Supporting Information

Impact of four common hydrogels on amyloid- β (A β) aggregation and cytotoxicity: Implications for 3D models of Alzheimer's disease

Laura W. Simpson¹, Gregory L. Szeto¹², Hacene Boukari³, Theresa A. Good⁴, & Jennie B. Leach^{1*}

- ¹ Department of Chemical, Biochemical and Environmental Engineering, University of Maryland Baltimore County, Baltimore, Maryland, USA
- ² Marlene and Stewart Greenebaum Comprehensive Cancer Center, University of Maryland, Baltimore, Maryland, USA, gszeto@umbc.edu
- ³ Division of Physical and Computational Sciences, Delaware State University, Dover, Delaware, USA
- ⁴ Division of Molecular and Cellular Biosciences, National Science Foundation, Alexandria, Virginia, USA

Table S1 Comparative KS 2-sample test of $G(\tau)$ curves.

With 95% confidence, p-values <0.05 were significantly different. The false discovery rate (FDR) was set at 5% using the two-stage step-up method of Benjamini, Krieger and Yekutieli. For the experimental $G(\tau)$, the FDR test found all the samples significant, shown with an "*". For the 2-component model and the MEMFCS model, the FDR test did not change the significance of any comparisons.

| | | | Experimental G(τ) | 2-Component G(τ) | MEMFCS G(τ) |
|----------|---|----------|----------------------|---------------------|----------------|
| Solution | - | Collagen | <0.0001 | 0.0003 | 0.0004 |
| Solution | - | Agarose | 0.0004 | <0.0001 | 0.8994 |
| Solution | - | HA | <0.0001 | <0.0001 | <0.0001 |
| Solution | - | PEG | 0.0056 | 0.0004 | 0.001 |
| Collagen | - | Agarose | <0.0001 | 0.3014 | <0.0001 |
| Collagen | - | HA | 0.0171 | <0.0001 | 0.0463 |
| Collagen | - | PEG | 0.112* | 0.1888 | 0.5436 |
| Agarose | - | НА | <0.0001 | <0.0001 | <0.0001 |
| Agarose | - | PEG | 0.0002 | 0.1888 | <0.0001 |
| НА | - | PEG | 0.1464* | 0.0025 | 0.454 |

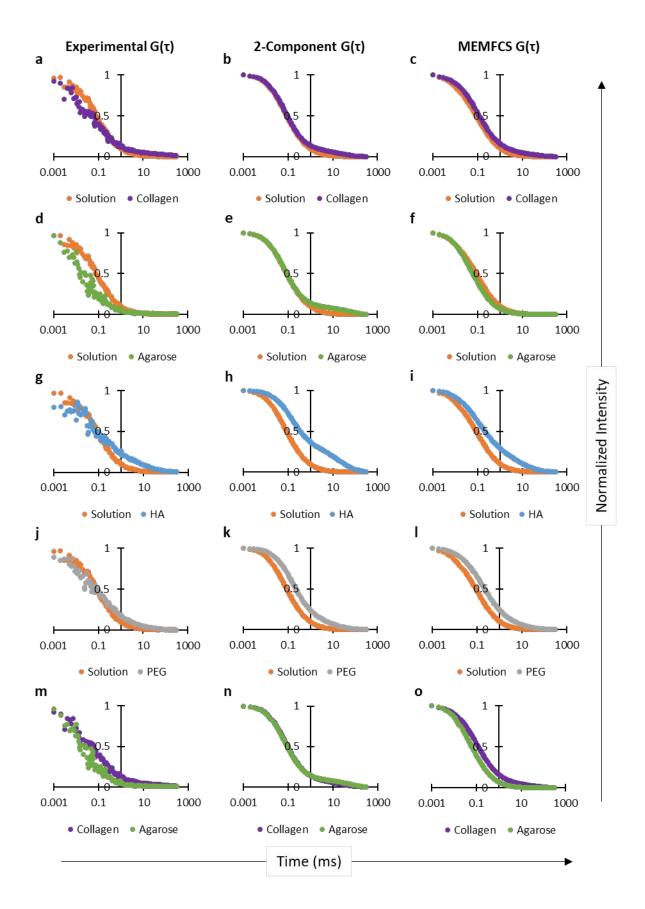


Figure S1 $G(\tau)$ comparison curves of raw experimental data, calculated 2-component model fits, and calculated MEMFCS model fits (Part 1: comparisons for solution-collagen, solution-agarose, solution-HA, solution-PEG and collagen-agarose).

Experimental comparisons are in the first column 2-component model comparisons are in the middle column, and MEMFCS model comparisons are in the third column. Solution data is in orange, collagen data is in purple, agarose data is in green, HA data is in blue, and PEG data is in grey. Row **a-c** compares solution and collagen. Row **d-f** compares solution and agarose. Row **g-I** compares solution and HA. Row **j-I** compares solution and PEG. Row **m-o** compares collagen and agarose. The p-values in Supplementary Table 1 correspond to these figure comparisons.

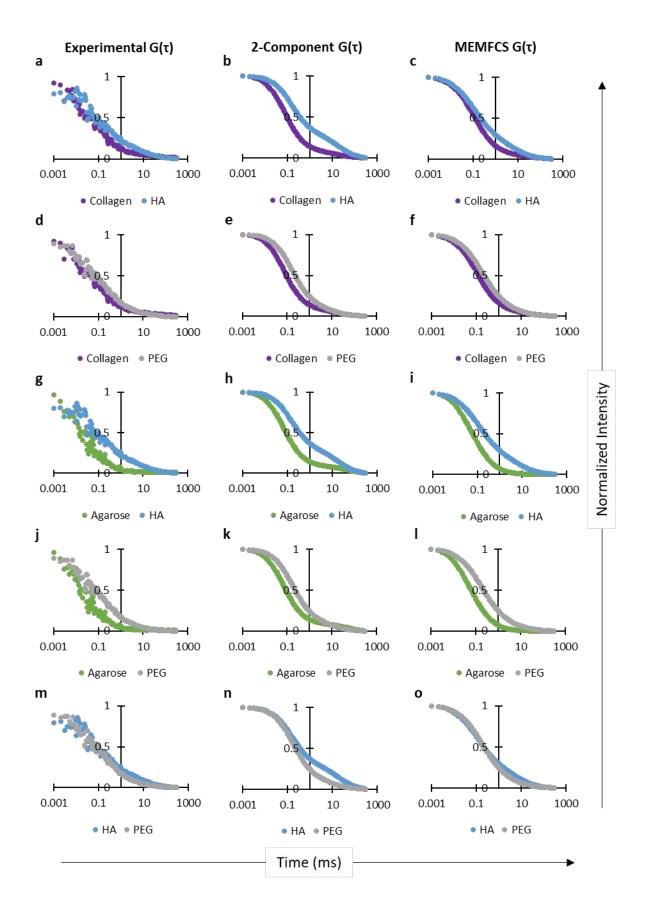


Figure S2 $G(\tau)$ comparison curves of raw experimental data, calculated 2-component model fits, and calculated MEMFCS model fits (Part 2: comparisons for collagen-HA, collagen-PEG, agarose-HA, agarose-PEG).

Experimental comparisons are in the first column 2-component model comparisons are in the middle column, and MEMFCS model comparisons are in the third column. Solution data is in orange, collagen data is in purple, agarose data is in green, HA data is in blue, and PEG data is in grey. Row **a-c** compares collagen and HA. Row **d-f** compares collagen and PEG. Row **g-I** compares agarose and HA. Row **j-I** compares agarose and PEG. Row **m-o** compares HA and PEG. The p-values in Supplementary Table 1 correspond to these figure comparisons.