Table 1: Two hundred genes whose expression levels were most strongly negatively correlated with the expression of COMT by brain area

Rank	Prefrontal	Cerebellum	Temporal	Pons
1	UBP1	ARHGEF12	PSMC1	PRELID1
2	CADPS2	TMEM106C	CADPS2	EEF2K
3	$\mathcal{N}\!\mathit{KRF}$	CNST	CCNB1	CAMSAP2
4	UBE3A	SNAP91	AGBL1	AAGAB
5	CCDC28A	CDS1	CYP4X1	ARHGEF12
6	RUSC1	GLE1	RAD1	FLOT2
7	CAMSAP1L1	MAP1B	RFC2	RARS
8	ABCA5	RUNDC3B	CCDC25	GPC5
9	GRSF1	RGS17	TRAF5	RAB11FIP5
10	ELOVL4	CELSR3	TMEM70	PRPF19
11	RAB11FIP5	RUSC1	INPP5A	HARS
12	RAB3GAP1	TTC19	IRX5	ARHGAP44
13	SCAMP1	CAMSAP2	SLC30A9	DNAJC5
14	LZTFL1	MSS51	RARS	BCAP31
15	SH3BGRL2	RNF150	HNRNPU	SRPRB

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Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
16	WDR69	PRKCE	PDE1A	СРЕВ3
17	KPNA4	SYT4	ZNF622	CDS1
18	RARS	SUZ12	SUPT16H	LUZP1
19	GABARAPL1	GFOD1	MPP3	NETO2
20	GPIAP1	FAM117B	TTC21B	ARPC5L
21	DENR	RIMKLB	CDKN3	AMER1
22	SDAD1	SERBP1	CAMSAP2	UBP1
23	PPP2CA	MYCBP2	ARL15	B4GALNT1
24	OPTN	CPEB3	UBP1	YAF2
25	DNAJA2	ZYG11B	RAD9B	ELOVL4
26	SH3GL2	ZNF398	DMAC1	ST3GAL3
27	PJA2	SCN2A	ABCA5	RALBP1
28	MYCBP2	ZNF540	FAM13B	AUNIP
29	$\mathcal{N}\!EF\!M$	BSN	RUSC1	PRKCE
30	MGC35154	LIN9	BEST4	KIAA0319
31	CCNB1	EDC4	CUL3	RUNDC3B

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
32	NME5	RARS	USP15	PDXK
33	SMARCA2	NRIP3	LRCH1	INSM2
34	KIF21A	<i>P3H3</i>	LMO7	OPRL1
35	SPATA18	MMS19	CASC1	SUPV3L1
36	PSMC1	<i>GPR135</i>	SH3GL2	KIAA1217
37	MATR3	PLEKHA5	PLA2R1	TMEM74B
38	PREPL	SPIRE1	SHH	MTFP1
39	SEL1L	DENND1B	TLK1	FBXW7
40	VPS36	CNOT6	TCEAL4	CAPZA2

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
41	MCF2	WDFY1	HSF2	PSMC1
42	SAE1	CHD9	RET	CLASP1
43	HSF2	KDM2B	EIF2B3	<i>TTC19</i>
44	SNAP91	SNAPC4	UBE2D2	CNOT4
45	SYT4	STK36	POLR3C	C6orf106
46	C14ORF169	РНКА2	PDS5B	KIAA0100
47	ARHGEF3	CDK13	CHSY3	POLR3A
48	CADPS	ARPP21	WSCD2	PLCB1
49	PRR23B	SETDB2	GFM1	EMC9
50	IFITM5	FAM13A	CALB1	FBXO31
51	CDC37L1	SH3GL2	TOMM70	SYNJ1
52	GABRG2	RYR2	LCN8	FUNDC2
53	ATG5	RAB3GAP1	FAM209B	PDE4A
54	TOMM34	ELOVL4	ERO1A	DDX28
55	FAM83B	SRRM4	ELOVL4	DACH1
56	C5ORF5	ZNF562	C1orf74	CCNB1

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
57	NDFIP1	TNFRSF25	PI4K2A	SDAD1
58	LOC401589	SLC30A7	SEL1L	CYSRT1
59	LIPI	RPS6KA4	JADE1	DUSP3
60	SYNJ1	FOXO3	ACTBL2	GPR3
61	$\mathcal{N}\!EFH$	DIAPH1	<i>SLC30A5</i>	RIOK1
62	KIAA1600	AHCTF1	PER2	PJA2
63	CCPG1	USP47	NEK10	FAM110B
64	TRIM37	TAF5	GRSF1	ADCY9
65	YARS	PCDHAC1	DNAJC25	SNAP91
66	SMAP1	GALNT9	USP14	SLC9A1
67	POPDC3	EPC2	POLR3A	KRAS
68	LPHN2	FRMD6	CDC37L1	PEX26
69	TCEAL2	RSAD1	<i>ZWILCH</i>	MRM3
70	CD83	RAB11FIP5	<i>TMEM127</i>	ZNF540
71	CASC1	KCNQ2	APP	NUDT3
72	APRIN	DEFB103B	BAAT	DNAJA2

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
73	<i>SLC6A15</i>	HSF2	ARPC5L	URGCP
74	MKL2	BICD1	UBE3A	TFRC
75	MEF2C	SELENOH	SAMD5	GRM8
76	LIN28B	<i>MAP3K12</i>	PCMT1	ARL4C
77	MTCH1	MALT1	SH3BP5	STS
78	ATP6V1C1	FOXJ2	FLT3	DMAC1
79	ARL15	SNAP25	MIXL1	CDK14
80	PTPN4	RPUSD4	EPB41L3	LMO3

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
81	CDH12	NCOA3	LMNB1	ЕРНВ3
82	PIP3-E	ZIM2	TTC19	OLFM1
83	OXR1	PRRT2	RHEBL1	ST8SIA4
84	ENO2	ZNF529	MCF2	$\mathcal{N}\!K\!R\!F$
85	C15ORF37	TUFT1	ZNF544	GDAP1L1
86	RSPO3	ARL5A	ZNF263	EIF5A2
87	CACNA2D3	ARHGAP44	TAF5	CNST
88	PLCB1	<i>ZHX1</i>	LMX1B	SLC36A1
89	$\mathcal{N}\!APB$	IPCEF1	GBP7	STIP1 /// HOPX
90	TOMM70A	TSPAN9	STS	C19orf12
91	<i>SLC25A12</i>	CCNB1	<i>UBE2J1</i>	TSHZ3
92	THYN1	LRRC37B	LZTFL1	RDH12
93	TOPBP1	GPAT3	ZWINT	PI4K2A
94	<i>MYH10</i>	RPS6KB1	SH3BGRL2	DBN1
95	РСТК2	SETD6	SARS	CDK5R2
96	PCMT1	MAP3K5	PEF1	OLFM3

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
97	ENPP5	BICRAL	MAT1A	PQLC1
98	DNAJC5G	UGCG	FAM160B1	LIMK1
99	CCNF	PLEKHA6	KRT5	C18orf25
100	CAPZA2	COL4A3BP	RANBP2	RUSC1
101	SLC30A5	ZNF521	$\mathcal{N}FYB$	NECAB3
102	PIP5KL1	POLG	ISL1	DBNDD1
103	CCDC63	FSTL5	FAM133A	KLK7
104	RALYL	ZNF354A	ZNF702P	HOMER2
105	COL5A2	KBTBD8	ZNF33B	BSN
106	AFF2	ADARB1	<i>RNF111</i>	EPHX4
107	ZNF804B	<i>ZNF547</i>	GABRR2	PTPN4
108	WASL	TRIM13	OXR1	RNF38
109	<i>SLC39A10</i>	RIMS3	ARL4D	PIP5K1C
110	WDR16	KCTD2	XK	INTS4P1
111	VMA21	GABRB3	ALPK2	HIVEP2
112	DCP2	SCN3A	RBM12	DENR

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
113	RPP40	DCAF8	SNU13	SKIDA1
114	PRICKLE1	CAPZA2	SLC35B4	KCND2
115	CYP4X1	CRYGS	NDFIP1	GRIPAP1
116	FLJ37357	PPP2R5E	CCDC80	CDKN2D
117	NCKAP1	PER2	SRP72	TIMM22
118	OR5K3	MED13L	OTX2	FBXL15
119	FAM26C	SF3B3	OPTN	C1orf115
120	B3GNT1	PPRC1	NUDCD1	SH3BGRL2

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
121	TTC19	PEG3	MB21D2	MRPS36
122	PANK2	GNRH1	UBE2B	CDH12
123	$\mathcal{N}\!DEL1$	EWSR1	OLFM3	FAM43A
124	FLJ23049	NPTX1	YIPF5	FAM160B1
125	CUL3	SLC7A6	UNC93A	EIF4A2
126	AP3M2	SLC36A1	DNMBP	CLTB
127	ZNF533	$\mathcal{N}SMAF$	ZIC1	KCNN1
128	RP1-32F7-2	MYT1	TRAPPC2L	XK
129	EPB41L3	FNDC9	MATR3	ST3GAL6
130	B4GALNT2	CYFIP2	KRTAP19.5	SLC7A8
131	TAS2R8	MEF2D	PHLDA2	PHYHIP
132	MC3R	KIF1B	NFS1	NICN1
133	KRT222P	LMNB1	LIPJ	SHQ1
134	AHI1	KDM2A	CSDE1	MTMR3
135	ADARB1	CERS5	CCDC47	EPN3
136	LARGE	UBP1	SYT4	<i>RNF219</i>

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
137	GPRASP2	POGLUT1	RAB11FIP5	WDR45
138	ZYG11B	PJA2	AHI1	TMX3
139	PI4KII	NOP14	PCP4	EPHA3
140	ORC4L	BLMH	PCDHGA5	PTPA
141	MLL2	CDC23	NHLRC1	NFS1
142	GLS	TIMM22	CHRNA3	BDKRB2
143	IL5RA	TEF	C3orf52	ACHE
144	ALS2CR13	SEZ6	B4GALT6	SIPA1L2
145	UBE2D2	INTS8	ARSG	PTGES
146	$\mathcal{N}\!ARS$	CDC7	VMA21	KCNJ11
147	ACTR6	ZADH2	OR5D16	DHDDS
148	LUZP4	RECQL	NRXN3	ULK1
149	KLK7	KCTD9	GNRHR	<i>TMEM127</i>
150	REEP5	FBXO31	FAM83D	GPAT3
151	GRM1	DUSP3	EFR3A	CD99L2
152	ALX4	BAZ2B	ZNF215	KCNK3

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
153	AFF3	$\mathcal{N}\!K\!RF$	TGM4	DYRK1A
154	ZNF490	$\mathcal{N}\!F\!I\!B$	KIAA1217	C1orf21
155	ZNF396	SETBP1	CHAF1B	BCL11A
156	LRFN5	KIAA1456	CDC7	RHBDL3
157	CAMTA1	ZNF148	CCDC91	KLHDC3
158	RPIB9	$\mathcal{N}\!APB$	RBP5	KCTD9
159	RIOK1	BCL6	NUAK1	GALNT9
160	PRC1	ZNF83	GALNT1	CTC1

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
161	NDUFV2	PM20D2	EGR3	TBC1D8
162	LGALS13	MYO9A	SESN1	MYCBP2
163	LDB2	GCNT2	MAPK6	KIAA1456
164	HSDL1	DDX39B	LEKR1	INPP5A
165	VDAC3	SLC16A9	GPRIN2	HDHD2
166	MTMR4	SLC25A32	GAS2	CABP1
167	MRPS36	NLGN1	CSTA	SH3GL2
168	KIAA0528	PPARGC1A	SLC2A3	RASL10B
169	PCDHGA1	GP1BB	RNGTT	HCRTR2
170	MAG1	ZIC3	OPRL1	ARSF
171	ZBTB24	MC1R	LHX5	SMARCA2
172	UBE2N	KCNJ6	AUNIP	SLC24A4
173	PHTF1	SPEG	SYCP1	CACNB2
174	MAP1B	FUT1	PPP1R2	TSC22D3
175	GMFB	DUSP4	$\mathcal{N}\!M\!E5$	TMEM242
176	FAM81A	C20orf204	MTNR1A	NRBP1

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
177	SV2B	ZNF304	FNDC7	MX1
178	RASSF3	YAF2	DEFB132	NETO1
179	PUS7	KANSL3	AFF2	ZNF385B
180	CPEB2	CEP57	TMEM266	VPS36
181	SPRR1B	SLC17A7	TBC1D9	UGCG
182	CCDC47	RPS6KA3	SPRR2G	CA7
183	TLK1	ATP1B3	$\mathcal{N}SG1$	SEZ6L
184	MKX	PDK1	KCNAB1	PRICKLE1
185	ZDHHC23	MTF2	C11orf1	РНҮН
186	TBC1D9	MARCH6	ACSL4	PDE5A
187	OPCML	ALKBH8	ZNF385B	TCTN3
188	MOGAT2	PATJ	UBASH3B	COMTD1
189	LRRK1	GRIN1	SLF1	CAPN5
190	HSPC072	CRY2	SERF1A	ZNF219
191	ATP1A1	ZNF266	OTOGL	NCKAP1
192	YPEL5	RPIA	NDST4	<i>CYP11A1</i>

Table 1: (Top 200 negatively correlated genes continued)

Rank	Prefrontal	Cerebellum	Temporal	Pons
193	NRXN3	RAB11FIP3	IPO11	NCEH1
194	CCDC15	PPP4R1	FGF22	$\mathcal{N}\!APB$
195	PIN4	OGT	EFNA2	DNTT
196	ORC5L	CTAGE5	TOPBP1	SYT12
197	GAS2	UTP15	TMEM97	RNF149
198	ALS2	PDZD4	TMEM242	DRD5
199	USP14	HOOK1	TLL1	ATP6V1C1
200	SORCS1	GRIN2C	ATP2C1	PDE8B