Supporting Information

The on-fibrillation-pathway membrane content leakage and off-fibrillation-pathway lipid mixing induced by 40-residue β-amyloid peptides in biologically relevant model liposomes

Qinghui Cheng, Zhiwen Hu, Katelynne E. Doherty, Yuto J. Tobin-Miyaji, and Wei Qiang

Department of Chemistry, State University of New York at Binghamton, Binghamton, NY 13902

Tables

Table S1 Percentage of $A\beta_{40}$ binding to membranes with DMPC/DMPS/Cholesterol and DMPC/DMPS/Cholesterol/Sphingomyelin (Similar to **Fig. 1B** in main text, determined with analytical HPLC)

DMPC/DMPS/Cholesterol		DMPC/DMPS/Cholesterol/Sphingomyelin	
1:30, w/o incubation	88.1 ± 4.8	1:30, w/o incubation	93.5 ± 2.1
1:30, w. incubation	53.6 ± 4.4	1:30, w. incubation	58.2 ± 4.8
1:60, w/o incubation	78.5 ± 4.3	1:60, w/o incubation	80.3 ± 4.4
1:60, w. incubation	40.7 ± 5.2	1:60, w. incubation	43.6 ± 3.9
1:90, w/o incubation	62.1 ± 5.2	1:90, w/o incubation	73.0 ± 3.2
1:90, w. incubation	24.6 ± 4.7	1:90, w. incubation	28.8 ± 3.5
1:120, w/o incubation	55.4 ± 3.3	1:120, w/o incubation	58.9 ± 5.5
1:120, w. incubation	19.0 ± 2.6	1:120, w. incubation	22.3 ± 4.0

Figures

Figure S1 TEM images of ssNMR samples (A) before and (B) after the performance of experiments.

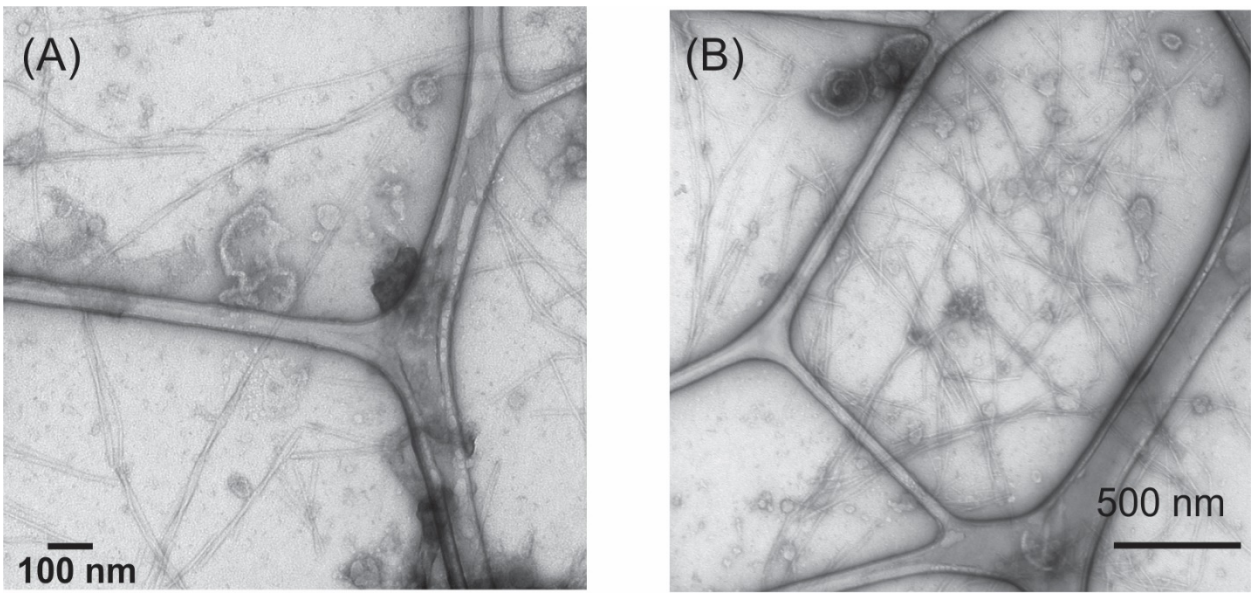

Figure S2 2D and 1D spectra for $A\beta_{40}$ fibrils labeled at L17, N27 and I32 (highlighted in spectra) in POPC (panel A) and DMPC/PS/cholesterol/sphingomyelin/ganglioside GM1 (panel B) membranes. Panel C showed representative 1D slices along two chemical shifts to show the structural similarity (indicated by the dashed lines) between the two fibrils (top: spectrum in panel A; bottom: spectrum in panel B) at high-resolution level.