

## Electronic Supplementary Information

### Acoustofluidic Assembly of 3D Neurospheroids to Model Alzheimer's Disease

*Hongwei Cai,<sup>a</sup> Zheng Ao,<sup>a</sup> Liya Hu,<sup>a</sup> Younghye Moon,<sup>b</sup> Zhuhao Wu,<sup>a</sup> Hui-Chen Lu,<sup>c</sup> Jungsu Kim,<sup>b</sup> and Feng Guo,<sup>a,\*</sup>*

- a. Department of Intelligent Systems Engineering, Indiana University, Bloomington, Indiana 47405, United States
- b. Stark Neurosciences Research Institute, and Department of Medical and Molecular Genetics, Indiana University School of Medicine, Indianapolis, Indiana, 46202, United States
- c. Gill Center for Biomolecular Science, and Department of Psychological and Brain Sciences, Indiana University, Bloomington, Indiana 47405, United States

\*Corresponding email: [fengguo@iu.edu](mailto:fengguo@iu.edu)

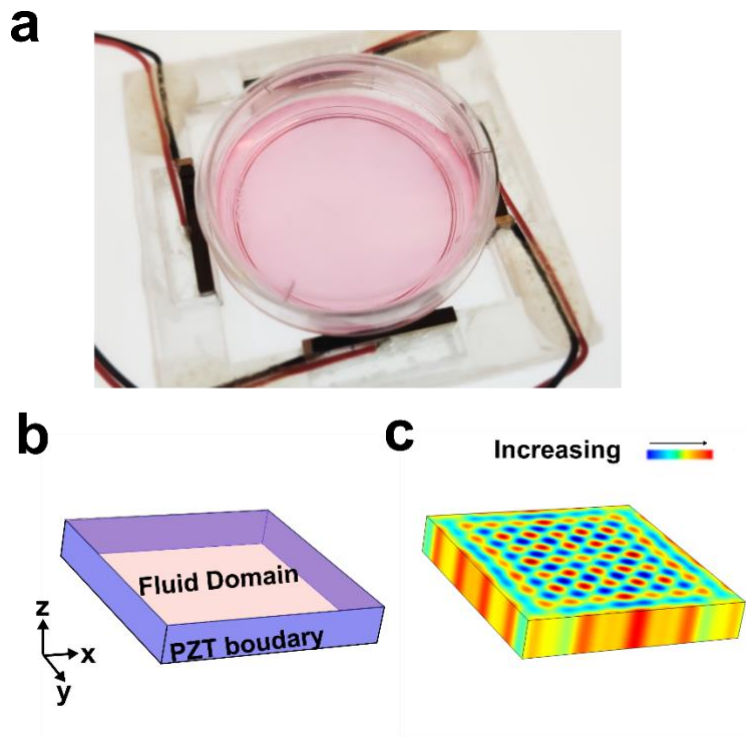
#### Supporting Figures:

**Figure S1.** Acoustic assembly device and simulation domain.

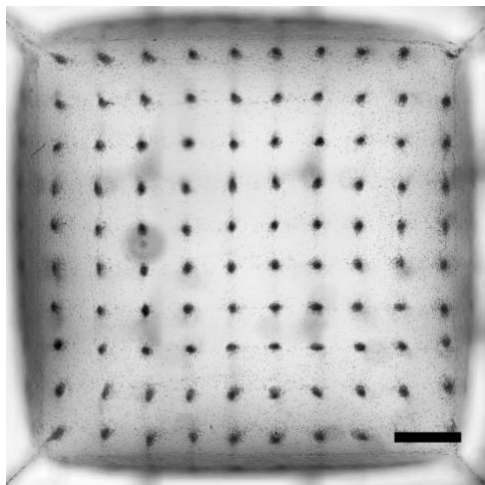
**Figure S2.** View of the acoustic pattern within the acoustofluidic device.

#### Supporting Movie:

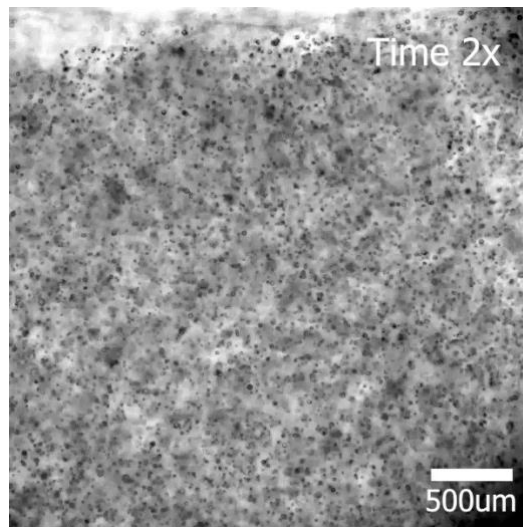
**Movie S1.** Acoustic assembly process of cells.



**Figure S1.** Acoustic assembly device and simulation domain. (a) An image of the acoustic assembly device. (b) Simulation domain of the acoustic assembly device, the blue four side faces were set to be plane incident wave boundary to account for the acoustic waves generated by PZTs. (c) 3D distribution of acoustic potential field.



**Figure S2.** View of the acoustic pattern within the acoustofluidic device. (Scale bar = 1mm)



**Movie S1.** Acoustic assembly process of cells (corresponding to Figure 2a, b). Here, N2A cells were acoustically assembled to form cell clusters. The movie is in 2x. (Scale bar: 500  $\mu\text{m}$ ).