Table 2. Top Category III Candidate Genes

Mouse Accession Number	Symbol - Description	Brain Region FC P value	Stopped by Co-Treatment	Multiple Brain Region	Convergent Functional Genomics	Biolog
-	**Methamphetamine Changed**					
Upregulated						
AV372577	**NPY2R** neuropeptide Y receptor Y2	**NA** 1.32/ 1.52 0.00033/ 0.000054	YES		4q32.1 **BP** **D4S1629** **1.57 cM** (Willour et al 2003)	YES
AI841629	**GNAI2** guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2	**NA** 1.15/ 1.32 0.00090/ 0.00014	YES		3p21 **SZ** **D3S3521** **5.93 cM** (Lewis et al 2003)	YES
AB006361	**PTGDS** Prostaglandin D synthetase	**AMY** 1.41/ 1.32 0.000003/ 0.00044	YES		9q34.3 **SZ** **D9S1818** **7.34 cM** (Kaufmann et al 1998)	YES
M19279	**GUSB** glucuronidase, beta	**CP** 1.23/ 1.32 0.00047/ 0.00038	YES		7q11.21	YES
U40930	**SQSTM1** Sequestosome 1 ubiquitin-binding protein p62	**AMY** 1.23/ 1.32 0.00019/ 0.00074	YES		5q35.3	YES
AI844797	**SCN4B** sodium channel, voltage-gated, type IV, beta	**PFC** 1.52/ 1.62 0.000014/ 0.000002	YES		11q23.3 **SZ** **D11S1316** **9.76 cM** (Lewis et al 2003)	YES
X04017	**SPARC** secreted protein, acidic, cysteine-rich (osteonectin	**NA** 1.74/ 1.41 0.000002/ 0.000018	YES		5q33.1 **BP** **D5S410** **0.80 cM** (Gurling et al 2001), **SZ**	YES
X81580	**IGFBP2** insulin-like growth factor binding protein 2	**CP** 2.14/ 1.23 0/ 0.00079	YES		2q35 **MDD** **D2S2944** **1.94 cM** (Philibert et al 2003)	YES
L07264	**DTR** (HB-EGF) diphtheria toxin receptor	**CP** 1.32/ 1.52 0.00013/ 0.00038	YES		5q31.2 **SZ** **D5S399** **1.28 cM** (Schwab et al 1997)	YES
Downregulated						
L25274	**ALCAM** activated leukocyte cell adhesion molecule	**PFC** METH 0.76/ 0.71 0.00029/ 0.000006	YES	**AMY** VPA IV 0.66/ 0.5 0.000001/ 0.000018 **VT** METH IV 0.76/ 0.62 0.00033/ 0	3q13.1 **SZ** **D3S1310** **7.08 cM** (Jonsson et al 1999)	YES
AI852174	**CHN1** Chimerin 1	**NA** METH 0.58/ 0.76 0/ 0.000008	YES	**AMY** VPA IV 0.81/ 0.33 0.000034/ 0 **CP** VPA IV 1.41/ 4.29 0.000001/ 0	2q31.1 **BP** **D2S1391** **7.48 cM** (Ewald et al 2003)	YES
AW050231	**MAPT** microtubule-associated protein tau	**AMY** 0.76/ 0.71 0.000001/ 0.000002	YES		17q21.31 **BP** **D17S1860** **0.69 cM** (Segurado et al 2003)	YES
AW050323	**SYNPO** synaptopodin	**PFC** 0.76/ 0.81 0.000031/ 0.00023	YES		5q33.1 **BP** **D5S410** **1.62 cM** (Gurling et al 2003), **SZ**	YES
	Valproate Changed					
Upregulated						
AB005664	**JNK2** (MAPK9) c-Jun N-terminal kinase 2	**CP** 1.52/ 1.74 0.000115/ 0.000007	YES	**AMY** IV 0.81/ 0.5 0.00089/ 0.0018	5q35	YES

X95818	**SYP** synaptophysin	**AMY** 1.41/ 1.52 0.000047/ 0.00065	YES		xp11.23-p11.22 **SZ** (Zandi et l 2003, Wei et al 2000 – cited in paper)	YES
AW125370	**NCS-1** (FREQ) neuronal calcium sensor	**AMY** 1.23/ 1.52 0.000043/ 0.00029	YES		9q34.11 **SZ** **D9S1825** **6.75 cM** (Kaufmann et al 1998)	YES
U58513	**ROCK-2** Rho-associated, coiled-coil containing protein kinase 2	**PFC** 1.41/ 1.32 0.0030/ 0.00065	YES	**AMY** IV 0.81/ 0.62 0.0022/ 0.00023	2p24	YES
M35725	**SOD1** Cu-Zn superoxide dismutase	**AMY** 1.32/ 1.87 0.00090/ 0.000006	YES		21q22.11	YES
M55669	**PCSK2** prohormone convertase 2	**AMY** 1.32/ 1.62 0.00057/ 0.0024	YES		20p12.1 **BP** **D20S190** **6.77 cM** (Willour et al 2003)	YES
Downregulated						
M16472	**PLP1** proteolipid protein (myelin)	**AMY** 0.81/ 0.29 0.000001/ 0	YES	**CP** IV 1.32/ 4.59 0.000001/ 0	Xq22.2	YES
AI846289	**CSNK1D** casein kinase 1, delta	**AMY** 0.76/ 0.66 0.000025/ 0.000092	YES	**CP** IV 1.52/ 1.52 0.000092/ 0.00013	17q25.3	YES
U60150	**VAMP2** synaptobrevin vesicle-associated membrane protein 2	**AMY** 0.71/ 0.5 0.00053/ 0.00060	YES	**CP** IV 1.74/ 6.06 0.000001/ 0.000008	17p13.1	YES
X61455	**NAPB** (beta-SNAP) N-ethylmaleimide-sensitive factor attachment protein, beta	**AMY** 0.76/ 0.5 0.00013/ 0.000054	YES		20p11.21 **SZ** **D20S190** **1.89 cM** (Lewis et al 2003)	YES
AV004774	**GRM3** glutamate receptor, metabotropic 3	**PFC** 0.71/ 0.47 0.0017/ 0.000098	YES		7q21.12 **SZ** **D7S2212** **3.21 cM** (Yan et al 2000)	YES
AI788757	**CCR4** (NOC) chemokine (C-C motif) receptor 4 nocturnin	**AMY** 0.41/ 0.71 0.000037/ 0.0021	YES		3p24 **SZ** **D3S3521** **5.78 cM** (Lewis et al 2003)	YES
AB003433	**CRY2** cryptochrome 2	**AMY** 0.66/ 0.62 0.00027/ 0.00049	YES	**CP** IV 1.74/ 2 0.000013/ 0.000019	11p11.2	YES
AI853311	**NDRG4** N-myc downstream regulated 4	**AMY** 0.76/ 0.44 0.000033/ 0.000001	YES	**CP** IV 1.51/ 3.73 0.000006/ 0.000001	16q21	YES
AW122015	**SPIN** spindlin	**AMY** 0.62/ 0.44 0.000021/ 0.00005	YES	**CP** IV 1.41/ 1.62 0.00024/ 0.000006	9q22.1 **BP** **D9S152** **7.23 cM** (Segurado et al 2003)	
AA637320	**IDS** iduronate 2-sulfatase	**AMY** 0.71/ 0.38 0.000004/ 0.000001	YES	**CP** IV 1.52/ 2.46 0.000007/ 0.000002	Xq28	
AF071313	**COPS3** COP9 (constitutive photomorphogenic) homolog, subunit 3 (Arabidopsis thaliana)	**CP** 0.76/ 0.66 0.0016/ 0.000019	YES	**AMY** IV 1.23/ 1.15 0.0017/ 0.000054	17p11.2 **BP** **D17S921** **6.4 cM** (Liu et al 2003)	
AF053473	**KIF5A** kinesin family member 5A	**AMY** 0.76/ 0.35 0.000006/ 0.000037	YES	**CP** IV 1.62/ 3.03 0.000002/ 0.000002	12q13.3	YES
U13836	**ATP6V0A1** ATPase, H+ transporting, lysosomal V0 subunit a isoform 1	**AMY** 0.76/ 0.47 0.00089/ 0.000001	YES	**CP** IV 1.41/ 3.25 0/ 0	17q21 **BP** **D17S1860** **1.22 cM**	

					(Segurado et al 2003)	
AV231065	**KIAA1363**	**AMY** 0.66/ 0.10 0.000003/ 0.000001	YES	**CP** IV 1.23/ 4.29 0.000153/ 0.000001	3q26.31 **BP** **D3S1565** **1.14 cM** (Cichon et al 2002)	
AW122655	**HIS1** cardiac lineage protein 1	**AMY** 0.76/ 0.71 0.00046/ 0.00084	YES	**CP** IV 1.52/ 2.83 0.0016/ 0.000004	17q21.31 **BP** **D17S1860** **0.35 cM** (Segurado et al 2003)	
AI838022	**ARF3** ADP-ribosylation factor 3	**AMY** 0.76/ 0.57 0.000025/ 0.000003	YES	**CP** IV 1.41/ 2.30 0.000002/ 0.000001	12q13.12	
AI507519	**DAPK1** death-associated protein kinase 1	**AMY** 0.87/ 0.81 0.0016/ 0.00035	YES		9q21.33 **SZ** **D9S922** **9 cM** (Hovatta et al 1999)	YES
AW048257	**PDE2A** Phosphodiesterase 2A	**AMY** 0.62/ 0.66 0.000012/ 0.000003	YES	**CP** IV 1.32/ 4.92 0.000068/ 0.000001	11q13.3	YES
L20343	**CACNB2** calcium channel, voltage-dependent, beta 2 subunit	**AMY** 0.66/ 0.54 0.00038/ 0.000059	YES	**CP** IV 1.15/ 2.46 0.0011/ 0.000001	10p12.33	YES
M14220	**NLK** neuroleukin	**CP** 0.71/ 0.57 0.00034/ 0.000007	YES		19q13.1	YES