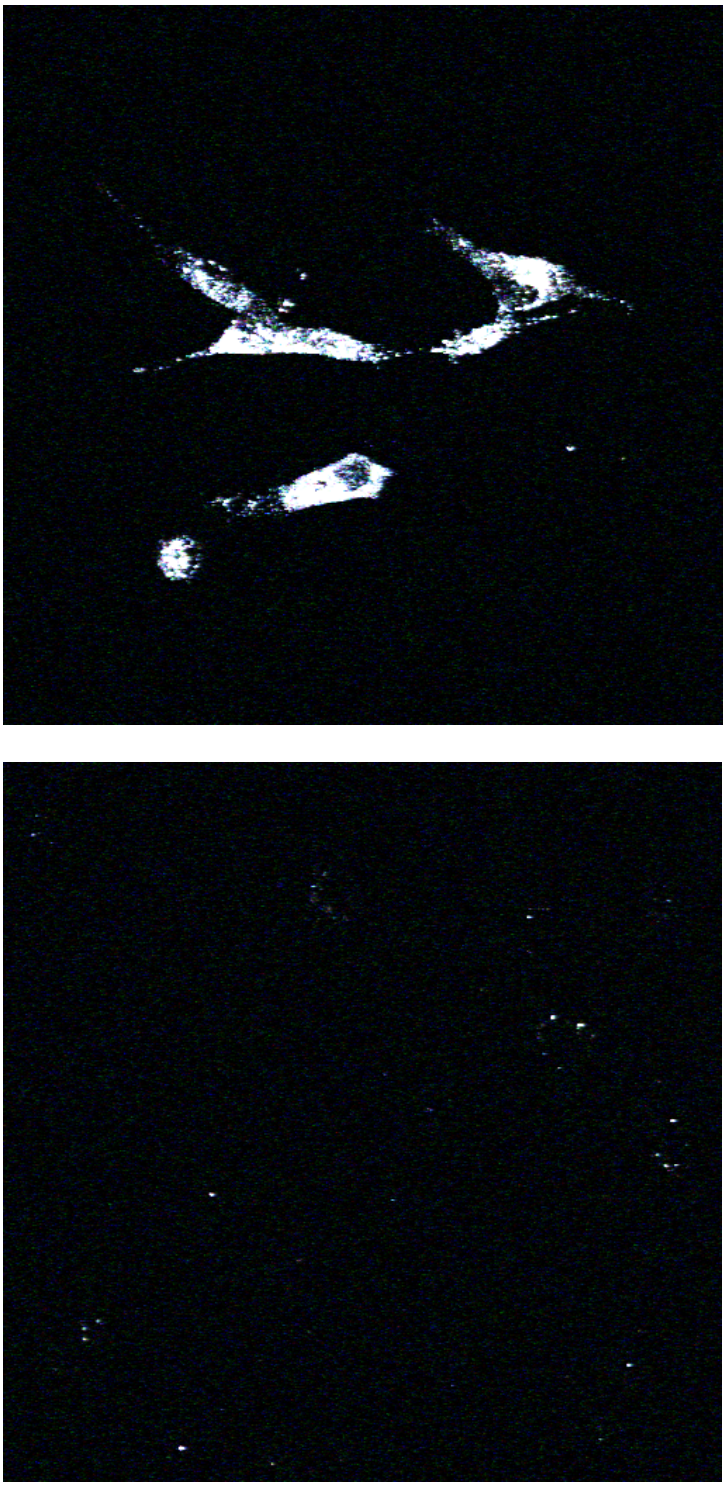

Figure S3. The intracellular TAT-GNS decreases over time. Calculated the pixel intensity under the same excitation laser power, GNS signal (white) at day 1 (top) was estimated 10-fold more than at day 8 (bottom). Image size 256×256 μm.

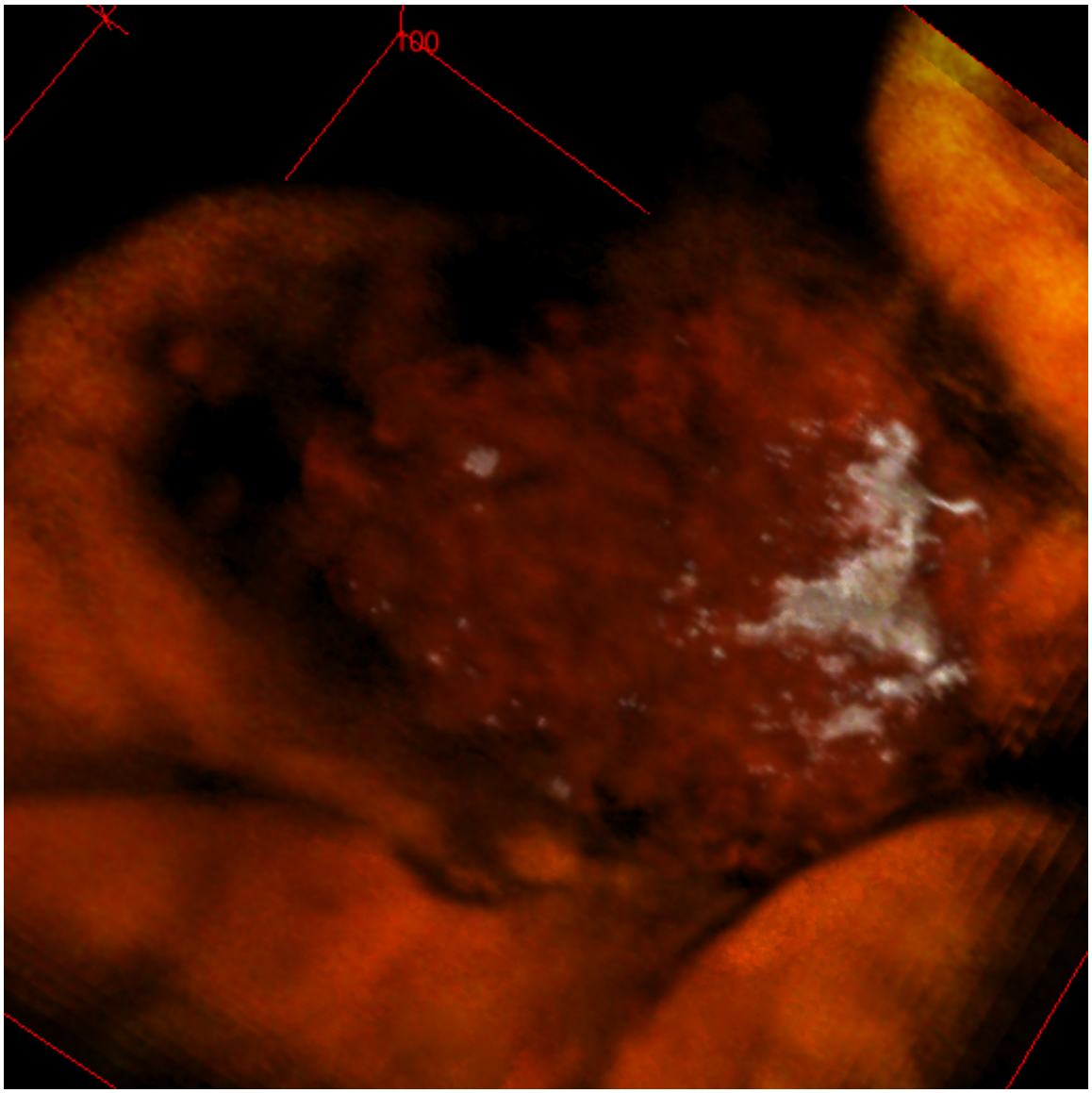

Figure S4. 3D reconstructed imaging of a cell cluster. Cytoplasm was stained orange (FM 1-43 FX) and GNS were white. While some GNS can be found inside MSCs (smaller white domains), some GNS seemed to form agglomerate (large white domain) outside the cells. Image size 125x125 μm.