

Supplementary Table 1. Tissue levels of catecholamines and their metabolites in the dorsal and ventral striatum, measured using HPLC-EC

doi:10.1093/brain/awp314

Title: Optimized rAAV5-mediated striatal DOPA delivery restores complex sensorimotor function and prevents dyskinesias in a model of advanced Parkinson's disease

Authors: T. Björklund, T. Carlsson, E. Ahlm Cederfjäll, M. Carta and D. Kirik

Group	Striatal region	BH4 ¹		DOPA ¹		DA ²		DOPAC ¹		HVA ¹		DOPAC/DA ratio		3-OMD ¹		5-HT ¹		5-HIAA ¹		5-HIAA/5-HT ratio	
		L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R
Intact ctrl	Dorsal	1036 ± 66	995 ± 64	ND	ND	72.19 ± 1.74	70.61 ± 2.98	12741 ± 604	13938 ± 802	3489 ± 159	3504 ± 136	0.18 ± 0.01	0.20 ± 0.01	ND	ND	1796 ± 179	1598 ± 211	1587 ± 88	1287 ± 180	0.90 ± 0.05	0.80 ± 0.04
	Ventral	677 ± 31	670 ± 25	ND	288 ± 126	40.12 ± 1.37	35.36 ± 2.66	8348 ± 371	9237 ± 970	2100 ± 84	1953 ± 182	0.21 ± 0.01	0.26 ± 0.02	ND	ND	5021 ± 175	3491 ± 445	979 ± 44	1089 ± 245	0.20 ± 0.01	0.32 ± 0.08
	Total	908 ± 37	879 ± 52	ND	92 ± 35	59.96 ± 1.05	57.50 ± 1.46	11064 ± 420	12196 ± 864	2964 ± 132	2928 ± 146	0.19 ± 0.01	0.22 ± 0.01	ND	ND	3030 ± 173	2236 ± 186	1359 ± 65	1198 ± 138	0.63 ± 0.03	0.63 ± 0.05
6-OHDA	Dorsal	1092 ± 37	151 ± 30	ND	97 ± 10	69.08 ± 2.38	0.16 ± 0.03	14696 ± 1096	311 ± 42	3626 ± 334	93 ± 11	0.21 ± 0.02	2.43 ± 0.56	ND	423 ± 27	1729 ± 128	2638 ± 336	1680 ± 113	1370 ± 155	0.98 ± 0.04	0.53 ± 0.02
	Ventral	641 ± 40	156 ± 20	ND	283 ± 17	32.35 ± 1.69	1.02 ± 0.31	7790 ± 637	449 ± 89	1933 ± 200	112 ± 22	0.24 ± 0.01	0.55 ± 0.08	ND	364 ± 14	4268 ± 311	4583 ± 594	1000 ± 91	1090 ± 122	0.23 ± 0.01	0.25 ± 0.03
	Total	938 ± 33	153 ± 25	ND	165 ± 8	56.47 ± 2.11	0.48 ± 0.14	12341 ± 868	363 ± 55	3055 ± 297	102 ± 13	0.22 ± 0.01	1.77 ± 0.37	ND	228 ± 49	2604 ± 179	3320 ± 392	1445 ± 99	1264 ± 129	0.72 ± 0.03	0.43 ± 0.02
6-OHDA/ rAAV-GCH1	Dorsal	1221 ± 74	8414 ± 979	ND	93 ± 5	71.43 ± 3.33	0.40 ± 0.20	14391 ± 1321	748 ± 392	3724 ± 289	137 ± 40	0.20 ± 0.01	4.66 ± 3.57	ND	258 ± 62	1565 ± 76	3164 ± 286	1496 ± 66	1725 ± 162	0.97 ± 0.07	0.55 ± 0.02
	Ventral	822 ± 43	2643 ± 318	ND	268 ± 19	31.67 ± 2.12	1.33 ± 0.36	7167 ± 414	554 ± 102	1824 ± 118	136 ± 19	0.23 ± 0.01	0.56 ± 0.08	ND	393 ± 18	4301 ± 204	4790 ± 534	967 ± 46	1083 ± 104	0.23 ± 0.01	0.23 ± 0.02
	Total	1070 ± 49	6144 ± 725	ND	159 ± 6	56.43 ± 2.74	0.74 ± 0.15	11686 ± 959	685 ± 252	2999 ± 207	135 ± 26	0.21 ± 0.01	3.31 ± 2.46	ND	210 ± 27	2596 ± 142	3804 ± 358	1307 ± 53	1465 ± 130	0.70 ± 0.05	0.43 ± 0.02
6-OHDA/ rAAV-TH+GCH1	Dorsal	1090 ± 63	2086 ± 233	ND	8003 ± 956	63.92 ± 2.82	2.09 ± 0.41	12421 ± 853	3374 ± 406	3048 ± 200	2428 ± 300	0.20 ± 0.01	1.75 ± 0.15	ND	801 ± 121	1527 ± 120	1839 ± 251	1502 ± 74	1484 ± 170	1.01 ± 0.06	0.84 ± 0.04
	Ventral	738 ± 69	863 ± 208	50 ± 50	1511 ± 412	33.39 ± 1.68	1.85 ± 0.51	7442 ± 565	1126 ± 256	1797 ± 152	458 ± 95	0.22 ± 0.01	0.71 ± 0.10	ND	471 ± 40	4144 ± 169	3547 ± 588	1031 ± 73	1005 ± 93	0.25 ± 0.01	0.35 ± 0.06
	Total	971 ± 40	1655 ± 142	31 ± 31	5731 ± 573	53.91 ± 1.79	2.00 ± 0.43	10729 ± 612	2573 ± 255	2639 ± 177	1730 ± 175	0.20 ± 0.01	1.40 ± 0.12	ND	682 ± 77	2341 ± 103	2412 ± 351	1345 ± 61	1307 ± 127	0.77 ± 0.05	0.67 ± 0.04
6-OHDA/ rAAV-TH+GCH1/ 5,7-DHT	Dorsal	1085 ± 97	1615 ± 466	ND	8258 ± 1741	66.85 ± 3.79	2.39 ± 1.41	11833 ± 1008	3500 ± 1102	3352 ± 205	2452 ± 723	0.18 ± 0.01	1.97 ± 0.43	ND	844 ± 126	1575 ± 116	24 ± 10	1548 ± 119	150 ± 34	0.98 ± 0.02	14.14 ± 5.50
	Ventral	768 ± 62	1307 ± 648	ND	2477 ± 1156	34.51 ± 1.04	2.18 ± 1.36	7851 ± 473	1588 ± 650	1921 ± 91	798 ± 367	0.23 ± 0.01	1.13 ± 0.42	ND	616 ± 97	3640 ± 578	87 ± 24	996 ± 83	710 ± 127	0.35 ± 0.12	11.30 ± 2.58
	Total	977 ± 84	1512 ± 502	ND	6255 ± 1360	55.66 ± 3.06	2.32 ± 1.39	10461 ± 880	2843 ± 910	2851 ± 177	1880 ± 554	0.19 ± 0.01	1.68 ± 0.37	ND	763 ± 92	2337 ± 194	45 ± 13	1355 ± 99	342 ± 47	0.75 ± 0.06	13.11 ± 4.36
6-OHDA/ 5,7-DHT	Dorsal	962 ± 31	17 ± 3	ND	58 ± 25	66.44 ± 6.48	0.17 ± 0.05	13308 ± 2534	105 ± 14	3408 ± 682	50 ± 17	0.20 ± 0.02	0.87 ± 0.38	ND	166 ± 87	1975 ± 104	51 ± 16	2245 ± 399	162 ± 43	1.15 ± 0.23	3.40 ± 0.42
	Ventral	645 ± 111	52 ± 23	ND	146 ± 70	28.80 ± 0.69	0.53 ± 0.17	8003 ± 2081	258 ± 134	1615 ± 265	138 ± 7	0.28 ± 0.07	0.42 ± 0.11	ND	261 ± 109	3676 ± 1125	141 ± 53	908 ± 61	477 ± 259	0.35 ± 0.18	7.46 ± 6.25
	Total	857 ± 28	26 ± 3	ND	83 ± 34	53.55 ± 4.67	0.28 ± 0.07	11530 ± 2214	144 ± 41	2784 ± 510	81 ± 13	0.23 ± 0.04	0.68 ± 0.20	ND	193 ± 92	2568 ± 338	80 ± 29	1772 ± 236	289 ± 93	0.87 ± 0.11	5.18 ± 2.75

¹ fmol/mg tissue; ² pmol/mg tissue; L = left striatum, contralateral to lesion; R = right striatum, ipsilateral to lesion; ND = not determined