SUPPORTING INFORMATION

Interaction of α-Synuclein and a Cell Penetrating Fusion Peptide with Higher Eukaryotic Cell Membranes Assessed by ^{19}F NMR

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Running title: ^{19}F NMR of Protein-Membrane Binding

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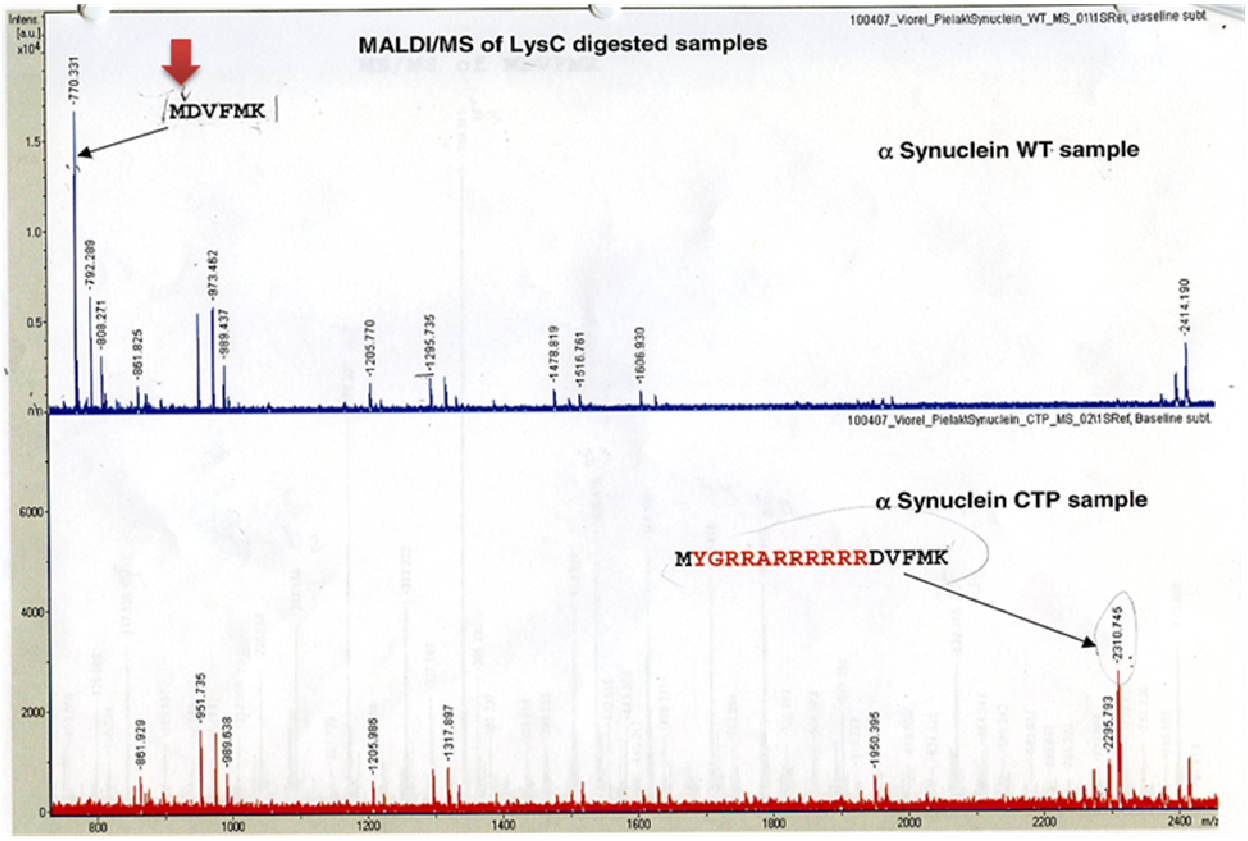

Figure S1 Matrix-assisted laser desorption/ionization mass spectroscopy analysis of wild-type α-synuclein (top) and CTP-α-synuclein (bottom). The CTP insertion is highlighted in red.

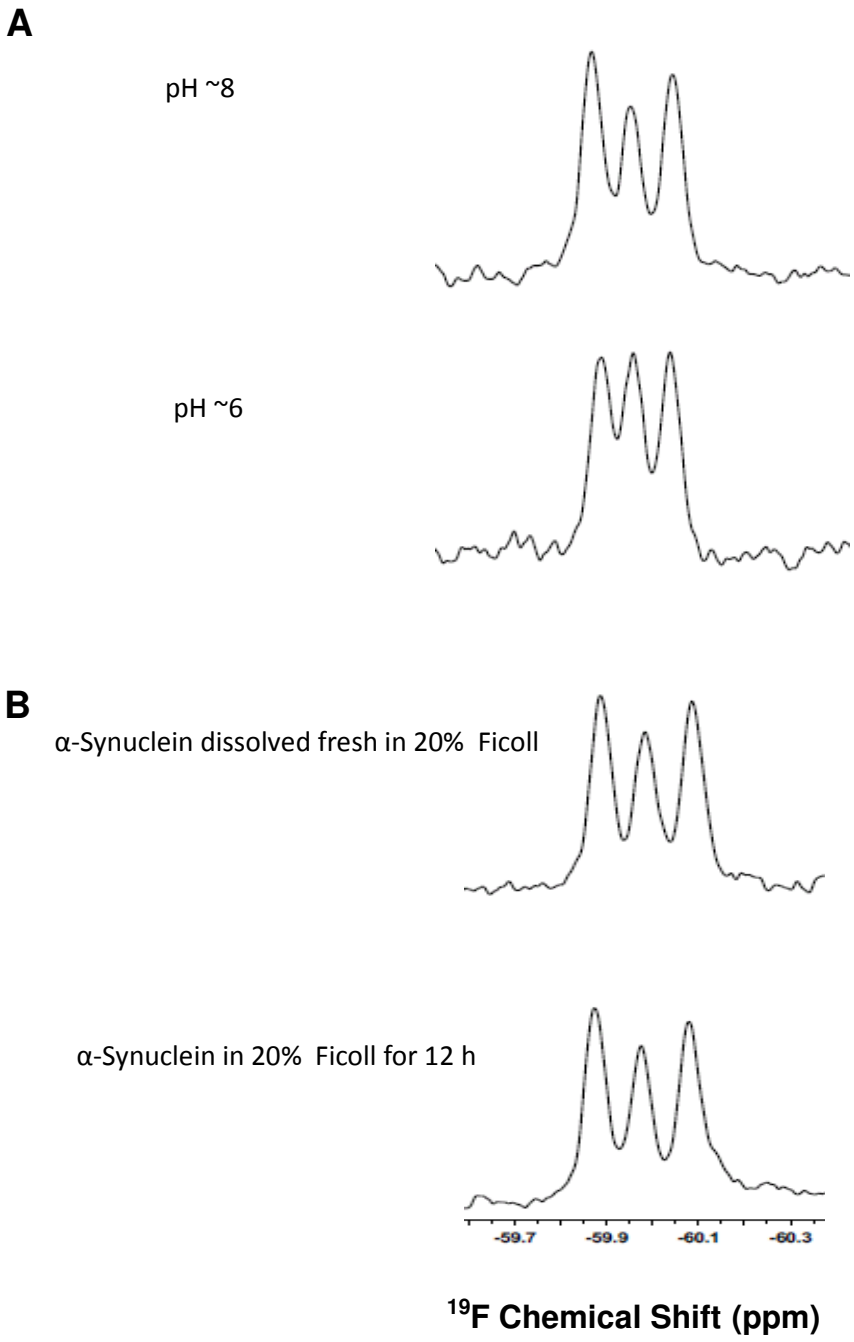

Figure S2 Control experiments show that the decrease in intensity noted in Figure 3 was not due to a change in pH or the presence of Ficoll. For instance, the

decrease could have been caused by a slight change in pH. To test this idea, we collected ^{19}F spectra of the Y125F variant under the same conditions as those used for the sample containing the cells, but at pH ~6. No decrease in intensity was noted for the resonance at position 39 but there was a slight change in chemical shift (*A*). The slight shift of the middle resonance can be explained by the change in pH. We also tested the effect of Ficoll. We kept the Y125F variant in cells media containing 20% (w/v) Ficoll for 12 h. No change in the intensities was noted between the freshly prepared sample and the sample kept in Ficoll for 12 h (*B*).