Supplementary Table S1. Characterization of subjects in different groups
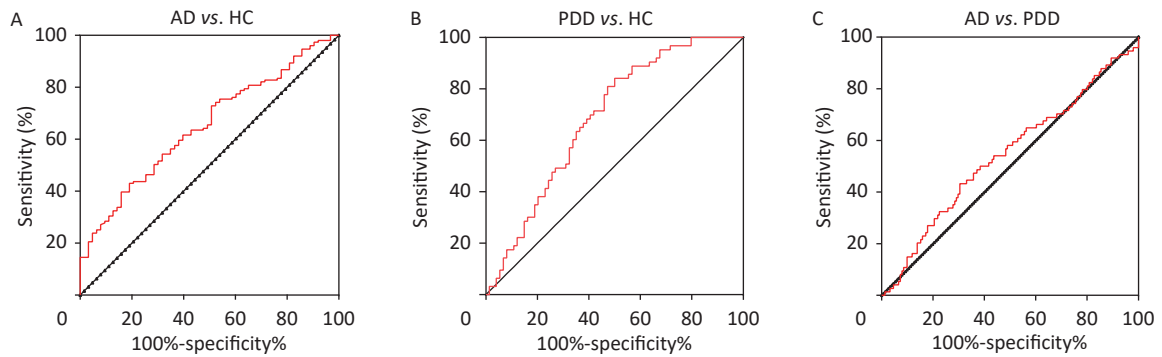
Characteristics	HC (*n* = 63)	MCI (*n* = 74)	DAT (*n* = 77)	PD (*n* = 74)	*P* value (*vs*. HC)
Age (years)					
Min	52	50	50	50	
Max	80	83	85	85	
Mean ± SD	65.24 ± 6.92	68.64 ± 8.08	67.86 ± 7.87	67.64 ± 7.91	ns
Gender, *n* (%)					
Female	29 (46.0%)	39 (52.7%)	44 (57.1%)	44 (59.5%)	ns
Male	34 (54.0%)	35 (47.3%)	33 (42.9%)	30 (40.5%)	ns
MMSE					
Min	22	16	8	10	
Max	29	28	26	28	
Mean ± SD	26.38 ± 2.31	23.15 ± 3.02	17.35 ± 4.74	19.30 ± 4.73	< 0.0001
MoCA					
Min	21	10	7	12	
Max	29	26	26	26	
Mean ± SD	25.70 ± 2.39	23.15 ± 3.02	20.89 ± 3.47	19.45 ± 4.81	< 0.0001

Note. HC: Health control; MCI: Mild cognitive impairment; DAT: dementia of Alzheimer type; PDD: Parkinson's disease dementia. MMSE: Mini-Mental State Examination; MoCA: Montreal cognitive assessment scale. Min: Minimum; Max: Maximum; SD: standard deviation; ns: no significance. Data were compared by One-way ANOVA test (Kruskal-Wallis test), *vs*. HC.
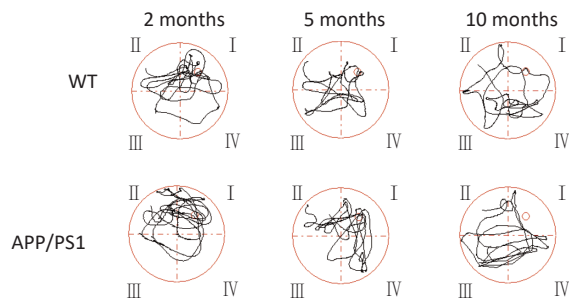
Supplementary Table S2. Diagnostic powers of the sTREM2 to discriminate between AD and the non-AD subjects

Comparison group	Cut-off value	Sensitivity (%)	Specificity (%)	AUC	95% Confidence Inteval	*P* value
AD *vs*. HC	0.294	81.8	47.6	0.6773	0.5892–0.7654	0.000316
PDD *vs*. HC	0.341	50.0	84.1	0.6862	0.5980–0.7744	0.000178
AD *vs*. PDD	0.136	50.0	63.6	0.5217	0.4282–0.6151	0.6458

Note. AUC: Area under the curve; HC: Health control; AD: Alzheimer's disease; PDD: Parkinson's disease dementia.

Supplementary Figure S1. ROC curves of sTREM2 in the differential diagnosis of AD and PDD patients and HC subjects. (A) ROC curve of sTREM2 was used to distinguish AD from HC. (B) ROC curve of sTREM2 was used to distinguish PDD from HC. (C) ROC curve of sTREM2 was used to distinguish AD from PDD patients.HC: Health control; MCI: Mild cognitive impairment; DAT: dementia of Alzheimer type; PDD: Parkinson's disease dementia.

Supplementary Figure S2. The representative swim traces for morris water maze (MWM) tests.