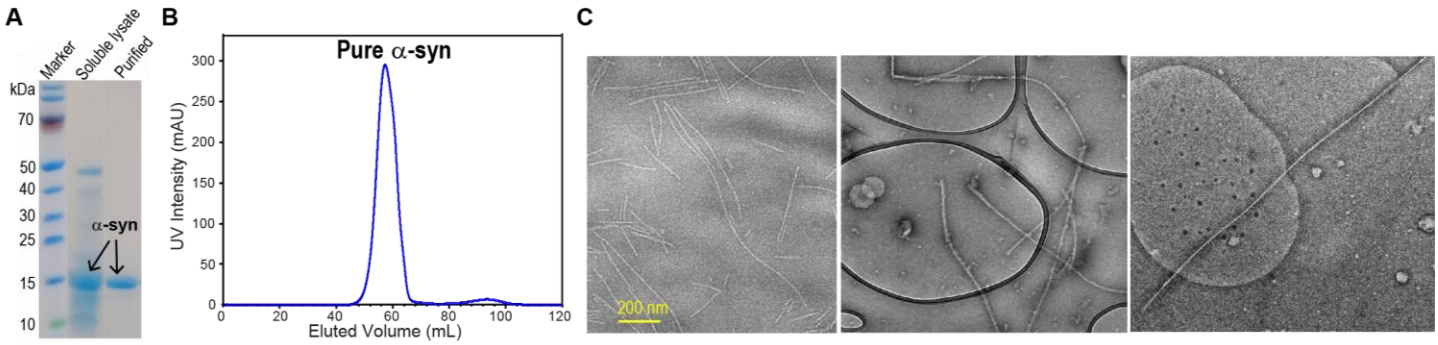

Fig. 1. (**A**) SDS page gel image and (**B**) size exclusion chromatography of the purified α-syn monomer. (**C**) Negative-stained TEM images of α-syn fibrils grown without lipids (left), with neuron membranes (middle), and with PD-associated membranes (right).

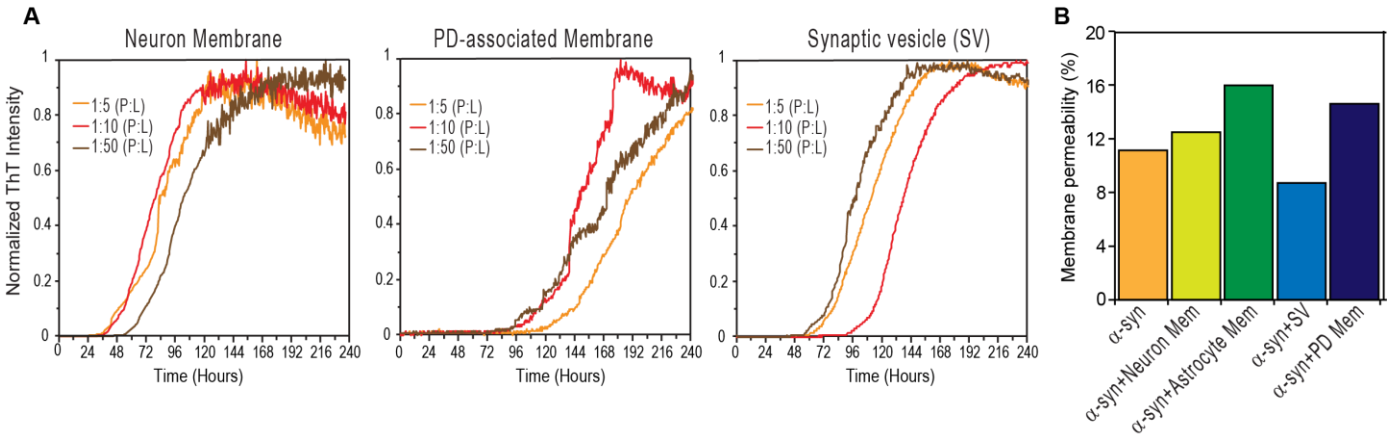

Fig. 2. (**A**) ThT aggregation kinetics of α-syn fibrils formation in the presence of neuron, PD-associated, and SV membranes at different protein: lipid (P: L) ratios with 200 μM of α-syn. (**B**) Membrane permeability induced by α-syn fibrils grown without lipid (orange), with neuron (light-green), astrocyte (green), SV (blue), and PD-associated (dark blue) membranes.

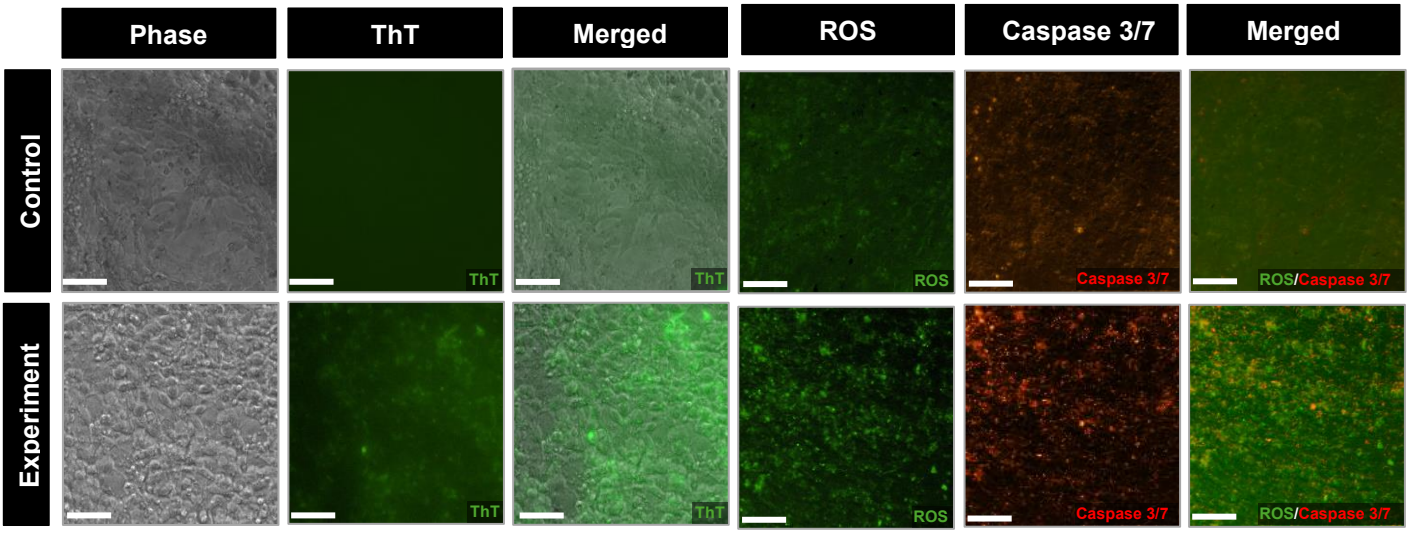

Fig. 3. Exposure our brain model to α-syn fibrils grown with PD-associated membranes led to their uptake by SH-SY5Y cells. This neuronal internalization was assessed by ThT fluorescence. Elevated production of reactive oxygen species (ROS) and activation of caspase 3/7 are more pronounced with the treatment of PD-associated fibrils.