

Supplementary table 1. PRC patient characteristics.

	Subj. no	Gender	Age (yr)	Disease onset age (yr)	Duration of disease (years)	Relatives with PD ^v	Leading symptom*	HY	SE-ADL	MMSE	MDS-UPDRS
qRT-PCR PD											
	1	M	68	65	2,5	3	3	2,5	70	29	66
	2	F	65	55	10	1	4	4	60	30	114
	3	M	73	65	9	1	3	3	80	30	77
	4	M	65	57	9	1	1	1,5	90	30	52
	5	F	80	63	17	2	1	3	70	28	92
	6	M	77	71	6	1	1	2	95	24	42
	7	M	68	53	15	1	3	2	90	30	49
	8	M	60	46	14	3	3	2,5	80	28	83
	9	M	71	70	0,9	1	1	1,5	90	29	33
	10	F	66	64	2	1	3	2	90	29	35
	11	M	54	46	8	1	3	2	90	30	51
	12	F	69	65	4	1	1	1,5	90	30	59
	13	M	72	63	9	1	3	3	90	30	53
	14	M	77	67	10	1	1	4	60	27	104
	15	M	70	68	2	1	1	1,5	90	29	43
	16	M	60	52	8	1	2	2,5	90	30	37
	17	F	68	61	7,4	1	3	1,5	90	30	33
	18	M	58	46	12	3	2	3	80	29	102

19	F	57	53	4	1	1	1,5	90	30	51
20	F	76	67	9	1	1	3	80	30	85
21	F	71	60	11	2	1	2,5	80	30	58
22	F	82	74	9,5	1	4	4	60	26	79
23	F	58	47	13	1	1	2,5	90	26	71
24	F	71	47	25	1	4	4	55	30	115
25	F	66	60	7	1	1	2	90	30	43
26	F	73	60	14	2	3	2,5	80	28	54
27	F	77	68	9	1	3	3	70	30	68
28	F	64	58	6	3	2	2,5	90	30	35
29	M	74	63	11	1	3	3	70	25	55
30	M	63	58	3,7	1	1	2,5	90	30	40
31	M	83	72	10	1	1	2,5	80	28	68
32	F	76	73	2,9	1	1	3	80	27	77
33	M	67	64	2,8	1	3	2	90	29	65
34	F	68	65	3	1	1	1,5	100	30	26
35	M	75	64	12	1	4	4	70	30	105
36	F	69	67	2	1	1	2,5	80	29	72
37	F	80	76	4,3	1	3	2	95	25	28
n/%	37	M=18/49			1=30/81,1 2=3/8,1 3=4/10,8	1=17/46 2=3/8 3=13/35				

							4=4/11				
Mean ± SD			69.5±7.3	61.4±8.3	8.2±5.1			2.5±0.8	82.0±11.3	28.8±1.7	62.7±24.8
qRT-PCR HC											
n/%	33	M=12/36				-	-				
Mean ± SD			72.1±7.9	-	-			-	-	-	-

PD – patients with Parkinson’s disease; HC – healthy controls

˘Familial incidence of PD: 1 - no relatives with PD, 2 - relatives with PD of 1st degree, 3 - relatives with PD of 2nd degree

*Leading clinical symptom of PD: 1- Tremor; 2 - Rigidity; 3 - Bradykinesia; 4 – Postural instability.

Abbreviations: PD, Parkinson’s disease; HY, Hoehn and Yahr stage; SE-ADL, Schwab and England Activities of Daily Living Scale; MMSE, Mini Mental State Examination; MDS-UPDRS, Movement Disorders Society Unified Parkinson’s Disease Rating Scale.

Supplementary Table 2. Input list of previous studies for the RRA analysis

RRA group	Dataset	Platform	Gene list cut-off default	Gene list cut-off applied	DEG list type	N DEGs at applied cut-off	N DEGs automatically annotated (Entrez)	N DEGs missing Entrez annotation	N DEGs used for RRA
Blood	Soreq_2008	microarray	$p \leq 0.05$	$p \leq 0.05$ (cannot calc. FDR)	probe IDs (multiple probes can correspond to a single gene or single probe to multiple genes)	982	1022 (932 unique)	50	869
	Santiago_2015	microarray (meta)	$FDR \leq 0.05$	$FDR \leq 0.05$	Entrez IDs	2781	2781	0	2781
	Infante_2015	RNAseq	$FDR \leq 0.05$	$FDR \leq 0.05$	Gene symbols	296	274	8	285
	Calligaris_2015	microarray	$FDR \leq 0.01$	$FDR \leq 0.01$	probe IDs (multiple probes can correspond to a single gene or single probe to multiple genes)	306	313 (291 unique)	14	273
	Kedmi_2011	microarray	$p \leq 0.01$	$p \leq 0.01$	RefSeq IDs	115	108	0	115
	Kurvits_TBA	RNAseq	full list	$FDR \leq 0.1$	Gene symbols	62	50	3	59
Cortex	Stamper_2008	microarray	$p \leq 0.01$	$p \leq 0.01$	probe IDs (multiple probes can correspond to a single gene or single probe to multiple genes)	162	150 (146 unique)	16	138

	Dimitriu_2016	RNAseq	full list	FDR <= 0.05	Gene symbols	1095	1026 (1022 unique)	73	1022
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	Henderson_2016	RNAseq	fold change (fc) $\geq 0.2 $ and $p \leq 0.001$	fold change (fc) $\geq 0.2 $ and $p \leq 0.001$	Gene symbols	40	34	36	36
SN	Bossers_2009	microarray	bonf. P ≤ 0.05	bonf. P ≤ 0.05	Gene symbols	262	222	5	251
	Cantuti_2007	microarray	$p \leq 0.05$	$p \leq 0.05$	probe IDs (multiple probes can correspond to a single gene or single probe to multiple genes)	129	138 (115 unique)	2	113
	Dijkstra_2015	microarray	fold change (fc) $\geq 1.5 $	fold change (fc) $\geq 1.5 $, but ordered by p	probe IDs (multiple probes can correspond to a single gene or single probe to multiple genes)	1383	1459 (1153 unique)	92	1061
	Durrenberger_2012	microarray	fold change (fc) $\geq 1.5 $	fold change (fc) $\geq 1.5 $	Entrez IDs	1423	1423 (1403 unique)	0	1403
	Simunovic_2009	microarray	FDR $\leq \sim 0.005$	FDR $\leq \sim 0.005$	probe IDs (multiple probes can correspond to a single gene or single probe to multiple genes)	1044	1159 (993 unique)	44	949

