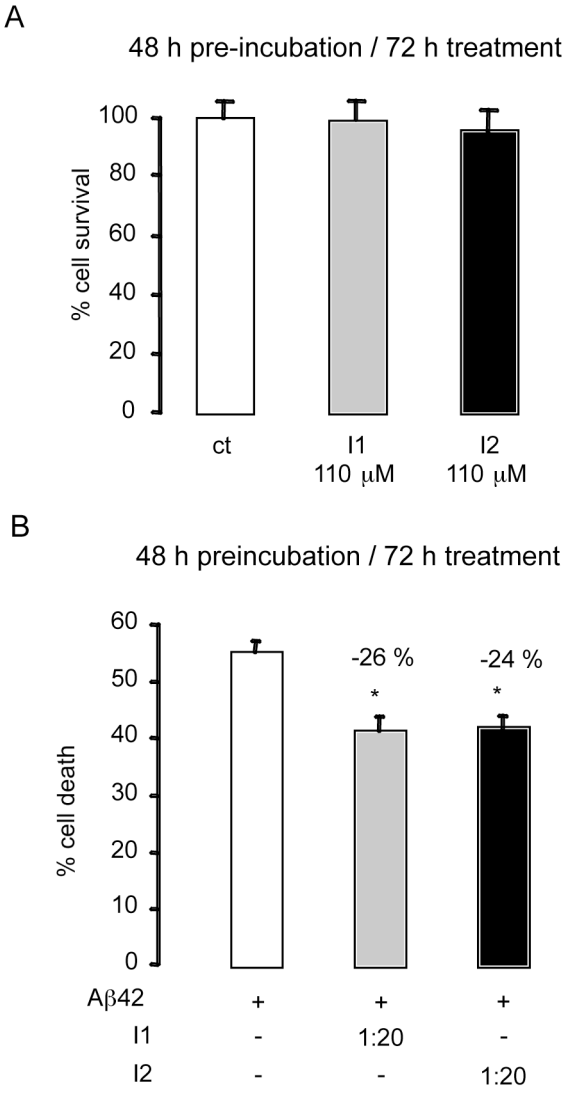
Supporting Information

Sato et al.

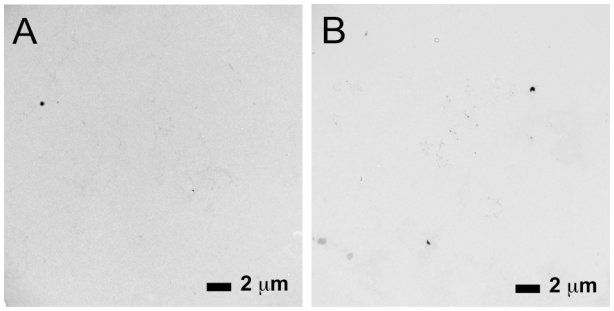
Inhibitors of amyloid toxicity based on β-sheet packing of Aβ40/42

Supporting Figure 1: Direct comparison of the ability of I1 and I2 to prevent cell toxicity of Aβ42. Supporting Figure 1A presents the effect of the inhibitors in the absence of Aβ42 on cell survival using a concentration of 110 μM. No cytotoxic effects of the inhibitors by themselves were observed. Supporting Figure 1B shows the effect of inhibitors I1 and I2 in on neuronal cell death. The experiments were identical to those described for the I1 and I10 inhibitors except after the Aβ42 and inhibitor mixtures were pre-incubated for 48 h rather than 72 h, and the molar ratio of Aβ40 to inhibitor was 1:20. In all cases, the percentage of cell death was measured in neuronal cell cultures after a 48 h treatment with the preincubated mixtures. These experiments were performed before demonstrating that that the maximal inhibitory effects on fibril formation were observed at least 72 h after *in vitro* incubation. The data in Supporting Figure 1B are from 2 separate experiments, n=12 for each experiment (* $p < 0.05$) and show that I1 and I2 have similar protective effects on Aβ42-induced cell death.

Supporting Figure 2: EM images of I1 (Supporting Figure 2A) and I10 (Supporting Figure 2B) incubated at 37°C without Aβ40. Images are shown at 4,800X magnification to facilitate comparison with Figures 3 A-C. I1 and I10 reveal no tendency to aggregate or form fibrils. The inhibitor alone samples were prepared at the highest concentration (400 μM) used for measurements at 37°C.



Supporting Figure 1



Supporting Figure 2