Legends of Supplementary Figures Supplementary Figure 1

A and B; Histograms showing the lag phase (A) and the overall amount at saturation (B) following dose-dependent aggregation of tau in the absence and presence of heparin as detected using ThT kinetic assay over 40 hr incubation. C and D; DLS analysis showing an increase in the diameter of aggregated tau as a function of time in the presence of heparin over 40 hr incubation as depicted by size distribution curves (C) and and histogram (D) representing mean peaks of tau aggregates at a given time. E and F; ThT kinetic assays showing fluorescence intensity observed over 40 hr period of spontaneous aggregation of 1-5 μ M A β_{1-42} seeds in the presence of heparin with (E) or without (F) 10 μ M 0N4R tau. Note the dose-dependent increase in the aggregation profile of 1, 2 and 5 μ M A β_{1-42} in the presence of heparin but the fluorescence intensity values are quite low compared to those observed in presence of 10 μ M 0N4R tau. G and H; Histograms showing the lag phase (G) and the overall amount at saturation (H) following aggregation of 10 μ M 0N4R tau in the presence of heparin with or without 1-5 μ M A β_{1-42} seeds as detected using ThT kinetic assay over 40 hr incubation. I and J; Histograms showing the lag phase (I) and the overall amount at saturation (J) following aggregation of 10 μ M 0N4R tau in the absence of heparin with 1-5 μ M A β_{1-42} seeds as detected using ThT kinetic assay over 40 hr incubation. I and J; Histograms showing the lag phase (I) and the overall amount at saturation (J) following aggregation of 10 μ M 0N4R tau in the absence of heparin with 1-5 μ M A β_{1-42} seeds as detected using ThT kinetic assay over 40 hr incubation. I and J; Histograms showing the lag phase (J) and the overall amount at saturation (J) following aggregation of 10 μ M 0N4R tau in the absence of heparin with 1-5 μ M A β_{1-42} seeds as detected using ThT kinetic assay over 40 hr incubation.

Supplementary Figure 2

A; ThT kinetic assays showing the real value of fluorescence intensity of 10 μ M tau, 10 μ M tau+0.044 mg/ml heparin, 10 μ M tau+0.044 mg/ml heparin+5 μ M A β_{1-42} seed, 10 μ M Tau+5 μ M A β_{1-42} seeds and 5 μ M A β_{1-42} seed only measured at 482 nm. **B**, DLS histogram of the PLGA nanoparticles displaying the diameter size of ~100 nm. **C**, STEM images showing the spheroidal nature of PLGA nanoparticles with an average diameter of ~100 nm. **D** and **E**, Histograms showing the lag phase (D) and the overall amount at saturation (E) following A β_{1-42} seed-induced spontaneous aggregation of 10 μ M 0N4R tau in the presence of heparin and PLGA (1-20 μ M) as detected using ThT kinetic assay over 40 hr incubation.

Supplementary Figure 3

A and B; Histograms showing the lag phase (A) and the overall amount at saturation (B) following spontaneous aggregation of 10 μ M 0N4R tau without heparin but in the presence of A β_{1-42} seeds and PLGA as detected using ThT kinetic assay over 40 hr incubation. C and D; Histograms showing the lag phase (C) and the overall amount at saturation (D) following aggregation of 10 μ M 0N4R tau in the presence of heparin and PLGA without A β_{1-42} seeds as detected using ThT kinetic assay over 40 hr incubation. E and F; Histograms showing the lag phase (E) and the overall amount at saturation of 10 μ M 0N4R tau with or without heparin and PLGA as detected using ThT kinetic assay over 40 hr incubation. E and F; Histograms showing the lag phase (E) and the overall amount at saturation (F) following A β_{1-40} seed-induced aggregation of 10 μ M 0N4R tau with or without heparin and PLGA as detected using ThT kinetic assay over 40 hr incubation. G and H; Histograms showing the lag phase (G) and the overall amount at saturation (H) following A β_{1-42} seed-induced aggregation of 10 μ M 0N4R tau in the presence of arachidonic acid and PLGA as detected using ThT kinetic assay over 40 hr incubation. G and H; Histograms showing the lag phase (G) and the overall amount at saturation (H) following A β_{1-42} seed-induced aggregation of 10 μ M 0N4R tau in the presence of arachidonic acid and PLGA as detected using ThT kinetic assay over 40 hr incubation.

Supplementary Figure 1



Supplementary Figure 2







C

Size (Diameter, nm)

Lag time (Hour)

0

D

Supplementary Figure 3

