

Supporting Information
for
Stimulation of α -synuclein amyloid formation by phosphatidylglycerol micellar tubules
Z Jiang, JD Flynn, WE Teague Jr., K Gawrisch, JC Lee

Fig. S1

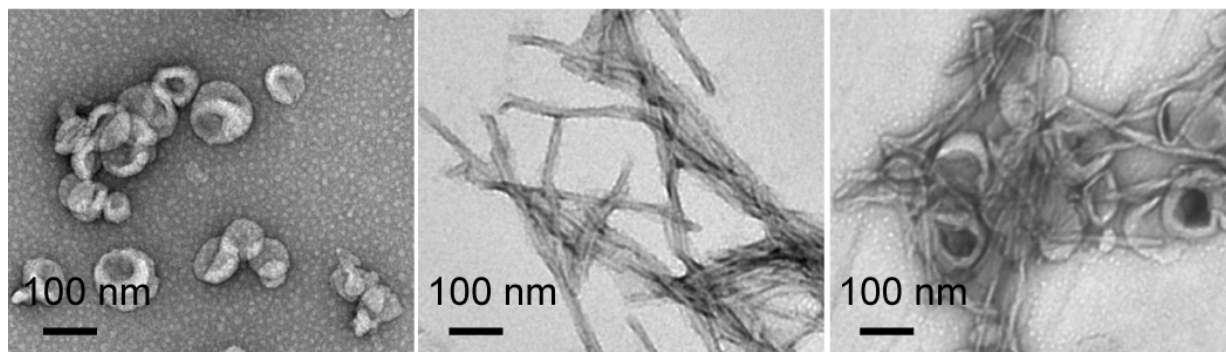


Figure S1. TEM images of preformed fibrils and POPG vesicles. α -Syn fibrils formed in pH 7 MOPS buffer were separated from soluble monomers by centrifugation and resuspended in pH 7 fresh buffer. The resuspended α -syn fibrils were then added to extruded POPG vesicle (100 nm pore size) solution and grids were made and imaged with TEM (Right). Vesicles (left) and fibrils (middle) controls are also shown. 100 nm scale bars as shown.

Fig. S2

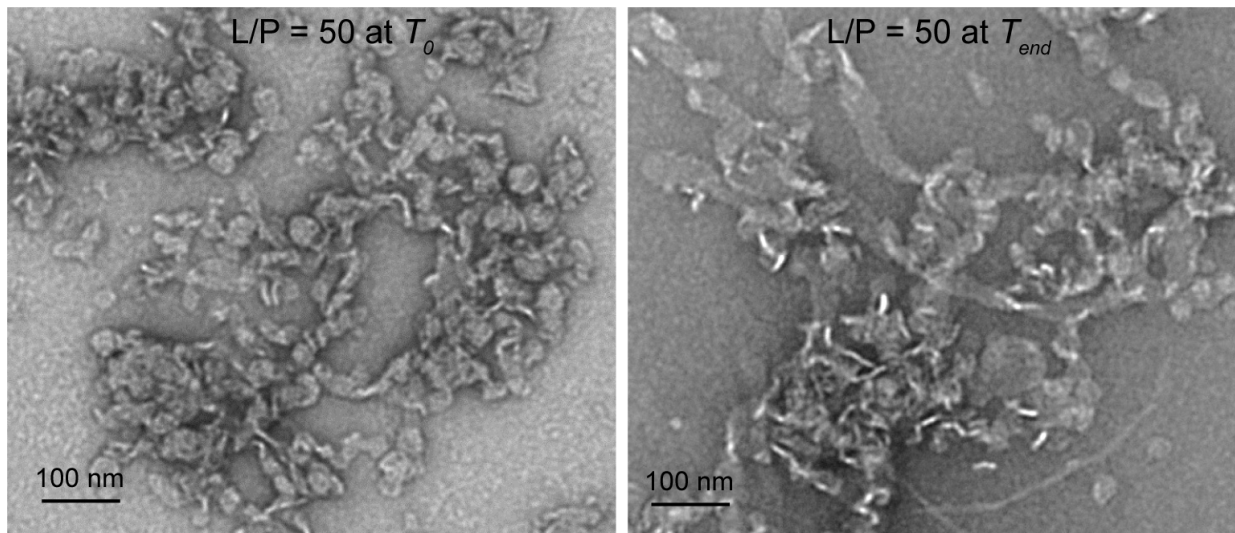


Figure S2. TEM images of L/P=50 at the beginning (Left) and end (Right) of incubation. 100 nm scale bars as shown.

Figure S3

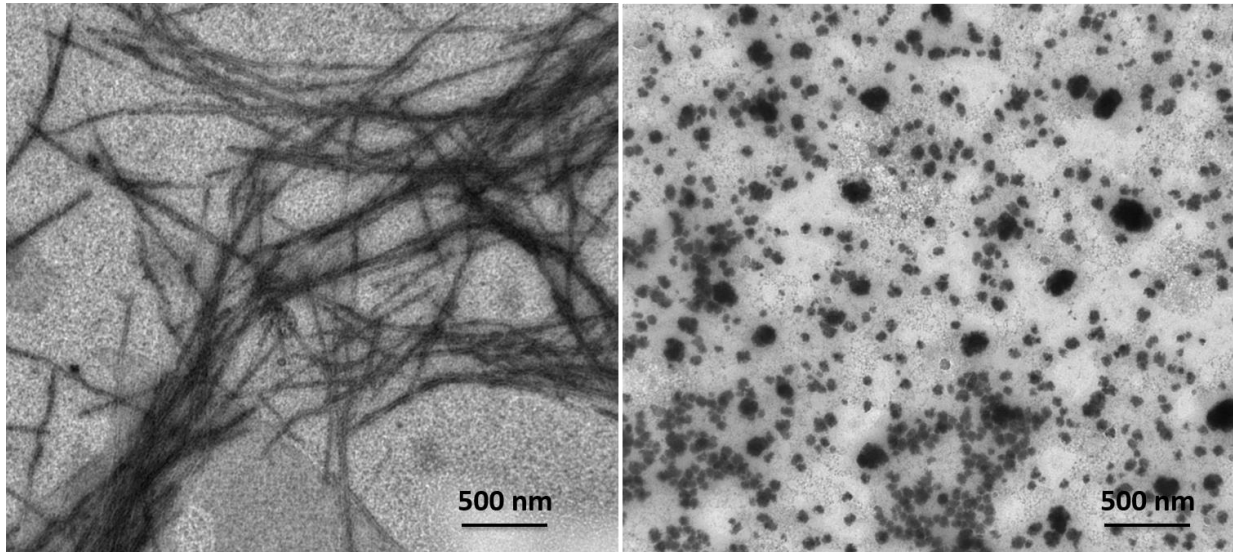


Figure S3. OsO₄ staining of α -syn fibrils formed at L/P = 1 (Left). POPG vesicle control (Right). 500 nm scale bar is shown.

Figure S4

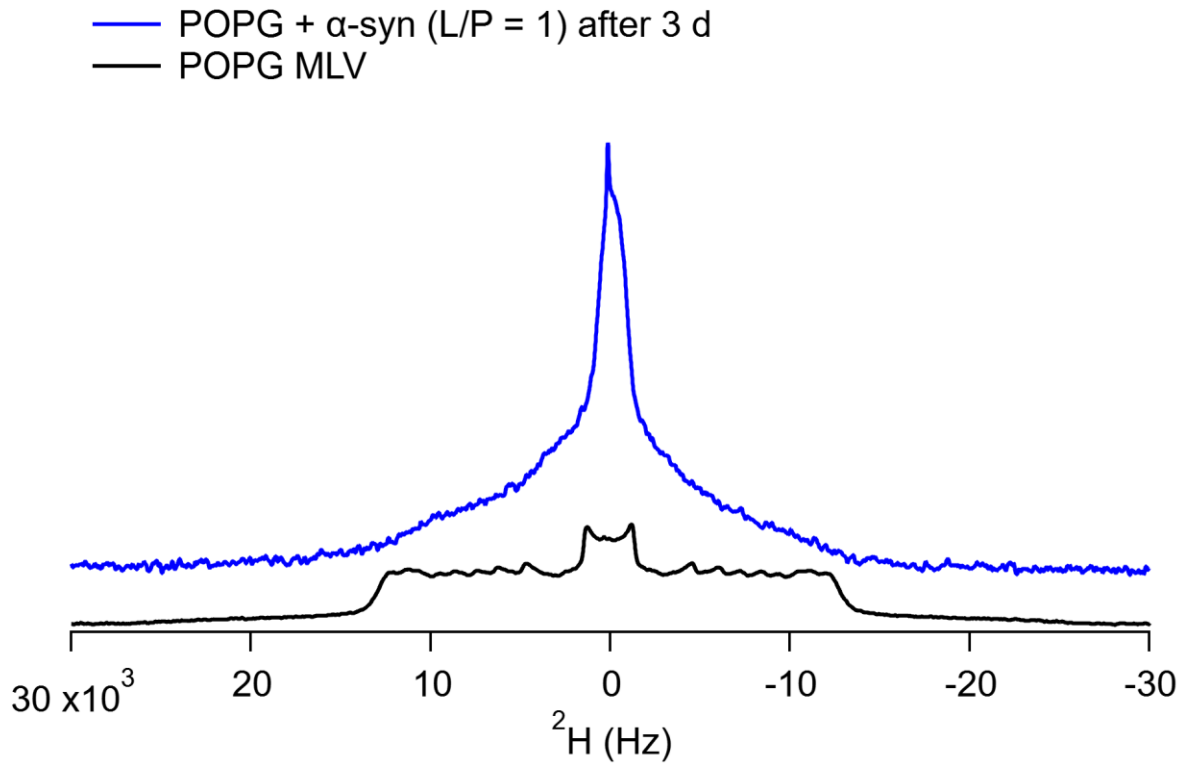


Figure S4. Solid-state ^2H -NMR spectra of POPG-d31 MLVs (6 mM) and POPG-d31 and α -syn fibrils formed at L/P = 1 (800 μM each) in deuterium depleted water. The control sample shows a band of quadrupolar splittings characteristic of a lamellar phase. For the L/P = 1 spectrum, it appears to be a superposition of a band of resonances with a width within range of lamellar lipid phases plus the spectrum of a second lipid mesophase of much smaller bandwidth as expected for tubular structure. A spectral deconvolution of contributions from both phases is hampered by significant broadening of resonances compared to the control spectrum. Such broadening could be the result of lipid-protein interaction as well as curvature of lipid bilayers and along the tubules of micelles