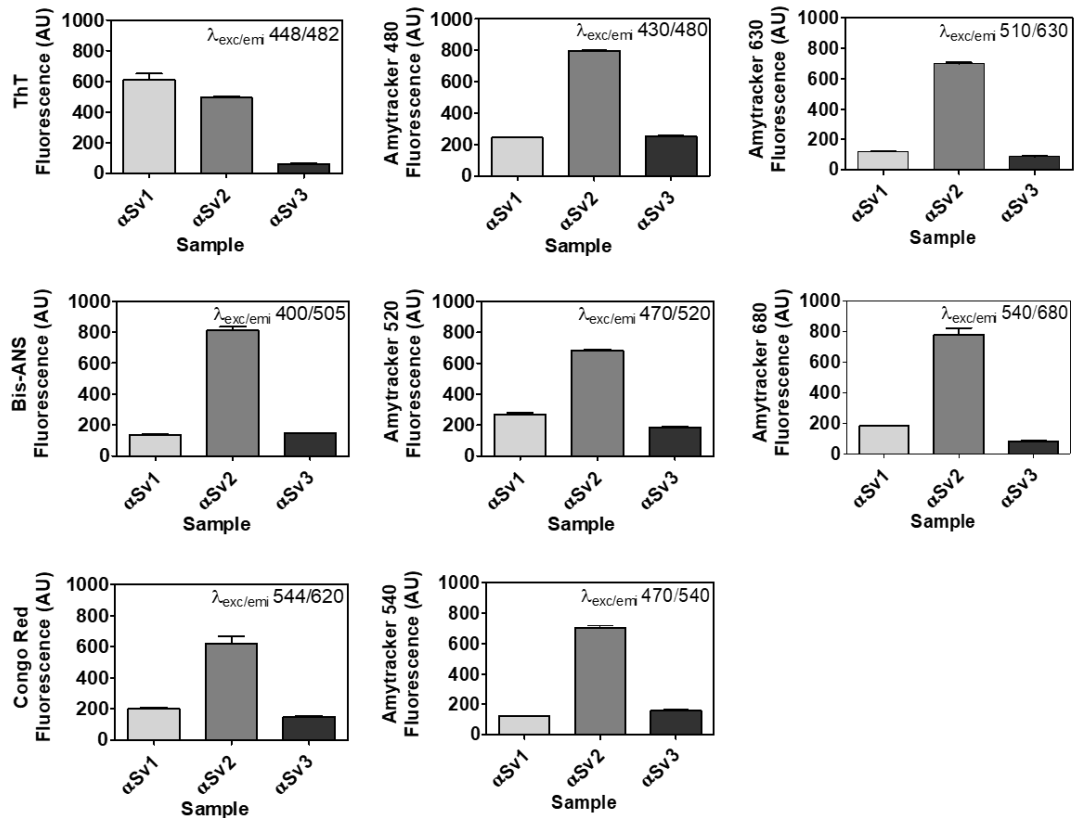
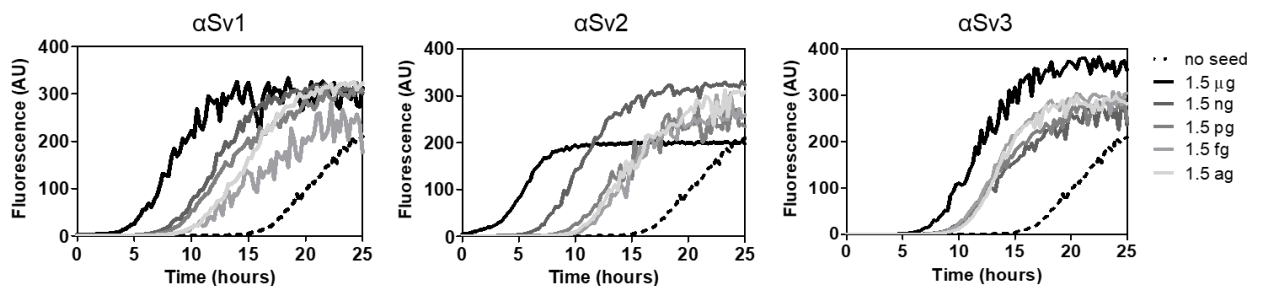


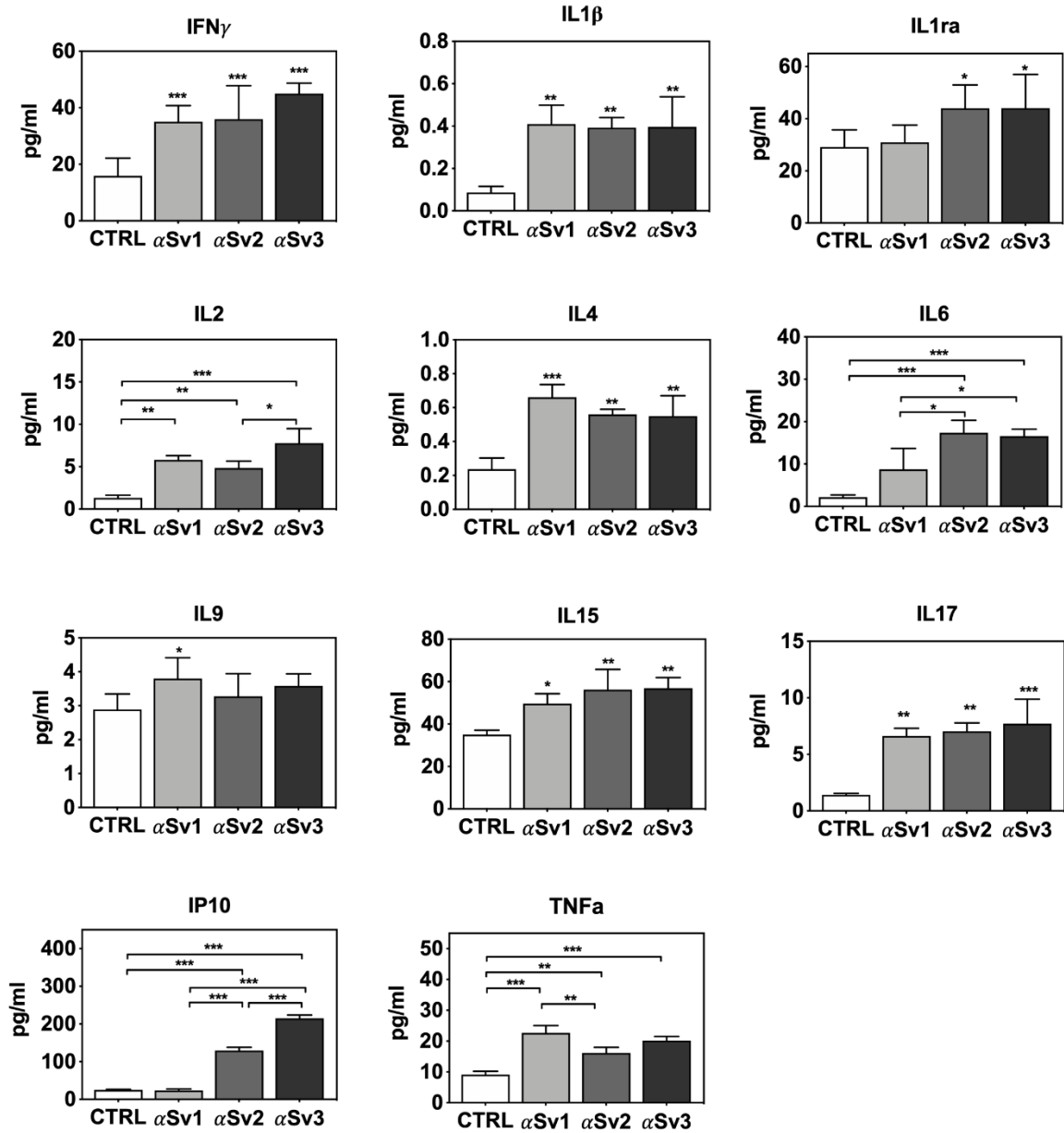
Supplementary Informations



Supplementary Figure S1. Dye-binding assay of rec-αSyn aggregates. Once generated, αSv1, αSv2 and αSv3 were incubated with ThT, Bis-ANS, Congo red, Amytracker 480, Amytracker 520, Amytracker 540, Amytracker 630, Amytracker 680. αSv1 interacted with higher efficiency with ThT than αSv2 and αSv3. αSv2 interacted with higher efficiency with all the other fluorophores while αSv3 weakly interacted with all the fluorescent probes.



Supplementary Figure S2. αSyn_RT-QuIC analysis of serial dilutions of αSv1, αSv2 and αSv3. All dilutions were able to induced an efficient seeding activity by αSyn_RT-QuIC. Curves represented in the graph were obtained by plotting the average fluorescence intensities of each sample against time.



Supplementary Figure S3. Multiparametric analysis of inflammatory mediator production from stimulated SH-SY5Y. Immune mediator quantification in the supernatants of SH-SY5Y incubated with α Sv1, α Sv2, α Sv3 (2.5 μ M for 24 hours), and control buffer medium. Among the 27 molecules analyzed, the serum concentration levels of 11 cytokines was found statistically significant: IFN γ (α Sv1 vs control: $p=0.0008$; α Sv2 vs control: $p=0.0005$; α Sv3 vs control: $p<0.0001$); IL1 α (β Sv1 vs control: $p=0.0052$; α Sv2 vs control: $p=0.0070$; α Sv3 vs control: $p=0.0066$); IL1ra (α Sv2 vs control: $p=0.04$; α Sv3 vs control: $p=0.03$); IL2 (α Sv1 vs control: $p=0.0015$; α Sv2 vs control: $p=0.0067$; α Sv3 vs control: $p=0.0001$; α Sv2 vs α Sv3: $p=0.02$); IL4 (α Sv1 vs control: $p=0.0005$; α Sv2 vs control: $p=0.0028$; α Sv3 vs control: $p=0.0034$); IL6 (α Sv2 vs control: $p=0.0007$; α Sv3 vs control: $p=0.001$; α Sv1 vs α Sv2: $p=0.02$; α Sv1 vs α Sv3: $p=0.03$); IL9 (α Sv1 vs control: $p=0.02$); IL15 (α Sv1 vs control: $p=0.04$; α Sv2 vs control: $p=0.006$; α Sv3 vs control: $p=0.0051$); IL17 (α Sv1 vs control: $p=0.0017$; α Sv2 vs control: $p=0.0011$; α Sv3 vs control: $p=0.0005$); IP10 (α Sv2 vs control: $p<0.0001$; α Sv3 vs control: $p<0.0001$; α Sv1 vs α Sv2: $p<0.0001$; α Sv1 vs α Sv3: $p<0.0001$; α Sv2 vs α Sv3: $p<0.0001$); TNF α (α Sv1 vs control: $p<0.0001$; α Sv2 vs control: $p=0.0028$; α Sv3 vs control: $p=0.0002$; α Sv1 vs α Sv2: $p=0.0052$). Statistical significance was assessed by one-way ANOVA test with Dunnett's multiple comparison test. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.