

Supplementary Material

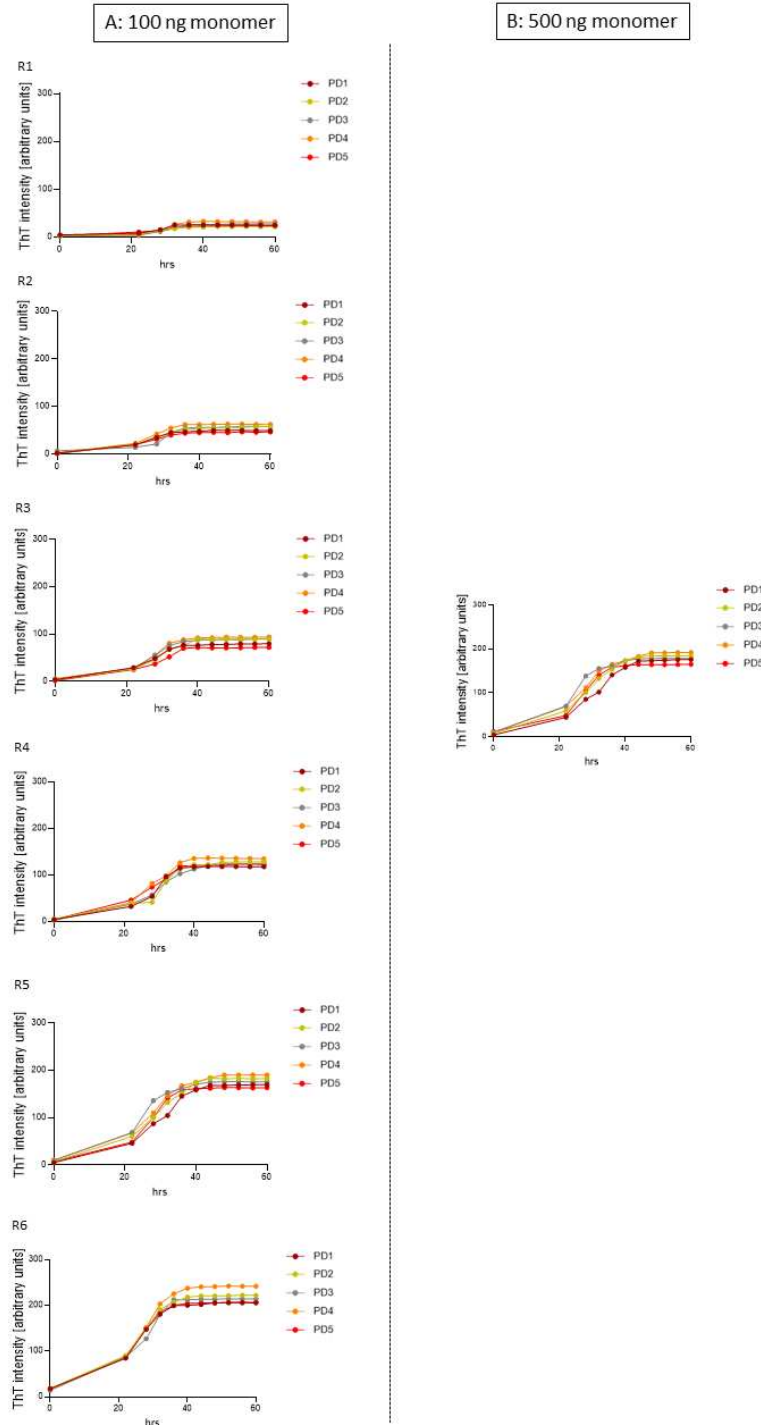
Association of Misfolded α -Synuclein Derived from Neuronal Exosomes in Blood with Parkinson's Disease Diagnosis and Duration

Supplementary Table 1. Seeding data of both replicates of n = 79 patients with Parkinson's disease

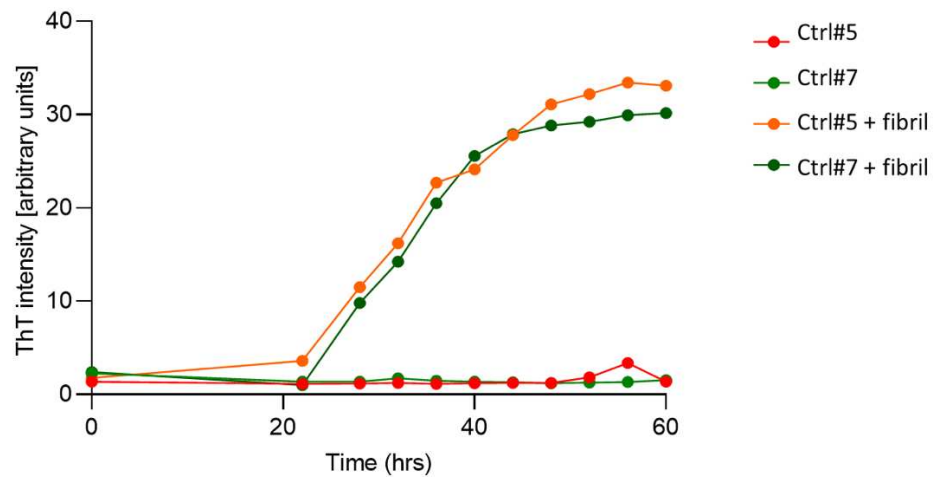
n = 79 PD patients	Thioflavin T signal intensity after 60 hours (F ₆₀) in arbitrary units			
	1st round	2nd round	Mean	SD
ID 1	169.1	165.2	167.1	1.9
ID 2	133.6	140.6	137.1	3.5
ID 3	171.6	172.9	172.3	0.7
ID 4	196.6	196.9	196.8	0.2
ID 5	211.5	209.5	210.5	1.0
ID 6	167.1	172.5	169.8	2.7
ID 7	181.5	181.4	181.5	0.1
ID 8	175.2	170.7	172.9	2.2
ID 9	168.5	166.8	167.7	0.9
ID 10	167.5	169.5	168.5	1.0
ID 11	143.1	145.6	144.3	1.3
ID 12	152.0	156.4	154.2	2.2
ID 13	129.1	125.1	127.1	2.0
ID 14	159.1	156.2	157.7	1.5
ID 15	124.5	129.4	126.9	2.4
ID 16	145.3	149.7	147.5	2.2
ID 17	143.1	142.0	142.5	0.5
ID 18	144.0	144.9	144.5	0.5
ID 19	193.9	193.6	193.8	0.1
ID 20	209.9	209.9	209.9	0.0
ID 21	194.0	197.1	195.6	1.5
ID 22	152.7	154.2	153.4	0.7
ID 23	154.9	151.7	153.3	1.6
ID 24	192.1	200.1	196.1	4.0
ID 25	211.4	210.6	211.0	0.4
ID 26	196.3	192.5	194.4	1.9
ID 27	176.5	176.2	176.3	0.1
ID 28	180.9	188.2	184.5	3.7
ID 29	183.2	190.1	186.6	3.5
ID 30	182.5	185.3	183.9	1.4
ID 31	186.2	181.4	183.8	2.4
ID 32	211.7	203.6	207.6	4.1
ID 33	188.8	187.0	187.9	0.9
ID 34	154.1	157.2	155.6	1.6
ID 35	143.7	144.7	144.2	0.5
ID 36	147.0	150.0	148.5	1.5
ID 37	212.4	216.0	214.2	1.8
ID 38	155.3	156.8	156.1	0.7
ID 39	180.3	177.6	179.0	1.4

ID 40	140.0	142.1	141.1	1.0
ID 41	131.7	135.1	133.4	1.7
ID 42	132.5	134.2	133.3	0.9
ID 43	173.4	175.1	174.2	0.8
ID 44	191.7	193.2	192.5	0.8
ID 45	195.9	180.9	188.4	7.5
ID 46	140.8	141.8	141.3	0.5
ID 47	144.2	149.8	147.0	2.8
ID 48	215.4	219.9	217.7	2.3
ID 49	125.1	126.1	125.6	0.5
ID 50	162.2	167.8	165.0	2.8
ID 51	137.2	136.1	136.6	0.6
ID 52	192.0	196.5	194.2	2.2
ID 53	173.0	168.3	170.6	2.3
ID 54	141.3	143.7	142.5	1.2
ID 55	147.0	145.9	146.5	0.5
ID 56	159.9	152.2	156.0	3.8
ID 57	126.4	129.4	127.9	1.5
ID 58	197.0	199.3	198.1	1.2
ID 59	133.1	130.6	131.8	1.2
ID 60	213.1	215.5	214.3	1.2
ID 61	220.6	221.1	220.9	0.3
ID 62	216.9	217.3	217.1	0.2
ID 63	160.8	165.1	162.9	2.1
ID 64	215.0	222.5	218.8	3.8
ID 65	223.0	227.7	225.4	2.3
ID 66	195.8	200.1	197.9	2.1
ID 67	200.2	208.2	204.2	4.0
ID 68	205.3	211.2	208.3	2.9
ID 69	73.7	70.0	71.9	1.8
ID 70	204.2	206.3	205.2	1.0
ID 71	219.2	221.9	220.6	1.3
ID 72	195.8	204.3	200.1	4.2
ID 73	209.8	217.2	213.5	3.7
ID 74	181.3	186.4	183.8	2.5
ID 75	161.2	163.8	162.5	1.3
ID 76	144.9	142.6	143.7	1.2
ID 77	197.6	204.1	200.8	3.2
ID 78	186.1	193.0	189.6	3.4
ID 79	193.2	196.0	194.6	1.4

Supplementary Figure 1. Comparison of different concentrations of monomeric α -synuclein. Graphic A and B compare the seeding curves in the same five individuals with Parkinson's disease (PD1-PD5) using different concentrations of monomeric α -synuclein. A) Seeding curves following the previous protocol with 100 ng recombinant monomeric α -synuclein. Six rounds of the α -synuclein seeding assay (R1-R6) are required to gain a sufficient signal. B) Seeding curves following the new protocol with 500 ng recombinant monomeric α -synuclein. Only one round of the α -synuclein seeding assay is necessary to gain a sufficient signal, reaching the same levels of ThT max with one round of 500 ng compared to five rounds of 100 ng ThT. hrs, hours; ThT, Thioflavin T



Supplementary Figure 2. Seeding activity of negative blood samples in the presence of pre-formed fibrils. Example of seeding activity of two healthy control blood samples in the presence of pre-formed fibrils (10 μ L of 0.68 ng/ μ L). hrs, hours; ThT, Thioflavin T



Supplementary Figure 3. Auto-aggregation of recombinant α -synuclein in healthy controls
Example of auto-aggregation of recombinant monomeric α -synuclein in three healthy control samples.
Auto-aggregation is seen after ≥ 140 hours. hrs, hours; ThT, Thioflavin T

