

Figure S1. PBAEs were screened by transfecting GB 319 astrocytes, with transfection (black bars) up to more than 60% and varying levels of cytotoxicity when used for transfection in the absence of serum. Top polymers found here, with high levels of transfection and/or moderate efficacy but low toxicity, were used in later experiments to find their optimal transfection efficacy in 10% serum (see Figure 3).

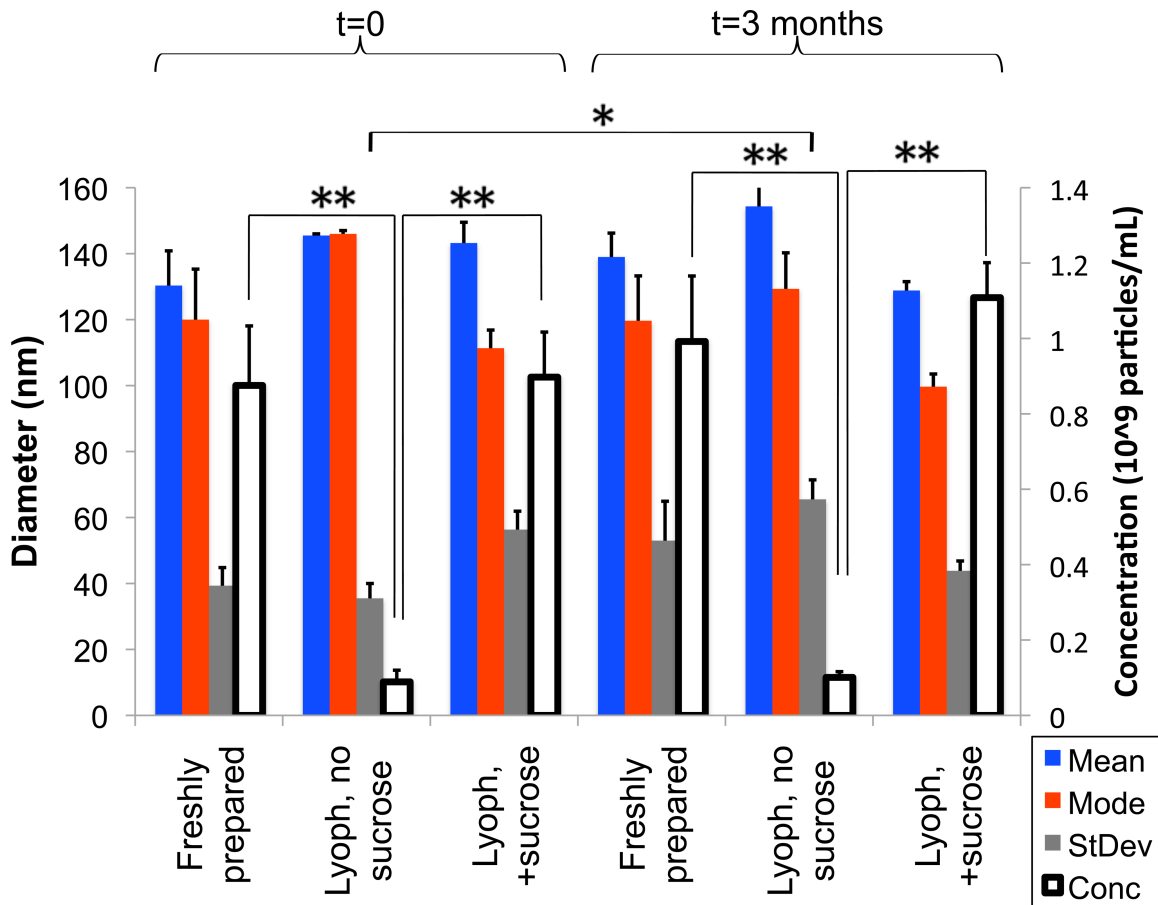


Figure S2. Nanoparticle tracking analysis (NTA) was used to find particle concentration and to measure the mean and mode diameter and the standard deviation of each sample's distribution (error bars show standard error of the mean after measuring n=3 samples). Particles lyophilized with 60 mg/mL sucrose retained similar size distributions before immediately after freezing and after 3 months of storage at 4°C and were not statistically significantly different from freshly prepared particles (one-way ANOVA, $p > 0.05$). Significantly fewer particles were found in samples lyophilized without sucrose compared to both fresh particles and particles lyophilized with sucrose. * $p < 0.05$, ** $p < 0.0001$.