

Supplementary Table 1. Manganese and iron levels in blood and liver after intranasal instillation of MnCl₂.

		Wild-type		H67D mutant	
	Mn Dose (mg/kg)	Mn (µg/g) (Mean ± SEM)	Fe (µg/g) (Mean ± SEM)	Mn (µg/g) (Mean ± SEM)	Fe (µg/g) (Mean ± SEM)
Blood	0	0.039 ± 0.005	569.78 ± 23.97	0.023 ± 0.004	618.80 ± 13.98
	0.2	0.041 ± 0.004	576.64 ± 15.20	0.016 ± 0.002	634.55 ± 15.66
	1	0.054 ± 0.007	565.74 ± 6.43	0.029 ± 0.002	626.17 ± 15.66
	5	0.054 ± 0.005	574.92 ± 10.62	0.027 ± 0.006	641.82 ± 8.84
Liver	0	1.92 ± 0.13	63.52 ± 2.57	1.69 ± 0.13	273.01 ± 25.43
	0.2	2.50 ± 0.08	66.59 ± 3.94	1.94 ± 0.15	270.19 ± 61.31
	1	2.88 ± 0.18	81.82 ± 4.69	2.15 ± 0.21	248.49 ± 64.91
	5	2.81 ± 0.22	80.44 ± 5.81	1.98 ± 0.09	486.31 ± 163.69

Values shown in Table 1 are identical to those in Figure 1.

Supplementary Table 2. Manganese and iron levels in different brain regions after intranasal instillation of MnCl₂.

		Wild-type		H67D mutant	
Brain regions	Mn Dose (mg/kg)	Mn (µg/g) (Mean ± SEM)	Fe (µg/g) (Mean ± SEM)	Mn (µg/g) (Mean ± SEM)	Fe (µg/g) (Mean ± SEM)
Olfactory bulb	0	1.45 ± 0.19	24.32 ± 1.14	1.50 ± 0.08	22.69 ± 2.41
	0.2	2.53 ± 0.23	20.88 ± 8.75	1.53 ± 0.39	19.12 ± 1.56
	1	4.15 ± 0.36	22.74 ± 1.61	2.70 ± 0.07	27.08 ± 3.98
	5	3.90 ± 0.99	21.77 ± 1.77	2.63 ± 0.58	19.69 ± 3.34
Prefrontal cortex	0	0.63 ± 0.03	13.06 ± 1.22	0.63 ± 0.01	13.13 ± 1.48
	0.2	0.84 ± 0.11	13.50 ± 1.56	0.80 ± 0.15	14.21 ± 1.89
	1	1.27 ± 0.09	13.40 ± 1.22	0.92 ± 0.10	15.36 ± 2.09
	5	1.17 ± 0.10	13.94 ± 2.03	0.82 ± 0.17	8.21 ± 0.86
Striatum	0	1.04 ± 0.09	20.62 ± 1.85	0.73 ± 0.06	17.72 ± 0.38
	0.2	1.35 ± 0.20	20.13 ± 1.16	0.74 ± 0.08	18.30 ± 1.03
	1	1.32 ± 0.07	15.63 ± 0.86	1.00 ± 0.14	19.46 ± 0.74
	5	1.43 ± 0.13	16.64 ± 0.54	0.91 ± 0.03	17.65 ± 1.05
Hippocampus	0	0.71 ± 0.03	18.92 ± 0.78	0.72 ± 0.10	21.28 ± 2.80
	0.2	0.78 ± 0.05	16.30 ± 1.17	0.65 ± 0.05	17.54 ± 0.61
	1	1.25 ± 0.12	22.36 ± 2.33	0.80 ± 0.08	18.67 ± 2.29
	5	1.40 ± 0.12	21.17 ± 2.78	0.86 ± 0.09	17.68 ± 0.79
Cerebellum	0	0.72 ± 0.01	21.19 ± 0.84	0.65 ± 0.05	20.31 ± 1.12
	0.2	0.75 ± 0.02	19.65 ± 0.68	0.68 ± 0.04	20.86 ± 0.99
	1	0.80 ± 0.07	16.88 ± 1.60	0.91 ± 0.05	24.59 ± 1.47
	5	0.98 ± 0.13	17.36 ± 2.16	0.82 ± 0.03	19.94 ± 1.69
Cortex	0	0.60 ± 0.07	14.60 ± 2.08	0.75 ± 0.07	21.57 ± 1.64
	0.2	1.07 ± 0.11	17.94 ± 1.66	1.01 ± 0.12	21.72 ± 1.32
	1	1.32 ± 0.08	18.95 ± 1.21	1.06 ± 0.08	21.26 ± 1.46
	5	1.38 ± 0.14	18.53 ± 1.11	1.14 ± 0.12	21.35 ± 0.69

Values shown in Table 2 are identical to those in Figures 2 and 3.