Supplementary Table 1. Demographic, postmortem, and clinical characteristics of human subjects used in this study.

Healthy Comparison Subjects									Subjects with Schizophrenia																
Pair	Case	Sex/ Race	Age	PMI[a]	Storage Time[b]	RIN	pH	Cause of Death	Case	DSM IV diagnosis	Sex/ Race	Age	PMI[a]	Storage Time[b]	RIN	pH	Cause of Death	Cannabis History	Nicotine ATOD	Antipsychotic ATOD	Antidepressant ATOD	Benzodiazepine/ VPA ATOD	CPZ (mg)	Family History[c]	Age at Onset of Illness	History of Marriage	Hollingshead Two Factor ISP	Living Independently ATOD
1	1047*	M/W	43	13.8	134.0	9.0	6.6	ASCVD	1209	Schizoaffective disorder	M/W	35	9.1	114.7	8.7	6.5	Suicide by diphenhydramine overdose	None	N	Y	N	N	364	N	21	Y	35	Y
2	1086*	M/W	51	24.2	128.0	8.1	6.8	ASCVD	10025	Disorganized schizophrenia; OAR	M/B	52	27.1	107.1	7.8	6.7	ASCVD	Abuse in remission	Y	N	N	N	None	N	22	N	27	N
3	1092	F/B	40	16.6	127.4	8.0	6.8	Mitral Valve Prolapse	1178	Schizoaffective disorder	F/B	37	18.9	118.8	8.4	6.1	Pulmonary embolism	None	Y	Y	N	Y	211	N	26	N	40	N
4	1336	M/W	65	18.4	92.3	8.0	6.8	Cardiac Tamponade	1173	Disorganized schizophrenia; ADR	M/W	62	22.9	119.0	7.7	6.4	ASCVD	None	Y	Y	N	N	421	N	29	Y	16	Y
5	1122	M/W	55	15.4	124.1	7.9	6.7	Cardiac Tamponade	1105	Schizoaffective disorder	M/W	53	7.9	126.1	8.9	6.2	ASCVD	None	Y	Y	N	N	421	N	48	N	24	N
6	1284	M/W	55	6.4	103.1	8.7	6.8	ASCVD	1188	Undifferentiated schizophrenia; AAR; OAR	M/W	58	7.7	117.5	8.4	6.2	ASCVD	Abuse in remission	Y	Y	N	N	711	Y	25	N	45	N
7	1191	M/B	59	19.4	117.0	8.4	6.2	ASCVD	1263	Undifferentiated schizophrenia; ADR	M/W	62	22.7	106.4	8.5	7.1	Accidental asphyxiation	Use	Y	Y	Y	N	142	N	21	N	11	N
8	970	M/W	42	25.9	145.5	7.2	6.4	ASCVD	1222	Undifferentiated schizophrenia; AAC	M/W	32	30.8	112.6	7.5	6.4	Suicide by combined drug overdose	Use	N	Y	Y	N	579	N	16	N	14	Y
9	1247*	F/W	58	22.7	108.7	8.4	6.4	ASCVD	1240	Undifferentiated schizophrenia; ADR	F/B	50	22.9	109.4	7.7	6.3	ASCVD	None	Y	Y	N	N	633	N	25	N	32	N
10	1324*	M/W	43	22.3	95.1	7.3	7	Aortic Dissection	10020	Paranoid schizophrenia; AAC; OAC	M/W	38	28.8	108.8	7.4	6.6	Suicide by salicylate overdose	None	Y	Y	Y	Y	None	N	18	N	27	N
11	1099	F/W	24	9.1	126.7	8.6	6.5	Cardiomyopathy	10023	Disorganized schizophrenia	F/B	25	20.1	108.0	7.4	6.7	Suicide by drowning	None	N	Y	N	Y	312	Y	15	N	17	Y
12	1307	M/B	32	4.8	98.1	7.6	6.7	ASCVD	10024	Paranoid schizophrenia	M/B	37	6.0	107.5	7.5	6.1	ASCVD	None	N	N	N	N	None	N	20	Y	27	N
13	1391*	F/W	51	7.8	84.1	7.1	6.6	ASCVD	1189	Schizoaffective disorder; AAR	F/W	47	14.4	117.2	8.3	6.4	Suicide by combined drug overdose	None	Y	Y	Y	Y	421	N	43	N	66	Y
14	1282*	F/W	39	24.5	102.9	7.5	6.8	ASCVD	1211	Schizoaffective disorder	F/W	41	20.1	114.4	7.8	6.3	Sudden unexplained death	Use	Y	Y	Y	N	606	N	29	Y	30	N
15	1159	M/W	51	16.7	120.2	7.6	6.5	ASCVD	1296	Undifferentiated schizophrenia	M/W	48	7.8	100.5	7.3	6.5	Pneumonia	None	Y	Y	Y	N	1613	N	13	N	14	N
16	1326	M/W	58	16.4	94.8	8.0	6.7	ASCVD	1314	Undifferentiated schizophrenia	M/W	50	11.0	97.4	7.2	6.2	ASCVD	None	N	Y	Y	N	dose unknown	N	17	N	19	N
17	902	M/W	60	23.6	159.8	7.7	6.7	ASCVD	1361	Schizoaffective disorder; ODC	M/W	63	23.2	90.0	7.7	6.4	Cardiomyopathy	Use	Y	Y	N	Y	493	N	16	N	17	N
18	592	M/B	41	22.1	210.7	9.0	6.7	ASCVD	533	Chronic undifferentiated schizophrenia	M/W	40	29.1	220.5	8.4	6.8	Accidental Asphyxiation	None	U	Y	N	N	dose unknown	N	25	N	20	N
19	567	F/W	46	15.0	214.7	8.9	6.7	Mitral valve prolapse	537	Schizoaffective disorder	F/W	37	14.5	219.8	8.6	6.7	Suicide by hanging	None	U	N	N	N	None	N	29	Y	20	Y
20	1322	M/W	62	16.5	95.2	8.6	6.8	ASCVD	566	Chronic undifferentiated schizophrenia; AAR	M/W	63	18.3	215.9	8.0	6.8	ASCVD	None	Y	Y	Y	Y	None	N	43	Y	16	N
21	604	M/W	39	19.3	208.4	8.6	7.1	Hypoplastic coronary artery	581	Chronic paranoid schizophrenia; ADC; OAC	M/W	46	28.1	212.9	7.9	7.2	Accidental combined drug overdose	Use	U	Y	N	Y	dose unknown	Y	16	Y	19	Y
22	546	F/W	37	23.5	218.7	8.6	6.7	ASCVD	587	Chronic undifferentiated schizophrenia; AAR	F/B	38	17.8	211.5	9.0	7.0	Myocardial hypertrophy	Use	Y	Y	N	Y	162	N	18	N	17	N
23	551	M/W	61	16.4	217.5	8.3	6.6	Cardiac tamponade	625	Chronic disorganized schizophrenia; AAC	M/B	49	23.5	205.4	7.6	7.3	ASCVD	None	Y	Y	Y	N	632	Y	35	Y	34	N
24	681	M/W	51	11.6	198.4	8.9	7.2	Hypertrophic cardio-myopathy	640	Chronic paranoid schizophrenia	M/W	49	5.2	203.5	8.4	6.9	Pulmonary embolism	None	U	Y	Y	N	682	N	21	N	63	N
25	806	M/W	57	24.0	176.9	7.8	6.9	Pulmonary embolism	665	Chronic paranoid schizophrenia; ADC	M/B	59	28.1	201.0	9.2	6.9	Intestinal hemorrhage	None	Y	Y	Y	N	272	Y	27	N	16	Y
26	822	M/B	28	25.3	174.3	8.5	7.0	ASCVD	787	Schizoaffective disorder; ODC	M/B	27	19.2	180.6	8.4	6.7	Suicide by gun shot	Dependence	N	Y	N	N	474	N	24	N	30	N
27	727	M/B	19	7.0	191.4	9.2	7.2	Trauma	829	Schizoaffective disorder; ADC; OAR	M/W	25	5.0	172.3	9.3	6.8	Suicide by salicylate overdose	Abuse in remission	Y	N	N	Y	None	Y	20	N	22	N
28	871	M/W	28	16.5	163.7	8.5	7.1	Trauma	878	Disorganized schizophrenia; ADC	M/W	33	10.8	162.8	8.9	6.7	Myocardial fibrosis	Use	Y	Y	Y	Y	421	N	16	N	57	N
29	700	M/W	42	26.1	195.5	8.7	7.0	ASCVD	539	Schizoaffective disorder; ADR	M/W	50	40.5	219.6	8.1	7.1	Suicide by combined drug overdose	None	U	Y	Y	Y	463	N	19	Y	45	Y
30	988	M/W	82	22.5	142.3	8.4	6.2	Trauma	621	Chronic undifferentiated schizophrenia	M/W	83	16.0	205.9	8.7	7.3	Accidental asphyxiation	None	U	N	N	N	None	Y	28	N	8	N
31	686*	F/W	52	22.6	197.5	8.5	7.0	ASCVD	656	Schizoaffective disorder; ADC	F/B	47	20.1	201.8	9.2	7.3	Suicide by gun shot	None	Y	Y	N	N	316	Y	17	N	19	Y
32	634	M/W	52	16.2	204.9	8.5	7.0	ASCVD	722	Chronic undifferentiated schizophrenia; ODR; OAR	M/B	45	9.1	192.4	9.2	6.7	Upper GI bleeding	Use	Y	Y	N	N	567	N	26	N	24	N
33	852	M/W	54	8.0	167.3	9.1	6.8	Cardiac tamponade	781	Schizoaffective disorder; ADR	M/B	52	8.0	182.3	7.7	6.7	Peritonitis	None	Y	Y	Y	N	256	N	37	Y	24	N
34	987	F/W	65	21.5	142.9	9.1	6.8	ASCVD	802	Schizoaffective disorder; ADC; ODR	F/W	63	29.0	178.2	9.2	6.4	Right ventricular dysplasia	None	Y	Y	N	Y	1358	N	20	N	42	Y
35	857	M/W	48	16.6	166.2	8.9	6.7	ASCVD	930	Disorganized schizophrenia; ADR; OAR	M/W	47	15.3	152.7	8.2	6.2	ASCVD	Abuse	Y	Y	N	Y	204	N	19	N	17	N
36	739	M/W	40	15.8	191.1	8.4	6.9	ASCVD	933	Disorganized schizophrenia	M/W	44	8.3	152.1	8.1	5.9	Myocarditis	None	N	Y	Y	Y	dose unknown	N	22	N	27	N

[a] PMI, postmortem interval (hours); [b] Storage time (months) at -80C; [c] First degree relative with schizophrenia; Other abbreviations: ASCVD, arteriosclerotic cardiovascular disease; ATOD, at time of death; ADC, alcohol dependence, current at time of death; ADR, alcohol dependence, in remission at time of death; AAC, alcohol abuse, current at time of death; AAR, alcohol abuse, in remission at time of death; ODC, other substance dependence, current at time of death; ODR, other substance dependence, in remission at time of death; OAC, other substance abuse, current at time of death; OAR, other substance abuse, in remission at time of death; U, unknown; VPA, valproic acid; ISP, index of social position. CPZ (mg): Daily antipsychotic medication dose in chlorpromazine equivalent (Andreasen, NC et al, 2010).

* subjects used in comparison between PV and pyramidal cells

Supplementary Table 2. Analysis of potential confounding covariates

Potential confounding covariate	Number of times appearing with Top 500 DEPs
RIN	96
Age	58
Suicide	45
Schizoaffective diagnosis	25
Antidepressants ATOD	20
PMI	19
Benzodiazepine/VPA ATOD	18
Tobacco ATOD	18
Sex	8

Abbreviations: RIN- RNA integrity number; ATOD- at time of death; PMI- postmortem interval; VPA- valproic acid

Supplementary Table 3. Differentially expressed genes in schizophrenia.

DEGs with increased expression in schizophrenia

Symbol	Gene Title	% change
ABCC2	ATP-binding cassette, sub-family C (CFTR/MRP), member 2	+16.9
ACKR1	atypical chemokine receptor 1 (Duffy blood group)	+16.9
ACTL8	actin-like 8	+10.4
ADAM33	ADAM metallopeptidase domain 33	+17
ADAM8	ADAM metallopeptidase domain 8	+17.5
ADAMTS7	ADAM metallopeptidase with thrombospondin type 1 motif, 7	+17.4
ADAMTSL1	ADAMTS-like 1	+14.1
ADM	adrenomedullin	+18.4
AFAP1L1	actin filament associated protein 1-like 1	+16.1
AGER	advanced glycosylation end product-specific receptor	+17.3
AGPAT2	1-acylglycerol-3-phosphate O-acyltransferase 2	+17.8
AGT	angiotensinogen (serpin peptidase inhibitor, clade A, member 8)	+60.5
ALPI	alkaline phosphatase, intestinal	+14.9
ANKDD1A	ankyrin repeat and death domain containing 1A	+17
ANKRD20A5P	ankyrin repeat domain 20 family, member A5, pseudogene	+53.8
ANKRD46	ankyrin repeat domain 46	+16.9
APOBEC3D	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3D	+15.6
APOBEC3H	apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3H	+15.5
APOC1	apolipoprotein C-I	+13.2
APOL1	apolipoprotein L, 1	+10.4
APOL4	apolipoprotein L, 4	+16
APOL6	apolipoprotein L, 6	+17.4
AQP1	aquaporin 1 (Colton blood group)	+18.2
AQP8	aquaporin 8	+14.9
ARHGAP21	Rho GTPase activating protein 21	+31.2
ARHGEF16	Rho guanine nucleotide exchange factor (GEF) 16	+15
ARL6IP4	ADP-ribosylation factor-like 6 interacting protein 4	+16.6
ARSE	arylsulfatase E (chondrodysplasia punctata 1)	+24.4
ARVP6125	uncharacterized LOC442092	+23.9

ASCL2	achaete-scute family bHLH transcription factor 2	+11.3
ASMTL-AS1	ASMTL antisense RNA 1	+12.9
ATG16L2	autophagy related 16-like 2 (S. cerevisiae)	+22
ATM	ATM serine/threonine kinase	+59.2
ATP1A2	ATPase, Na+/K+ transporting, alpha 2 polypeptide	+19.9
ATP2A3	ATPase, Ca++ transporting, ubiquitous	+11.5
ATP4A	ATPase, H+/K+ exchanging, alpha polypeptide	+12.2
ATP9B	ATPase, class II, type 9B	+12.3
BAI1	brain-specific angiogenesis inhibitor 1	+15.8
BAIAP2	BAI1-associated protein 2	+20.8
BAIAP3	BAI1-associated protein 3	+19.6
BAZ2A	bromodomain adjacent to zinc finger domain, 2A	+19.1
BCL2L11	BCL2-like 11 (apoptosis facilitator)	+16.4
BCL3	B-cell CLL/lymphoma 3 /// microRNA 8085	+22.5
BGN	biglycan	+41.1
BIRC5	baculoviral IAP repeat containing 5	+17.8
BIRC7	baculoviral IAP repeat containing 7	+17.3
BMF	Bcl2 modifying factor	+24.1
BPIFB3	BPI fold containing family B, member 3	+10.1
BRD7P3	bromodomain containing 7 pseudogene 3	+36.2
BRF1	BRF1, RNA polymerase III transcription initiation factor 90 kDa subunit	+15.7
BRICD5	BRICHOS domain containing 5	+17.5
BTN2A3P	butyrophilin, subfamily 2, member A3, pseudogene	+15.9
C10orf95	chromosome 10 open reading frame 95	+14.3
C12orf43	chromosome 12 open reading frame 43	+17.7
C14orf180	chromosome 14 open reading frame 180	+19.6
C14orf80	chromosome 14 open reading frame 80	+14.1
C15orf40	chromosome 15 open reading frame 40	+19.2
C17orf74	chromosome 17 open reading frame 74	+13.8
C19orf71	chromosome 19 open reading frame 71	+12.2
C20orf27	chromosome 20 open reading frame 27	+18.8
C5orf38	chromosome 5 open reading frame 38	+11.2
C8orf86	chromosome 8 open reading frame 86	+24

C9orf139	chromosome 9 open reading frame 139	+15.3
C9orf163	chromosome 9 open reading frame 163	+15.4
C9orf3	chromosome 9 open reading frame 3	+62.9
CA6	carbonic anhydrase VI	+12.4
CACFD1	calcium channel flower domain containing 1	+16.2
CACNG6	calcium channel, voltage-dependent, gamma subunit 6	+13.2
CACUL1	CDK2-associated, cullin domain 1	+14.6
CALCOCO2	calcium binding and coiled-coil domain 2	+36.2
CCDC42B	coiled-coil domain containing 42B	+15.4
CCDC64	coiled-coil domain containing 64	+15.4
CCDC7	coiled-coil domain containing 7	+15.4
CCDC71L	coiled-coil domain containing 71-like	+16.1
CCDC78	coiled-coil domain containing 78	+16.1
CCL27	chemokine (C-C motif) ligand 27	+12.3
CD164L2	CD164 sialomucin-like 2	+17.8
CD177	CD177 molecule	+15.9
CD1C	CD1c molecule	+13.7
CD209	CD209 molecule	+14.1
CD248	CD248 molecule, endosialin	+19.7
CD300LG	CD300 molecule-like family member g	+13.7
CD79B	CD79b molecule, immunoglobulin-associated beta	+17.6
CDC45	cell division cycle 45	+9.7
CDCA4	cell division cycle associated 4	+15.1
CDHR4	cadherin-related family member 4	+19
CDK10	cyclin-dependent kinase 10	+19
CDKN3	cyclin-dependent kinase inhibitor 3	+17.3
CDRT15P1	CMT1A duplicated region transcript 15 pseudogene 1	+18.5
CEACAM21	carcinoembryonic antigen-related cell adhesion molecule 21	+13
CELA2A	chymotrypsin-like elastase family, member 2A	+14.2
CELA3A	chymotrypsin-like elastase family, member 3A	+16
CHP2	calcineurin-like EF-hand protein 2	+10.1
CHPF	chondroitin polymerizing factor	+16.8
CHRND	cholinergic receptor, nicotinic, delta (muscle)	+15.6

CHST7	carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 7	+29.5
CLCF1	cardiotrophin-like cytokine factor 1	+23.3
CLCN7	chloride channel, voltage-sensitive 7	+16.6
CLDN11	claudin 11	+14.5
CLDN19	claudin 19	+14.6
CLDN9	claudin 9	+21.4
CLEC4M	C-type lectin domain family 4, member M	+15.7
CLK3	CDC-like kinase 3	+17.7
CMTM5	CKLF-like MARVEL transmembrane domain containing 5	+14.3
COL16A1	collagen, type XVI, alpha 1	+17.1
COL1A1	collagen, type I, alpha 1	+12
COL4A6	collagen, type IV, alpha 6	+19.9
COMP	cartilage oligomeric matrix protein	+13.3
COPE	coatomer protein complex, subunit epsilon	+12.8
COX6B2	cytochrome c oxidase subunit VIb polypeptide 2 (testis)	+12.4
CREB3L3	cAMP responsive element binding protein 3-like 3	+11.8
CRIPT	cysteine-rich PDZ-binding protein	+66.7
CSF3	colony stimulating factor 3 (granulocyte)	+20.8
CTNNAL1	catenin (cadherin-associated protein), alpha-like 1	+30.9
CYP1A2	cytochrome P450, family 1, subfamily A, polypeptide 2	+21.6
CYTH4	cytohesin 4	+10.7
DAB1	Dab, reelin signal transducer, homolog 1 (Drosophila)	+36.8
DACT1	dishevelled-binding antagonist of beta-catenin 1	+15
DAPK1	death-associated protein kinase 1	+21.3
DMKN	dermokine	+17.7
DNAH5	dynein, axonemal, heavy chain 5	+12.9
DNAJB13	DnaJ (Hsp40) homolog, subfamily B, member 13	+16.9
DND1	DND microRNA-mediated repression inhibitor 1	+30.4
DPP9	dipeptidyl-peptidase 9	+16
DUSP9	dual specificity phosphatase 9	+13.4
EBF3	early B-cell factor 3	+17.6
ECE1	endothelin converting enzyme 1	+15
EEF1A1	eukaryotic translation elongation factor 1 alpha 1	+10.5

EEF2K	eukaryotic elongation factor-2 kinase /// eukaryotic elongation factor 2 kinase-like	+38.8
EIF5A	eukaryotic translation initiation factor 5A	+13.3
ELAC1	elaC ribonuclease Z 1	+19.8
EPS8L2	EPS8-like 2	+17.1
ERN2	endoplasmic reticulum to nucleus signaling 2	+14.3
EVC	Ellis van Creveld syndrome	+11.2
EVI5	ecotropic viral integration site 5	+18.2
EVX1	even-skipped homeobox 1	+12.4
EXD1	exonuclease 3'-5' domain containing 1	+17.3
EXOC3L2	exocyst complex component 3-like 2	+17.4
F2	coagulation factor II (thrombin)	+16.2
F2RL3	coagulation factor II (thrombin) receptor-like 3	+16.5
FAM107A	family with sequence similarity 107, member A	+44.2
FAM109A	family with sequence similarity 109, member A	+20.5
FAM124A	family with sequence similarity 124A	+15.2
FAM132A	family with sequence similarity 132, member A	+15.6
FAM170A	family with sequence similarity 170, member A	+18.4
FAM221B	family with sequence similarity 221, member B	+13.1
FAM83A-AS1	FAM83A antisense RNA 1	+12.3
FAM83C	family with sequence similarity 83, member C	+13
FAXDC2	fatty acid hydroxylase domain containing 2	+11.7
FBF1	Fas (TNFRSF6) binding factor 1	+19.5
FBLIM1	filamin binding LIM protein 1	+15.1
FBLN1	fibulin 1	+17.8
FBXO2	F-box protein 2	+17.4
FBXO24	F-box protein 24	+17.1
FBXW8	F-box and WD repeat domain containing 8	+14.7
FCER1A	Fc fragment of IgE, high affinity I, receptor for; alpha polypeptide	+10.6
FCN2	ficolin (collagen/fibrinogen domain containing lectin) 2	+13.6
FCRL6	Fc receptor-like 6	+21.1
FCRLA	Fc receptor-like A	+14
FGB	fibrinogen beta chain	+15.1
FGD3	FYVE, RhoGEF and PH domain containing 3	+11.2

FGFR4	fibroblast growth factor receptor 4	+15.4
FGFRL1	fibroblast growth factor receptor-like 1	+23.2
FHAD1	forkhead-associated (FHA) phosphopeptide binding domain 1	+16.5
FKBP1AP1	FK506 binding protein 1A, 12kDa pseudogene 1	+28.8
FLT4	fms-related tyrosine kinase 4	+13.2
FLYWCH1	FLYWCH-type zinc finger 1	+24.1
FSCN3	fascin actin-bundling protein 3, testicular	+18.3
FTCD	formimidoyltransferase cyclodeaminase	+12.8
FXYD5	FXYD domain containing ion transport regulator 5	+19.4
FZD5	frizzled class receptor 5	+12.3
GALK1	galactokinase 1	+18.7
GALM	galactose mutarotase (aldose 1-epimerase)	+34
GALNT6	polypeptide N-acetylgalactosaminyltransferase 6	+10.8
GATA1	GATA binding protein 1 (globin transcription factor 1)	+15
GATA2	GATA binding protein 2	+12.4
GDF5	growth differentiation factor 5	+14.3
GGA3	golgi-associated, gamma adaptin ear containing, ARF binding protein 3	+20.8
GGT6	gamma-glutamyltransferase 6	+12.1
GLUL	glutamate-ammonia ligase	+28.4
GLYCTK	glycerate kinase	+19.9
GMIP	GEM interacting protein	+22.5
GNAO1	guanine nucleotide binding protein (G protein), alpha activating activity polypeptide O	+27.1
GOLGA2P10	golgin A2 pseudogene	+49.3
GPATCH3	G patch domain containing 3	+11.5
GPC6	glypican 6	+13
GPD1	glycerol-3-phosphate dehydrogenase 1 (soluble)	+14
GPER1	G protein-coupled estrogen receptor 1	+18.6
GPR114	G protein-coupled receptor 114	+14.1
GPR142	G protein-coupled receptor 142	+13.2
GPR35	G protein-coupled receptor 35	+14.5
GPR56	G protein-coupled receptor 56	+80
GPR6	G protein-coupled receptor 6	+16
GRAMD2	GRAM domain containing 2	+10.1

GRM4	glutamate receptor, metabotropic 4	+19.7
GSDMD	gasdermin D	+15.6
GSG1L	GSG1-like	+15.9
H1FOO	H1 histone family, member O, oocyte-specific	+12.3
HAAO	3-hydroxyanthranilate 3,4-dioxygenase	+15.7
HAGHL	hydroxyacylglutathione hydrolase-like	+15.1
HDAC10	histone deacetylase 10	+14.7
HDAC11	histone deacetylase 11	+19.7
HDAC7	histone deacetylase 7	+22.5
HDGFL1	hepatoma derived growth factor-like 1	+15.1
HEG1	heart development protein with EGF-like domains 1	+12.6
HIP1	huntingtin interacting protein 1	+15.8
HIST3H2BB	histone cluster 3, H2bb	+15.5
HIVEP3	human immunodeficiency virus type I enhancer binding protein 3	+14.2
HLA-DPB1	major histocompatibility complex, class II, DP beta 1	+15
HMCN2	hemicentin 2	+14.3
HMGA2	high mobility group AT-hook 2	+13.1
HMHB1	histocompatibility (minor) HB-1	+17.8
HNRNPLL	heterogeneous nuclear ribonucleoprotein L-like	+49.7
HNRNPM	heterogeneous nuclear ribonucleoprotein M	+13.4
HP	haptoglobin	+18.4
HPCAL4	hippocalcin like 4	+27.6
HRCT1	histidine rich carboxyl terminus 1	+26.4
HSPB7	heat shock 27kDa protein family, member 7 (cardiovascular)	+19.4
HTR3A	5-hydroxytryptamine (serotonin) receptor 3A, ionotropic	+13.4
HYAL1	hyaluronoglucosaminidase 1	+21.2
ID3	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein	+15.7
IFI44L	interferon-induced protein 44-like	+16.1
IFITM2	interferon induced transmembrane protein 2	+18.2
IFITM3	interferon induced transmembrane protein 3	+28.6
IGFBP5	insulin-like growth factor binding protein 5	+13.9
IGKC	immunoglobulin kappa constant /// immunoglobulin kappa variable 1-39 (gene/pseudogene) /// --- /// immunoglobulin kappa variable 1D-39 /// ---	+41.3

IGLJ3	immunoglobulin lambda joining 3	+19.1
IL15RA	interleukin 15 receptor, alpha	+14.9
IL17RC	interleukin 17 receptor C	+18.4
IL17RE	interleukin 17 receptor E	+16
IL3RA	interleukin 3 receptor, alpha (low affinity)	+18.6
ING4	inhibitor of growth family, member 4	+13.7
INPP5D	inositol polyphosphate-5-phosphatase, 145kDa	+15.7
IRF5	interferon regulatory factor 5	+11.7
ISLR	immunoglobulin superfamily containing leucine-rich repeat	+14.8
ITGB3	integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)	+15.3
ITGB4	integrin, beta 4	+17.5
JPH2	junctophilin 2	+13.6
KAZN	kazrin, periplakin interacting protein	+21.4
KCNK10	potassium channel, subfamily K, member 10	+37.6
KCP	kielin/chordin-like protein	+14.7
KIF25-AS1	KIF25 antisense RNA 1	+19.5
KLF16	Kruppel-like factor 16	+12.4
KLK2	kallikrein-related peptidase 2	+15.3
KLK3	kallikrein-related peptidase 3	+18.3
KLKB1	kallikrein B, plasma (Fletcher factor) 1	+59
KLRG2	killer cell lectin-like receptor subfamily G, member 2	+12.8
KREMEN1	kringle containing transmembrane protein 1	+15
KREMEN2	kringle containing transmembrane protein 2	+17.1
KRT16P1	keratin 16 pseudogene 1	+13.9
KRTAP10-10	keratin associated protein 10-10	+18.5
KRTAP10-11	keratin associated protein 10-11	+21.7
KRTAP10-12	keratin associated protein 10-12 /// keratin associated protein 10-7	+16
KRTAP10-5	keratin associated protein 10-5	+23.2
KRTAP10-8	keratin associated protein 10-8	+19.1
KRTAP23-1	keratin associated protein 23-1	+15.5
LAMB4	laminin, beta 4	+14.3
LAX1	lymphocyte transmembrane adaptor 1	+10.9
LDLRAD2	low density lipoprotein receptor class A domain containing 2	+27.2

LEMD1	LEM domain containing 1	+15.4
LENEP	lens epithelial protein	+14.7
LFNG	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase	+10.9
LGALS9	lectin, galactoside-binding, soluble, 9	+16.2
LINC01000	long intergenic non-protein coding RNA 1000	+19.4
LLGL1	lethal giant larvae homolog 1 (Drosophila)	+14.7
LOC100130071	GSQS6193	+12.2
LOC100131826	TSSP3028	+44.5
LOC100133106	VCEW9374	+16.3
LOC100506766	uncharacterized LOC100506766	+11.9
LPCAT3	lysophosphatidylcholine acyltransferase 3	+17.9
LRBA	LPS-responsive vesicle trafficking, beach and anchor containing	+15.7
LRCH4	leucine-rich repeats and calponin homology (CH) domain containing 4	+22.4
LRG1	leucine-rich alpha-2-glycoprotein 1	+18.3
LSMEM2	leucine-rich single-pass membrane protein 2	+15.1
LST1	leukocyte specific transcript 1	+16.9
MADCAM1	mucosal vascular addressin cell adhesion molecule 1	+18.8
MAFG	v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog G	+23.3
MAMSTR	MEF2 activating motif and SAP domain containing transcriptional regulator	+22
MAP3K2	mitogen-activated protein kinase kinase kinase 2	+53.8
MAVS	mitochondrial antiviral signaling protein	+17.1
MBD1	methyl-CpG binding domain protein 1	+18.4
MBD3	methyl-CpG binding domain protein 3	+16.4
MBD3L5	methyl-CpG binding domain protein 3-like 5	+18.3
MCAT	malonyl CoA:ACP acyltransferase (mitochondrial)	+11.2
MGAT4A	mannosyl (alpha-1,3-)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase, isozyme A	+96.7
MICB	MHC class I polypeptide-related sequence B	+12.7
MKNK1	MAP kinase interacting serine/threonine kinase 1	+14.8
MLC1	megalencephalic leukoencephalopathy with subcortical cysts 1	+26.2
MRC2	mannose receptor, C type 2	+16.7
MRGPRE	MAS-related GPR, member E	+18.6
MT2A	metallothionein 2A	+112
MT4	metallothionein 4	+17.2

MUC5B	mucin 5B, oligomeric mucus/gel-forming	+14.2
MXD3	MAX dimerization protein 3	+18.8
MXRA8	matrix-remodelling associated 8	+13.9
MYL10	myosin, light chain 10, regulatory	+13.5
MYO7B	myosin VIIB	+17.8
MYOCD	myocardin	+12.5
MZF1	myeloid zinc finger 1	+17.6
NAALADL1	N-acetylated alpha-linked acidic dipeptidase-like 1	+18.2
NAGS	N-acetylglutamate synthase	+15
NARFL	nuclear prelamin A recognition factor-like	+18.2
NAV1	neuron navigator 1	+32.3
NCAPH2	non-SMC condensin II complex, subunit H2	+17.6
NCR3	natural cytotoxicity triggering receptor 3	+13.1
NECAP2	NECAP endocytosis associated 2	+14.9
NET1	neuroepithelial cell transforming 1	+14.6
NGFR	nerve growth factor receptor	+16.8
NINJ2	ninjurin 2	+24.7
NLRP1	NLR family, pyrin domain containing 1	+14.9
NLRP9	NLR family, pyrin domain containing 9	+11.5
NLRX1	NLR family member X1	+13.1
NMUR1	neuromedin U receptor 1	+17.1
NOL6	nucleolar protein 6 (RNA-associated)	+18.4
NOV	nephroblastoma overexpressed	+40.9
NUP214	nucleoporin 214kDa	+11.7
NVL	nuclear VCP-like	+33.4
NXN	nucleoredoxin	+14.7
NYX	nyctalopin	+16.3
OIT3	oncoprotein induced transcript 3	+15.7
OPN4	opsin 4	+15.8
OR10W1	olfactory receptor, family 10, subfamily W, member 1	+13.9
OR2A14	olfactory receptor, family 2, subfamily A, member 14	+18.9
OSBPL5	oxysterol binding protein-like 5	+14.4
OXER1	oxoeicosanoid (OXE) receptor 1	+12.9

P2RY14	purinergic receptor P2Y, G-protein coupled, 14	+40.6
P2RY6	pyrimidinergic receptor P2Y, G-protein coupled, 6	+11.1
PADI4	peptidyl arginine deiminase, type IV	+14.5
PARVG	parvin, gamma	+13.5
PAX4	paired box 4	+21.5
PAX8	paired box 8	+13.8
PCDHA12	protocadherin alpha 12	+10.5
PDCD1	programmed cell death 1	+15.9
PDCD1LG2	programmed cell death 1 ligand 2	+14.3
PDE6G	phosphodiesterase 6G, cGMP-specific, rod, gamma	+18.6
PDGFRB	platelet-derived growth factor receptor, beta polypeptide	+12.5
PHYKPL	5-phosphohydroxy-L-lysine phospho-lyase	+22.3
PIGP	phosphatidylinositol glycan anchor biosynthesis, class P	+37.5
PLA2G15	phospholipase A2, group XV	+16.7
PLA2G2D	phospholipase A2, group IID	+14.5
PLA2G4C	phospholipase A2, group IVC (cytosolic, calcium-independent)	+37.2
PLAT	plasminogen activator, tissue	+7.8
PLEKHG2	pleckstrin homology domain containing, family G (with RhoGef domain) member 2	+15.8
PLEKHN1	pleckstrin homology domain containing, family N member 1	+15.9
PLK3	polo-like kinase 3	+21.2
PNMA5	paraneoplastic Ma antigen family member 5	+30.8
PODN	podocan	+18.1
PODNL1	podocan-like 1	+18.5
POLA2	polymerase (DNA directed), alpha 2, accessory subunit	+13
PPP4C	protein phosphatase 4, catalytic subunit	+31.5
PRAMEF1	PRAME family member 1	+17.2
PRB2	proline-rich protein BstNI subfamily 2	+12.3
PRF1	perforin 1 (pore forming protein)	+21.9
PRKAG3	protein kinase, AMP-activated, gamma 3 non-catalytic subunit	+15
PRND	prion protein 2 (dublet)	+10.6
PRODH	proline dehydrogenase 1, mitochondrial-like /// proline dehydrogenase (oxidase) 1	+16.2
PROSER3	proline and serine rich 3	+31.5
PROZ	protein Z, vitamin K-dependent plasma glycoprotein	+16.6

PRR25	proline rich 25	+19.3
PRSS1	protease, serine, 1 (trypsin 1) /// protease, serine, 2 (trypsin 2)	+16.4
PRSS8	protease, serine, 8	+18.7
PRUNE	prune exopolyphosphatase	+25
PSMB5	proteasome (prosome, macropain) subunit, beta type, 5	+14
PSTPIP1	proline-serine-threonine phosphatase interacting protein 1	+17.1
PTCHD1	patched domain containing 1	+8
PTGES	prostaglandin E synthase	+16.7
PTGIS	prostaglandin I2 (prostacyclin) synthase	+14.7
PTH2	parathyroid hormone 2	+13.1
PTK6	protein tyrosine kinase 6	+13.9
PTPN6	protein tyrosine phosphatase, non-receptor type 6	+15.2
PTPRG	protein tyrosine phosphatase, receptor type, G	+42.5
PYCRL	pyrroline-5-carboxylate reductase-like	+12.8
QSOX1	quiescin Q6 sulfhydryl oxidase 1	+14.5
RAB13	RAB13, member RAS oncogene family	+44.7
RAD52	RAD52 homolog (S. cerevisiae)	+20.4
RAPGEF3	Rap guanine nucleotide exchange factor (GEF) 3	+16.1
RARG	retinoic acid receptor, gamma	+14.3
RBBP8NL	RBBP8 N-terminal like	+17.6
RBM15	RNA binding motif protein 15	+26.2
RBM25	RNA binding motif protein 25	+23.1
RCSD1	RCSD domain containing 1	+16.5
REPIN1	replication initiator 1	+18.3
RFNG	RFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase	+17.6
RGPD4	RANBP2-like and GRIP domain containing 4	+16.5
RHBDD3	rhomboid domain containing 3	+15.9
RHCG	Rh family, C glycoprotein	+23
RIMKLB	ribosomal modification protein rimK-like family member B	+30.1
RNF223	ring finger protein 223	+15.7
RNH1	ribonuclease/angiogenin inhibitor 1	+18.7
RPL9	ribosomal protein L9	+33.6
RPS28	ribosomal protein S28	+17.1

RRP7A	ribosomal RNA processing 7 homolog A (S. cerevisiae)	+22
RTL1	retrotransposon-like 1	+17.8
RUNDC3A	RUN domain containing 3A	+23.8
SAMD14	sterile alpha motif domain containing 14	+26.4
SAPCD2	suppressor APC domain containing 2	+22.6
SCN1B	sodium channel, voltage-gated, type I, beta subunit	+18.1
SCT	secretin	+12.2
SEPT12	septin 12	+10.9
SEPT5-GP1BB	SEPT5-GP1BB readthrough	+27.2
SFN	stratifin	+12.8
SFPQ	splicing factor proline/glutamine-rich	+17.1
SFTPB	surfactant protein B	+16.6
SGCA	sarcoglycan, alpha (50kDa dystrophin-associated glycoprotein)	+17.1
SH3BP5L	SH3-binding domain protein 5-like	+15.3
SIGLEC11	sialic acid binding Ig-like lectin 11	+16.5
SLC16A5	solute carrier family 16 (monocarboxylate transporter), member 5	+14
SLC19A3	solute carrier family 19 (thiamine transporter), member 3	+11.2
SLC22A3	solute carrier family 22 (organic cation transporter), member 3	+11
SLC29A2	solute carrier family 29 (equilibrative nucleoside transporter), member 2	+9.8
SLC35G3	solute carrier family 35, member G3	+19.1
SLC5A11	solute carrier family 5 (sodium/inositol cotransporter), member 11	+17.5
SLC6A18	solute carrier family 6 (neutral amino acid transporter), member 18	+12.4
SMAD3	SMAD family member 3	+40.4
SMG9	SMG9 nonsense mediated mRNA decay factor	+20.1
SMPD4	sphingomyelin phosphodiesterase 4, neutral membrane (neutral sphingomyelinase-3)	+13
SMTNL2	smoothelin-like 2	+15.8
SND1-IT1	SND1 intronic transcript 1 (non-protein coding)	+28.3
SNORA71C	small nucleolar RNA, H/ACA box 71C	+14.2
SNORA74B	small nucleolar RNA, H/ACA box 74B	+15.8
SOX13	SRY (sex determining region Y)-box 13	+18.7
SOX9	SRY (sex determining region Y)-box 9	+40.7
SP9	Sp9 transcription factor	+18.5
SPATA12	spermatogenesis associated 12	+13.6

SPIDR	scaffolding protein involved in DNA repair	+27.3
SPRN	shadow of prion protein homolog (zebrafish)	+28.9
SSU72	SSU72 RNA polymerase II CTD phosphatase homolog (S. cerevisiae)	+10.2
STX10	syntaxin 10	+14.4
STX16	syntaxin 16	+28.5
STX3	syntaxin 3	+14.9
SUV420H2	suppressor of variegation 4-20 homolog 2 (Drosophila)	+13.7
SYT15	synaptotagmin XV	+14.7
SYT8	synaptotagmin VIII	+13.2
TBX1	T-box 1	+15.1
TCF7	transcription factor 7 (T-cell specific, HMG-box)	+13.5
TDGF1P3	teratocarcinoma-derived growth factor 1 pseudogene 3	+19.8
TERT	telomerase reverse transcriptase	+16.4
TF	transferrin	+32.1
THEM6	thioesterase superfamily member 6	+14.5
THSD7B	thrombospondin, type I, domain containing 7B	+11.8
TMEM101	transmembrane protein 101	+12.2
TMEM150A	transmembrane protein 150A	+24.5
TMEM150B	transmembrane protein 150B	+16.8
TMEM184A	transmembrane protein 184A	+21.1
TMEM247	uncharacterized LOC101805491 /// transmembrane protein 247	+12.9
TMEM54	transmembrane protein 54	+15
TMEM8A	transmembrane protein 8A	+21.3
TMPRSS5	transmembrane protease, serine 5	+15.5
TMPRSS6	transmembrane protease, serine 6	+15.4
TNFRSF1B	tumor necrosis factor receptor superfamily, member 1B	+15
TOP1MT	topoisomerase (DNA) I, mitochondrial	+14.4
TPCN2	two pore segment channel 2	+69.3
TPTE2	transmembrane phosphoinositide 3-phosphatase and tensin homolog 2	+18.6
TRIM40	tripartite motif containing 40	+14.5
TRIM46	tripartite motif containing 46	+14.4
TRIM7	tripartite motif containing 7	+12.8
TRMT2A	tRNA methyltransferase 2 homolog A (S. cerevisiae)	+19.6

TRMU	tRNA 5-methylaminomethyl-2-thiouridylate methyltransferase	+20
TSC2	tuberous sclerosis 2	+18.4
TSC22D4	TSC22 domain family, member 4	+18
TTTY6B	testis-specific transcript, Y-linked 6B (non-protein coding)	+17.3
TTYH2	tweety family member 2	+13.7
TUBGCP2	tubulin, gamma complex associated protein 2	+17.5
TXNIP	thioredoxin interacting protein	+17.5
TXNRD2	thioredoxin reductase 2	+22.6
UBE2F	ubiquitin-conjugating enzyme E2F (putative)	+16.7
UBE2L3	ubiquitin-conjugating enzyme E2L 3	+40.9
UBE3A	ubiquitin protein ligase E3A	+42.2
UCK1	uridine-cytidine kinase 1	+20.1
UCKL1	uridine-cytidine kinase 1-like 1	+13
UGT2B15	UDP glucuronosyltransferase 2 family, polypeptide B15	+15.4
UNC80	unc-80 homolog (C. elegans)	+24.2
UPK3A	uroplakin 3A	+15.2
USF1	upstream transcription factor 1	+17.8
USF2	upstream transcription factor 2, c-fos interacting	+7.3
USP30	ubiquitin specific peptidase 30	+15.1
USP6	ubiquitin specific peptidase 32 /// ubiquitin specific peptidase 6	+24.5
USP7	ubiquitin specific peptidase 7 (herpes virus-associated)	+17.9
VARS	valyl-tRNA synthetase	+13.6
VASH2	vasohibin 2	+17.8
VCX2	variable charge, X-linked /// variable charge, X-linked 2	+17.4
VNN1	vanin 1	+10
VPS13B	vacuolar protein sorting 13 homolog B (yeast)	+25.8
VRTN	vertebrae development associated	+15.3
WDR81	WD repeat domain 81	+13.7
WIPF1	WAS/WASL interacting protein family, member 1	+10.6
WRAP73	WD repeat containing, antisense to TP73	+22.1
XRCC3	X-ray repair complementing defective repair in Chinese hamster cells 3	+13.6
YJEFN3	--- /// Homo sapiens YjeF N-terminal domain containing 3 (YJEFN3), transcript variant 2, mRNA.	+16.9
ZACN	zinc activated ligand-gated ion channel	+29.7

ZBTB7B	zinc finger and BTB domain containing 7B	+16.7
ZFYVE1	zinc finger, FYVE domain containing 1	+12.3
ZNF133	zinc finger protein 133	+16.2
ZNF367	zinc finger protein 367	+14.3
ZNF395	zinc finger protein 395	+12.3
ZNF423	zinc finger protein 423	+13.3
ZNF503	zinc finger protein 503	+17.2
ZNF517	zinc finger protein 517	+12
ZNF70	zinc finger protein 70	+15

DEGs with decreased expression in schizophrenia

Symbol	**Gene Title**	**% change**
ACSL6	acyl-CoA synthetase long-chain family member 6	-28.9
ACTR3	ARP3 actin-related protein 3 homolog (yeast)	-47.5
ADAM22	ADAM metallopeptidase domain 22	-33
ADCY2	adenylate cyclase 2 (brain)	-22.8
ADSS	adenylosuccinate synthase	-22.6
AKAP11	A kinase (PRKA) anchor protein 11	-26.3
ALDOA	aldolase A, fructose-bisphosphate	-25.4
ALDOC	aldolase C, fructose-bisphosphate	-22.4
AMPH	amphiphysin	-24.8
ANAPC13	anaphase promoting complex subunit 13	-58.4
ANK2	ankyrin 2, neuronal	-23
AP2M1	adaptor-related protein complex 2, mu 1 subunit	-19.1
AP3B2	adaptor-related protein complex 3, beta 2 subunit	-36.5
APBB1IP	amyloid beta (A4) precursor protein-binding, family B, member 1 interacting protein	-45.3
APOOL	apolipoprotein O-like	-33.1
APP	amyloid beta (A4) precursor protein	-14.1
ARHGEF2	Rho/Rac guanine nucleotide exchange factor (GEF) 2	-23.6
ARHGEF6	Rac/Cdc42 guanine nucleotide exchange factor (GEF) 6	-25.1
ARL4C	ADP-ribosylation factor-like 4C	-16.1
ARL6IP1	ADP-ribosylation factor-like 6 interacting protein 1	-21.7
ARL6IP5	ADP-ribosylation factor-like 6 interacting protein 5	-24.9

ARMCX3	armadillo repeat containing, X-linked 3	-16
ARPC5L	actin related protein 2/3 complex, subunit 5-like	-25.9
ARPP19	cAMP-regulated phosphoprotein, 19kDa	-11.4
ASAH2B	N-acylsphingosine amidohydrolase (non-lysosomal ceramidase) 2B	-35.7
ASNS	asparagine synthetase (glutamine-hydrolyzing)	-34.2
ATF4	activating transcription factor 4	-22
ATL1	atlastin GTPase 1	-26.6
ATP1A1	ATPase, Na+/K+ transporting, alpha 1 polypeptide	-15
ATP1A3	ATPase, Na+/K+ transporting, alpha 3 polypeptide /// uncharacterized LOC101927137	-14.9
ATP2A2	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2	-21.1
ATP5B	ATP synthase, H+ transporting, mitochondrial F1 complex, beta polypeptide	-36
ATP5F1	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit B1	-17.6
ATP5G3	ATP synthase, H+ transporting, mitochondrial Fo complex, subunit C3 (subunit 9)	-26.5
ATP6V0D1	ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d1	-22.2
ATP6V1B2	ATPase, H+ transporting, lysosomal 56/58kDa, V1 subunit B2	-23.7
ATP6V1E1	ATPase, H+ transporting, lysosomal 31kDa, V1 subunit E1	-37.6
ATP6V1G1	ATPase, H+ transporting, lysosomal 13kDa, V1 subunit G1	-46.4
ATPIF1	ATPase inhibitory factor 1	-15.7
ATRNL1	attractin-like 1	-26
BAG1	BCL2-associated athanogene	-30.7
BCAP29	B-cell receptor-associated protein 29	-39.9
BCL2L2	BCL2-like 2	-32.5
BCL6	B-cell CLL/lymphoma 6	-34
BECN1	beclin 1, autophagy related	-16
BLOC1S2	biogenesis of lysosomal organelles complex-1, subunit 2	-33.9
BRMS1L	breast cancer metastasis-suppressor 1-like	-34.3
BTBD3	BTB (POZ) domain containing 3	-32.6
C18orf25	chromosome 18 open reading frame 25	-21.8
C19orf60	chromosome 19 open reading frame 60	-24.8
C4orf3	chromosome 4 open reading frame 3	-35.6
C6orf106	chromosome 6 open reading frame 106	-27.7
CAB39	calcium binding protein 39	-26.5
CADM2	cell adhesion molecule 2	-33.6

CADPS	Ca++-dependent secretion activator	-24.7
CAP2	CAP, adenylate cyclase-associated protein, 2 (yeast)	-29.8
CAPZA2	capping protein (actin filament) muscle Z-line, alpha 2	-39.4
CCDC136	coiled-coil domain containing 136	-28.4
CCDC184	coiled-coil domain containing 184	-20.8
CCDC91	coiled-coil domain containing 91	-31.3
CCNI	cyclin I	-15.7
CCT7	chaperonin containing TCP1, subunit 7 (eta)	-31.2
CD200	CD200 molecule	-25.9
CDC42	cell division cycle 42	-20.2
CDK5	cyclin-dependent kinase 5	-36.3
CERK	ceramide kinase	-29
CHGB	chromogranin B (secretogranin 1)	-35.9
CHMP2B	charged multivesicular body protein 2B	-26.5
CKB	creatine kinase, brain	-24.1
CLCN4	chloride channel, voltage-sensitive 4	-44.2
CLTC	clathrin, heavy chain (Hc)	-19.9
CMAS	cytidine monophosphate N-acetylneuraminic acid synthetase	-30
CNPY2	canopy FGF signaling regulator 2	-29.6
COLGALT2	collagen beta(1-O)galactosyltransferase 2	-27.9
COPRS	coordinator of PRMT5, differentiation stimulator	-27.4
COPS7A	COP9 signalosome subunit 7A	-31.1
COX4I1	cytochrome c oxidase subunit IV isoform 1	-17.4
COX5A	cytochrome c oxidase subunit Va	-23.3
COX6B1	cytochrome c oxidase subunit VIb polypeptide 1 (ubiquitous)	-15.9
COX7A2	cytochrome c oxidase subunit VIIa polypeptide 2 (liver)	-28.8
CSDE1	cold shock domain containing E1, RNA-binding	-22.2
CSPG5	chondroitin sulfate proteoglycan 5 (neuroglycan C)	-33.1
CTNND2	catenin (cadherin-associated protein), delta 2	-22.1
DCK	deoxycytidine kinase	-27.5
DCTN6	dynactin 6	-34.3
DDB1	damage-specific DNA binding protein 1, 127kDa	-12.4
DDX25	DEAD (Asp-Glu-Ala-Asp) box helicase 25	-20.6

DLC1	DLC1 Rho GTPase activating protein	-21.4
DNAJB9	DnaJ (Hsp40) homolog, subfamily B, member 9	-23.9
DNAJC15	DnaJ (Hsp40) homolog, subfamily C, member 15	-45.7
DNAJC18	DnaJ (Hsp40) homolog, subfamily C, member 18	-35.2
DNAJC6	DnaJ (Hsp40) homolog, subfamily C, member 6	-29.1
DNM3	dynamin 3	-19.5
DPYSL4	dihydropyrimidinase-like 4	-31.5
EFTUD2	elongation factor Tu GTP binding domain containing 2	-51.8
EHD3	EH-domain containing 3	-22.6
EID1	EP300 interacting inhibitor of differentiation 1	-17.2
EIF2S1	eukaryotic translation initiation factor 2, subunit 1 alpha, 35kDa	-38.5
EIF5	eukaryotic translation initiation factor 5	-45.5
EMC3	ER membrane protein complex subunit 3	-27.6
ENSA	endosulfine alpha	-27.3
EPHA4	EPH receptor A4	-31.8
EPS15	epidermal growth factor receptor pathway substrate 15	-31.2
ERP29	endoplasmic reticulum protein 29	-34.5
ESRRG	estrogen-related receptor gamma	-45.3
ETS1	v-ets avian erythroblastosis virus E26 oncogene homolog 1	-37.3
EXOSC9	exosome component 9	-31.8
FAM169A	family with sequence similarity 169, member A	-32.6
FAM174A	family with sequence similarity 174, member A	-44.6
FAM49B	family with sequence similarity 49, member B	-24.3
FAM69A	family with sequence similarity 69, member A	-26.3
FAT1	FAT atypical cadherin 1	-43.6
FBLN7	fibulin 7	-33.9
FBXO28	F-box protein 28	-31.5
FDPS	farnesyl diphosphate synthase	-23.3
FEZ1	fasciculation and elongation protein zeta 1 (zygin I)	-50.9
FNDC5	fibronectin type III domain containing 5	-36.9
FOXN3	forkhead box N3	-36.2
FYTTD1	forty-two-three domain containing 1	-31.6
G3BP2	GTPase activating protein (SH3 domain) binding protein 2	-29.2

GABARAPL1	GABA(A) receptor-associated protein like 1	-19.4
GABARAPL2	GABA(A) receptor-associated protein-like 2	-24.9
GABRA1	gamma-aminobutyric acid (GABA) A receptor, alpha 1	-26.3
GAD2	glutamate decarboxylase 2 (pancreatic islets and brain, 65kDa)	-27.7
GATS	GATS, stromal antigen 3 opposite strand	-35
GDI1	GDP dissociation inhibitor 1	-10.4
GPRASP1	G protein-coupled receptor associated sorting protein 1	-20.7
GRIN2A	glutamate receptor, ionotropic, N-methyl D-aspartate 2A	-24.9
GRIP1	glutamate receptor interacting protein 1	-43.1
HACE1	HECT domain and ankyrin repeat containing E3 ubiquitin protein ligase 1	-30.2
HIF1A	hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)	-28.2
HIVEP2	human immunodeficiency virus type I enhancer binding protein 2	-28.6
HMGCS1	3-hydroxy-3-methylglutaryl-CoA synthase 1 (soluble)	-25.9
HOOK3	hook microtubule-tethering protein 3	-18.9
HSBP1	heat shock factor binding protein 1	-37.4
HSD17B12	hydroxysteroid (17-beta) dehydrogenase 12	-35.2
HSPA12A	heat shock 70kDa protein 12A	-22.7
HSPA9	heat shock 70kDa protein 9 (mortalin)	-25.4
HSPB11	heat shock protein family B (small), member 11	-28.9
IBTK	inhibitor of Bruton agammaglobulinemia tyrosine kinase	-26.2
IDH3B	isocitrate dehydrogenase 3 (NAD+) beta	-43.5
IDS	iduronate 2-sulfatase	-25.1
IGFBP6	insulin-like growth factor binding protein 6	-31.3
IL6ST	interleukin 6 signal transducer	-23.8
INPP5A	inositol polyphosphate-5-phosphatase, 40kDa	-22
INSIG1	insulin induced gene 1	-27.7
IRGQ	immunity-related GTPase family, Q	-24.3
ISCU	iron-sulfur cluster assembly enzyme	-21.6
KCNIP2	Kv channel interacting protein 2	-32.8
KCNS3	potassium voltage-gated channel, delayed-rectifier, subfamily S, member 3	-31.5
KCTD8	potassium channel tetramerization domain containing 8	-31.8
KIAA1107	KIAA1107	-30.5
KIAA1109	KIAA1109	-15.7

KIF1A	kinesin family member 1A	-18.2
KIF1B	kinesin family member 1B	-30
KIF3C	kinesin family member 3C	-26.8
KIF5C	kinesin family member 5C	-29.5
KIFAP3	kinesin-associated protein 3	-35.7
KLC1	kinesin light chain 1	-20
KLF9	Kruppel-like factor 9	-30.4
KLHL42	kelch-like family member 42	-22
KPNA6	karyopherin alpha 6 (importin alpha 7)	-35.4
KPNB1	karyopherin (importin) beta 1	-31.6
LAPTM4B	lysosomal protein transmembrane 4 beta	-29.1
LBH	limb bud and heart development	-34.2
LGALS1	lectin, galactoside-binding, soluble, 1	-26.8
LMBRD1	LMBR1 domain containing 1	-32.8
LOC284441	actin-related protein 2 pseudogene	-20.6
LYNX1	Ly6/neurotoxin 1	-17.9
MAGEL2	MAGE-like 2	-18
MAP4	microtubule-associated protein 4	-33
MAPK9	mitogen-activated protein kinase 9	-28.9
MAPRE2	microtubule-associated protein, RP/EB family, member 2	-35.4
MBD2	methyl-CpG binding domain protein 2	-27.9
MEAF6	MYST/Esa1-associated factor 6	-18.6
MFN2	mitofusin 2	-27.6
MPP1	membrane protein, palmitoylated 1, 55kDa	-29.2
MRFAP1	Morf4 family associated protein 1	-28.2
MRPL33	mitochondrial ribosomal protein L33	-41.8
MRPL52	mitochondrial ribosomal protein L52	-31.7
MRPL9	mitochondrial ribosomal protein L9	-34.2
MTMR7	myotubularin related protein 7	-28.4
MYADM	myeloid-associated differentiation marker	-30.2
MYL6	myosin, light chain 6, alkali, smooth muscle and non-muscle	-23.4
MYO5A	myosin VA (heavy chain 12, myoxin)	-24.8
NACA	nascent polypeptide-associated complex alpha subunit	-42.7

NAP1L2	nucleosome assembly protein 1-like 2	-38.1
NAP1L5	nucleosome assembly protein 1-like 5	-27.6
NARS	asparaginyl-tRNA synthetase	-26.7
NAT8L	N-acetyltransferase 8-like (GCN5-related, putative)	-22.3
NBEA	neurobeachin	-38.7
NBR1	neighbor of BRCA1 gene 1	-48.9
NDRG3	NDRG family member 3	-16.8
NDRG4	NDRG family member 4	-7.5
NDUFA1	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 1, 7.5kDa	-20.4
NDUFA13	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 13	-54.8
NDUFA3	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 3, 9kDa	-19.2
NDUFA6	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 6, 14kDa	-29.2
NDUFB2	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 2, 8kDa	-25.7
NDUFB3	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12kDa	-29.5
NDUFB6	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 6, 17kDa	-33.5
NDUFB8	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 8, 19kDa	-32.5
NDUFB9	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 9, 22kDa	-26.6
NDUFS2	NADH dehydrogenase (ubiquinone) Fe-S protein 2, 49kDa (NADH-coenzyme Q reductase)	-40.4
NDUFS3	NADH dehydrogenase (ubiquinone) Fe-S protein 3, 30kDa (NADH-coenzyme Q reductase)	-13.8
NDUFV1	NADH dehydrogenase (ubiquinone) flavoprotein 1, 51kDa	-29
NEFL	neurofilament, light polypeptide	-18.4
NF1	neurofibromin-like /// neurofibromin 1	-38.6
NNT	nicotinamide nucleotide transhydrogenase	-38.9
NR1D2	nuclear receptor subfamily 1, group D, member 2	-40.1
NRIP3	nuclear receptor interacting protein 3	-23.5
NRXN1	neurexin 1	-31.5
NSF	uncharacterized LOC101930324 /// N-ethylmaleimide-sensitive factor	-25.3
NTM	neurotrimin	-45.1
NTN4	netrin 4	-37.1
NTRK2	neurotrophic tyrosine kinase, receptor, type 2	-27.5
NUAK1	NUAK family, SNF1-like kinase, 1	-23.4
NUDC	nudC nuclear distribution protein	-29.4
NUDT21	nudix (nucleoside diphosphate linked moiety X)-type motif 21	-30.3

OCIAD1	OCIA domain containing 1	-17.7
OLFM1	olfactomedin 1	-28.8
OSBPL10	oxysterol binding protein-like 10	-33.9
OSBPL3	oxysterol binding protein-like 3	-30.1
OXCT1	3-oxoacid CoA transferase 1	-28.3
PAFAH1B1	platelet-activating factor acetylhydrolase 1b, regulatory subunit 1 (45kDa)	-28.2
PAIP2	poly(A) binding protein interacting protein 2	-28.7
PBX1	pre-B-cell leukemia homeobox 1	-29.7
PDIA6	protein disulfide isomerase family A, member 6	-29.7
PDSS2	prenyl (decaprenyl) diphosphate synthase, subunit 2	-37.8
PFN2	profilin 2	-28.4
PIGS	phosphatidylinositol glycan anchor biosynthesis, class S	-25.5
PINK1	PTEN induced putative kinase 1	-25.6
PIP4K2B	phosphatidylinositol-5-phosphate 4-kinase, type II, beta	-30.1
PIP5K1B	phosphatidylinositol-4-phosphate 5-kinase, type I, beta	-30.7
PITPNB	phosphatidylinositol transfer protein, beta	-52.4
PKM	pyruvate kinase, muscle	-9.7
PLCXD3	phosphatidylinositol-specific phospholipase C, X domain containing 3	-25.7
PNMA2	paraneoplastic Ma antigen 2	-24.4
PPP1CB	protein phosphatase 1, catalytic subunit, beta isozyme	-39.2
PPP1R12B	protein phosphatase 1, regulatory subunit 12B	-24.3
PPP3CB	protein phosphatase 3, catalytic subunit, beta isozyme	-43.1
PPT1	palmitoyl-protein thioesterase 1	-47.8
PRCP	prolylcarboxypeptidase (angiotensinase C)	-30.3
PRDX2	peroxiredoxin 2	-30
PRDX5	peroxiredoxin 5	-34.3
PREPL	prolyl endopeptidase-like	-29.6
PRKACA	protein kinase, cAMP-dependent, catalytic, alpha	-30.3
PRKACB	protein kinase, cAMP-dependent, catalytic, beta	-21.8
PRKAG2	protein kinase, AMP-activated, gamma 2 non-catalytic subunit	-21.1
PRKAR1A	protein kinase, cAMP-dependent, regulatory, type I, alpha	-14.5
PRKCI	protein kinase C, iota	-39.6
PRMT2	protein arginine methyltransferase 2	-31.2

PRRT3	proline-rich transmembrane protein 3	-17.3
PSAP	prosaposin	-22.2
PSD3	pleckstrin and Sec7 domain containing 3	-27.4
PSMC1	proteasome (prosome, macropain) 26S subunit, ATPase, 1	-34.1
PSMD12	proteasome (prosome, macropain) 26S subunit, non-ATPase, 12	-26.5
PSMD4	proteasome (prosome, macropain) 26S subunit, non-ATPase, 4	-35
PTP4A1	protein tyrosine phosphatase type IVA, member 1	-36.2
PTPRA	protein tyrosine phosphatase, receptor type, A	-32.2
PTPRE	protein tyrosine phosphatase, receptor type, E	-32
PTPRN2	protein tyrosine phosphatase, receptor type, N polypeptide 2	-29.5
PTPRS	protein tyrosine phosphatase, receptor type, S	-20.6
PVALB	parvalbumin	-22.3
RAB11A	RAB11A, member RAS oncogene family	-42.9
RAB11FIP4	RAB11 family interacting protein 4 (class II)	-28.8
RAB22A	RAB22A, member RAS oncogene family	-22.7
RAB33A	RAB33A, member RAS oncogene family	-34
RAB6B	RAB6B, member RAS oncogene family	-30.4
RAC1	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)	-49.4
RAD21	RAD21 homolog (S. pombe)	-41
RAD23A	RAD23 homolog A (S. cerevisiae)	-20.2
RAN	RAN, member RAS oncogene family	-17.5
RAP1GDS1	RAP1, GTP-GDP dissociation stimulator 1	-36.3
RBFOX2	RNA binding protein, fox-1 homolog (C. elegans) 2	-31
RBMXL1	RNA binding motif protein, X-linked-like 1	-30.8
RGS4	regulator of G-protein signaling 4	-47.3
RGS7BP	regulator of G-protein signaling 7 binding protein	-35.2
RHEB	Ras homolog enriched in brain	-22.8
RHOQ	ras homolog family member Q	-42.4
RIOK1	RIO kinase 1	-48.4
RNF5	ring finger protein 5, E3 ubiquitin protein ligase /// ring finger protein 5, E3 ubiquitin protein ligase pseudogene 1	-34.7
RPL41	ribosomal protein L41	-20.6
RTN1	reticulon 1	-10

RTN4	reticulon 4	-46.1
RUFY3	RUN and FYVE domain containing 3	-13.2
SAR1A	secretion associated, Ras related GTPase 1A	-33.4
SARAF	store-operated calcium entry-associated regulatory factor	-20.9
SARS	seryl-tRNA synthetase	-25.3
SAT2	spermidine/spermine N1-acetyltransferase family member 2	-38.3
SATB1	SATB homeobox 1	-22.1
SCAMP1	secretory carrier membrane protein 1	-30
SCOC	short coiled-coil protein	-23
SCP2	sterol carrier protein 2	-32.8
SDCBP	syndecan binding protein (syntenin)	-19.2
SEC23A	Sec23 homolog A (S. cerevisiae)	-27.6
SEPT4	septin 4	-27.9
SH3BGRL	SH3 domain binding glutamate-rich protein like	-26
SHOC2	soc-2 suppressor of clear homolog (C. elegans)	-29.8
SIK3	SIK family kinase 3	-26.8
SLC24A2	solute carrier family 24 (sodium/potassium/calcium exchanger), member 2	-25
SLC25A3	solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 3	-32.9
SLC25A46	solute carrier family 25, member 46	-34.9
SLC32A1	solute carrier family 32 (GABA vesicular transporter), member 1	-32.4
SLC35B4	solute carrier family 35 (UDP-xylose/UDP-N-acetylglucosamine transporter), member B4	-36.6
SLC4A1AP	solute carrier family 4 (anion exchanger), member 1, adaptor protein	-44.4
SLC6A1	solute carrier family 6 (neurotransmitter transporter), member 1	-31.4
SMARCA4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4	-21.8
SMIM14	small integral membrane protein 14	-30.3
SNAP25	synaptosomal-associated protein, 25kDa	-14.3
SNF8	SNF8, ESCRT-II complex subunit	-22
SOBP	sine oculis binding protein homolog (Drosophila)	-25.1
SOD1	superoxide dismutase 1, soluble	-17.9
SPOCK3	sparc/osteonectin, cwcv and kazal-like domains proteoglycan (testican) 3	-25.7
SRPRB	signal recognition particle receptor, B subunit	-45.2
ST6GAL1	ST6 beta-galactosamide alpha-2,6-sialyltranferase 1	-29.5
STK39	serine threonine kinase 39	-27.8

STMN2	stathmin 2	-14.1
STS	steroid sulfatase (microsomal), isozyme S	-32.8
STX12	syntaxin 12	-29.5
SUMO1	small ubiquitin-like modifier 1	-22.1
SUMO3	small ubiquitin-like modifier 3	-19.5
SUSD1	sushi domain containing 1	-43.6
SV2A	synaptic vesicle glycoprotein 2A	-18.9
SYT1	synaptotagmin I	-21.6
SYT13	synaptotagmin XIII	-29.4
TACC1	transforming, acidic coiled-coil containing protein 1	-29.2
TAOK1	TAO kinase 1	-18.4
TBCD	uncharacterized LOC101929597 /// tubulin folding cofactor D	-29.3
TCEAL7	transcription elongation factor A (SII)-like 7	-33.1
TENM2	teneurin transmembrane protein 2	-33.5
TMCC1	transmembrane and coiled-coil domain family 1	-24.9
TMCO1	transmembrane and coiled-coil domains 1	-38
TMEM120A	transmembrane protein 120A	-13.4
TMEM155	transmembrane protein 155	-36.5
TMEM65	transmembrane protein 65	-36.4
TMSB4X	thymosin beta 4, X-linked	-17
TOLLIP	toll interacting protein	-57.7
TOR1A	torsin family 1, member A (torsin A)	-30.7
TP53BP1	tumor protein p53 binding protein 1	-12.7
TP53INP2	tumor protein p53 inducible nuclear protein 2	-36.6
TPST2	tyrosylprotein sulfotransferase 2	-38.2
TRAF3IP1	TNF receptor-associated factor 3 interacting protein 1	-26.6
TRIM37	tripartite motif containing 37	-45.7
TRPC1	transient receptor potential cation channel, subfamily C, member 1	-39.1
TSC22D1	TSC22 domain family, member 1	-34.2
TSN	translin	-24.5
TSNAX	translin-associated factor X	-19
TTC39B	tetratricopeptide repeat domain 39B	-34.5
TULP4	tubby like protein 4	-16.2

TXN	thioredoxin	-36.6
UBA3	ubiquitin-like modifier activating enzyme 3	-33.8
UBE2K	ubiquitin-conjugating enzyme E2K	-36.2
UGP2	UDP-glucose pyrophosphorylase 2	-35.8
UQCRC1	ubiquinol-cytochrome c reductase core protein I	-46.5
UTRN	utrophin	-29.1
VAPB	VAMP (vesicle-associated membrane protein)-associated protein B and C	-33.1
VCPIP1	valosin containing protein (p97)/p47 complex interacting protein 1	-30.4
VKORC1L1	vitamin K epoxide reductase complex, subunit 1-like 1	-32.4
VSNL1	visinin-like 1	-12.9
WDR13	WD repeat domain 13	-31.8
WDR37	WD repeat domain 37	-29.5
WDR41	WD repeat domain 41	-49.8
WDR47	WD repeat domain 47	-32.1
WLS	wntless Wnt ligand secretion mediator	-28.4
WSB2	WD repeat and SOCS box containing 2	-30.6
WSCD2	WSC domain containing 2	-16.9
YME1L1	YME1-like 1 ATPase	-29.1
YWHAE	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon	-18.6
YWHAQ	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, theta	-35.7
ZBTB38	zinc finger and BTB domain containing 38	-24.4
ZHX1	zinc fingers and homeoboxes 1	-29.7
ZNF428	zinc finger protein 428	-29.9

Differential expression was determined using a 5% FDR. Bolded genes showed differential expression for more than one probeset, % change for the largest difference is shown.

Supplementary Table 4. Potential upstream molecular regulators of PV cell DEGs (A) and PC DEGs (B) in schizophrenia subjects.

A. PV cell upstream regulators

Upstream regulator	Molecule type	DEGs potentially regulated
Activated regulators		
RICTOR	mTORC2 signaling complex	35
IFNG	cytokine	75
KDM5A	transcription regulator	18
Cisplatin (drug)	tumor suppressor drug	44
CSF2	cytokine	24
E. coli B4 lipopolysaccharide	immune stimulant	16
STAT3	transcription regulator	28
EP300	transcription regulator	25
Inhibited regulators		
ADORA2A	adenosine receptor	16
BDNF	neurotrophic factor	25
NFE2L2	transcription regulator	28
1,2-dithiol-3-thione (drug)	ROS inhibiting drug	19
RB1	transcription regulator	26
INSR	insulin receptor	26

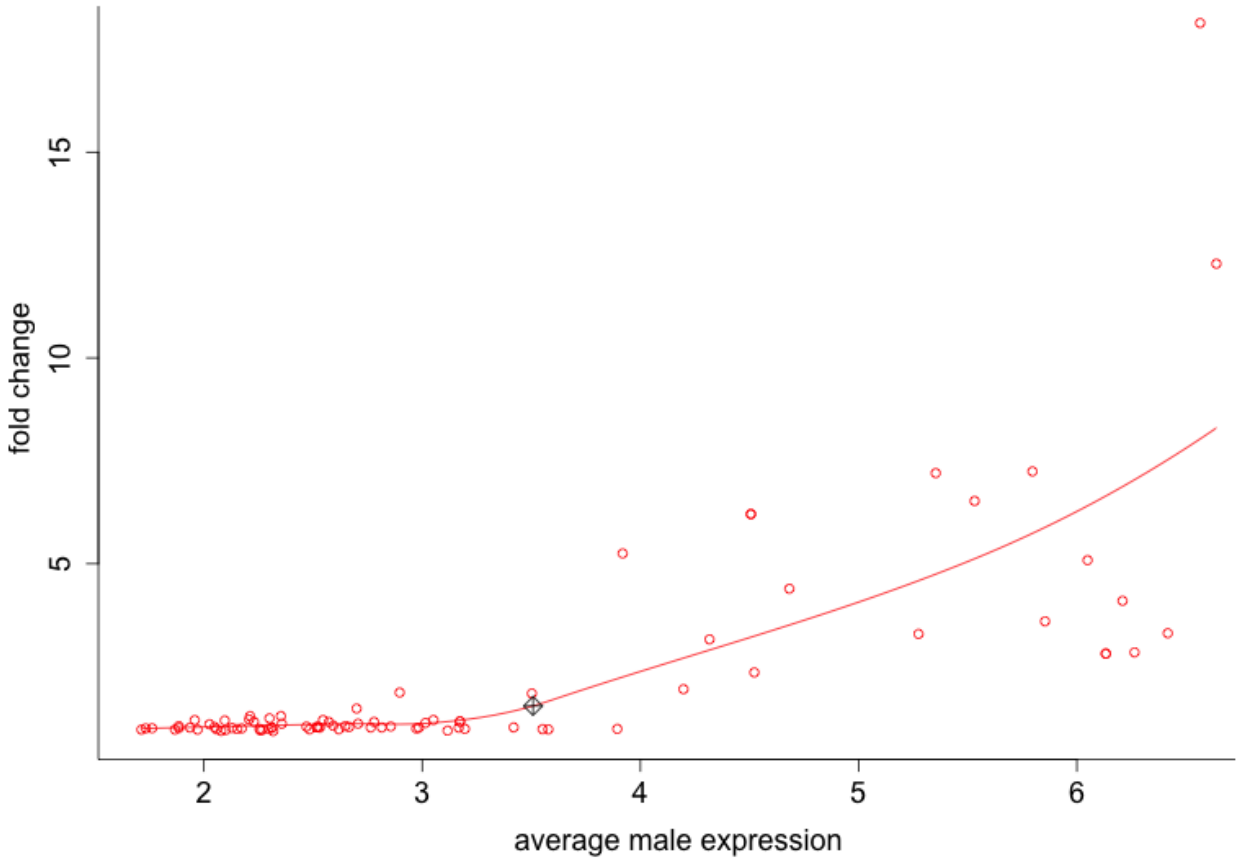
B. PC upstream regulators

Upstream regulator	Molecule type	DEGs potentially regulated
Activated regulators		
RICTOR	mTORC2 signaling complex	109
CD 437 (retinoid drug)	binds RXR	65
ST1926 (retinoid drug)	binds retinoid receptors	58
5-fluorouracil (drug)	nucleic acid synthesis inhibitor	61
Sirolimus (drug)	mTOR inhibitor	81
KDM5A	transcription regulator	37
CD3	immune transmembrane receptor	69
valproic acid (drug)	HDAC inhibitor	53
MAP4K4	kinase	23
CD28	immune transmembrane receptor	34
POR	electron transport protein	20
NR3C2	aldosterone/glucocorticoid nuclear receptor	15
Prednisolone (drug)	binds androgren receptor	27

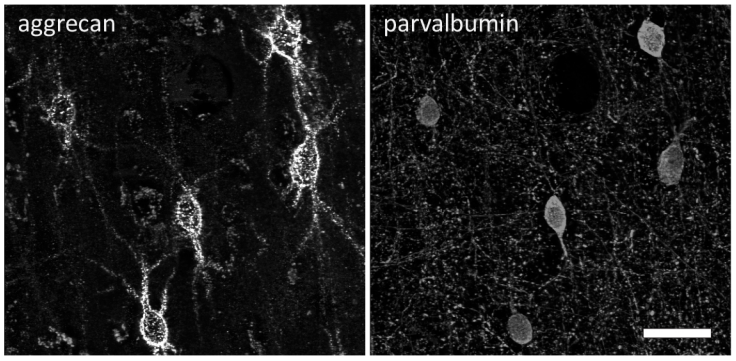
GnRH analog	gonadotropin-releasing hormone	43
cholesterol	lipid	17
PD98059 (drug)	kinase inhibitor	38
Inhibited regulators		
1,2-dithiol-3-thione (drug)	ROS inhibiting drug	46
NFE2L2	transcription regulator	57
RB1	transcription regulator	53
IGF1R	transmembrane receptor	37
Esrra	transcription regulator	19
MYCN	transcription regulator	48
VEGFA	growth factor	34
Bortezomib (drug)	proteasome activator	30
INSR	insulin receptor	46
pirinixic acid (drug)	ROS inhibiting drug	47
mono-(2-ethylhexyl)phthalate (drug)	ROS inhibiting drug	28
PPARGC1A	transcription regulator	30
hydrogen peroxide (drug)	ROS product	46
Mibolerone (drug)	inhibits androgen receptor	22
ARNT	transcription regulator	17
KRAS	enzyme	40
benzyloxycarbonyl-Leu-Leu-Leu aldehyde (drug)	protease inhibitor	32
Rosiglitazone (drug)	PPARGC1A activator	31
MYC	transcription regulator	94
HIF1A	transcription regulator	38
Curcumin (drug)	ROS inhibiting drug	31
Methylprednisolone (drug)	binds androgren receptor	48
beta-estradiol	binds estrogen receptor	130
BDNF	neurotrophic factor	33
Forskolin (drug)	activates adenylate cyclase	52
RAF1	kinase	19
XBP1	transcription regulator	23
SYVN1	transporter	18

Abbreviations: mTOR- mammalian target of rapamycin, ROS- reactive oxygen species, RXR- retinoid X receptor, HDAC- histone deacetylase

Supplementary Figure1



A



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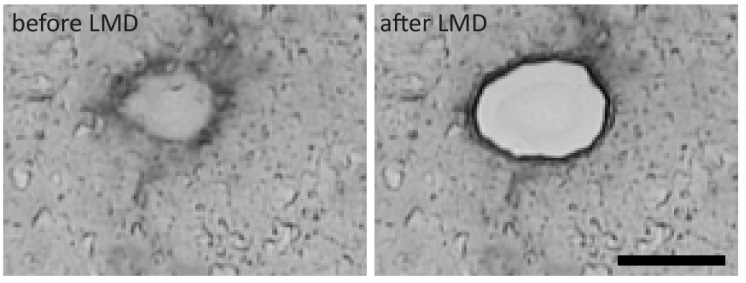

C

Gene Symbol	Gene Name	Fold enrichment	Cell type
PVALB	parvalbumin	29.4	PV
KCNS3	potassium voltage-gated channel, delayed-rectifier, subfamily S, member 3	16.4	PV
GAD1	glutamate decarboxylase 1 (brain, 67kDa)	39.3	GABA
GAD2	glutamate decarboxylase 2 (pancreatic islets and brain, 65kDa)	58	GABA
SLC32A1	solute carrier family 32 (GABA vesicular transporter), member 1; vGAT1	33.8	GABA
SLC6A1	solute carrier family 6 (neurotransmitter transporter, GABA), member 1; GAT1	56.6	GABA
ERBB4	v-erb-a erythroblastic leukemia viral oncogene homolog 4 (avian)	91	PV
SLC17A7	solute carrier family 17 (sodium-dependent inorganic phosphate cotransporter), member 7; vGLUT1	0.1	PC
NEUROD6	neuronal differentiation 6	0.05	PC

D