Table S2. Mapping genes targeted by SNP sets to Mental and Brain and Nervous System Disorder categories. (Information obtained fron Nextbio database)

Gene	Disease	Score	Up/Down regulated	References
7SK	Autistic disorder	39	up-regulated	(1)
7SK	Encephalomyelopathy	32	up-regulated	(2)
7SK	Mood disorder	51	down-regulated	(3)
7SK	Multiple sclerosis	27	up-regulated	(4)
ABCC12	Alzheimer's disease	55	down-regulated	(5)
ABCC12	Dementia	55	down-regulated	(5)
ABCC12	Disorder of basal ganglia	2	up-regulated	(6)
ABCC12	Hypoxia of brain	8	up-regulated	(7)
ABCC12	Meningitis	14	up-regulated	(8)
ABCC12	Movement disorder	1	up-regulated	(6)
ABCC12	Multiple sclerosis	37	down-regulated	(9) (10)
ABCC12	Nerve injury	25	down-regulated	(11) (12) (13)
ABCC12	Neuropathy	14	down-regulated	(11) (14)
ABCC12	Parkinson's disease	10	up-regulated	(6)
ABCC12	Psychotic disorder	47	up-regulated	(15) (16) (17)
ABCC12	Schizophrenia	47	up-regulated	(15) (16) (17)
ARPC5L	Alzheimer's disease	26	down-regulated	(18)
ARPC5L	Amyotrophic lateral sclerosis	14	down-regulated	(19)
ARPC5L	Anxiety disorder	73	up-regulated	(20)
ARPC5L	Autistic disorder	45	down-regulated	(21) (22) (23)
ARPC5L	Cerebrovascular disease	45	up-regulated	(24)
ARPC5L	Chronic fatigue syndrome	100	down-regulated	(25)
ARPC5L	Dementia	26	down-regulated	(18)
ARPC5L	Developmental mental disorder	41	up-regulated	(22)
ARPC5L	Disorder of basal ganglia	74	down-regulated	(26) (27) (28) (29) (30) (6)
ARPC5L	Disorder of brain	38	up-regulated	(31) (32)
ARPC5L	Huntington's disease	85	down-regulated	(27) (29)
ARPC5L	Meningitis	69	down-regulated	(33) (8) (34) (35)
ARPC5L	Mental retardation	38	up-regulated	(22)
ARPC5L	Motor neuron disease	28	up-regulated	(36) (19)
ARPC5L	Movement disorder	71	down-regulated	(26) (27) (28) (29) (30) (6)
ARPC5L	Nerve injury	1	down-regulated	(19)
ARPC5L	Parkinson's disease	50	down-regulated	(26) (28) (30) (6)

ARPC5L	Prion disease	26	down-regulated	(37)
ARPC5L	Psychotic disorder	36	down-regulated	(15) (38)
ARPC5L	Schizophrenia	36	down-regulated	(15) (38)
ATP8A2	Alzheimer's disease	44	down-regulated	(39) (18) (5) (40)
ATP8A2	Autistic disorder	23	up-regulated	(1)
ATP8A2	Cerebrovascular disease	29	down-regulated	(41)
ATP8A2	Dementia	43	down-regulated	(39) (18) (5) (40)
ATP8A2	Disorder of basal ganglia	84	down-regulated	(10) (26) (42) (28) (29) (6)
ATP8A2	Encephalitis	46	down-regulated	(43)
ATP8A2	Encephalomyelopathy	37	up-regulated	(44)
ATP8A2	Huntington's disease	80	down-regulated	(27) (29)
ATP8A2	Hypoxia of brain	32	down-regulated	(41)
ATP8A2	Meningitis	55	up-regulated	(33) (8) (35) (45)
ATP8A2	Movement disorder	81	down-regulated	(10) (26) (42) (28) (29) (6)
ATP8A2	Nerve injury	31	up-regulated	(12)
ATP8A2	Neuropathy	33	down-regulated	(46) (47)
ATP8A2	Parkinson's disease	84	down-regulated	(10) (48) (26) (42) (28) (6)
ATP8A2	Prion disease	40	down-regulated	(49)
ATP8A2	Psychotic disorder	30	0.0001 p-value	(38)
ATP8A2	Schizophrenia	30	0.0001 p-value	(38)
ATP8A2	Sleep disorder	34	down-regulated	(50)
C14orf102	Alzheimer's disease	48	up-regulated	(51) (5) (52)
C14orf102	Anxiety disorder	17	up-regulated	(20)
C14orf102	Autistic disorder	27	up-regulated	(1)
C14orf102	Cerebrovascular disease	20	down-regulated	(41)
C14orf102	Dementia	48	up-regulated	(51) (5) (52)
C14orf102	Disorder of basal ganglia	18	up-regulated	(10) (26) (27)
C14orf102	Huntington's disease	24	down-regulated	(10) (27)
C14orf102	Hypoxia of brain	22	down-regulated	(41)
C14orf102	Meningitis	51	up-regulated	(8) (53)
C14orf102	Movement disorder	15	up-regulated	(10) (26) (27)
C14orf102	Neural tube defect	42	down-regulated	(54)
C14orf102	Neuropathy	14	down-regulated	(55) (47)
C14orf102	Parkinson's disease	8	up-regulated	(26)
C14orf102	Psychotic disorder	20	0.0002 p-value	(38)
C14orf102	Schizophrenia	21	0.0002 p-value	(38)
C14orf102	Sleep disorder	42	down-regulated	(56)

C20orf78	Anxiety disorder	32	down-regulated	(20)
C20orf78	Disorder of basal ganglia	42	down-regulated	(29)
C20orf78	Huntington's disease	55	down-regulated	(29)
C20orf78	Movement disorder	39	down-regulated	(29)
C20orf78	Psychotic disorder	35	up-regulated	(57) (38)
C20orf78	Schizophrenia	35	up-regulated	(57) (38)
C4orf37	Autistic disorder	3	up-regulated	(23)
C4orf37	Meningitis	10	up-regulated	(8)
C4orf37	Multiple sclerosis	14	up-regulated	(9)
C4orf37	Psychotic disorder	1	down-regulated	(16)
C4orf37	Schizophrenia	1	down-regulated	(16)
C4orf37	Sleep disorder	16	up-regulated	(58)
C6orf138	Amnestic disorder	88	up-regulated	(59)
C6orf138	Cerebrovascular disease	48	down-regulated	(41)
C6orf138	Disorder of basal ganglia	62	down-regulated	(10)
C6orf138	Huntington's disease	54	down-regulated	(10)
C6orf138	Hypoxia of brain	51	down-regulated	(41)
C6orf138	Meningitis	75	down-regulated	(8) (45)
C6orf138	Movement disorder	59	down-regulated	(10)
C6orf138	Multiple sclerosis	71	down-regulated	(10) (4)
C6orf138	Nerve injury	46	down-regulated	(60) (12) (61)
C6orf138	Neuropathy	83	down-regulated	(47)
C6orf138	Parkinson's disease	63	down-regulated	(10)
CHST9	Alzheimer's disease	21	up-regulated	(5) (52)
CHST9	Amnestic disorder	79	down-regulated	(59)
CHST9	Amyotrophic lateral sclerosis	37	down-regulated	(10)
CHST9	Dementia	21	up-regulated	(5) (52)
CHST9	Disorder of basal ganglia	33	up-regulated	(10) (29)
CHST9	Huntington's disease	47	up-regulated	(10) (29)
CHST9	Meningitis	31	up-regulated	(8)
CHST9	Motor neuron disease	46	down-regulated	(10) (62)
CHST9	Movement disorder	30	up-regulated	(10) (29)
CHST9	Multiple sclerosis	56	up-regulated	(63) (64) (65)
CHST9	Nerve injury	24	down-regulated	(11) (12) (13)
CHST9	Neuropathy	11	down-regulated	(11)
CHST9	Psychotic disorder	69	down-regulated	(38) (66)
CHST9	Schizophrenia	69	down-regulated	(38) (66)
CSMD1	Alzheimer's disease	38	8.7E-6 p-value	(40) (67) (68) (69)
CSMD1	Attention deficit hyperactivity disorder	35		(70)
CSMD1	Autistic disorder	38	down-regulated	(71) (23)
CSMD1	Cerebrovascular disease	10	5.4E-5 p-value	(72)

CSMD1	Dementia	37	8.7E-6 p-value	(40) (67) (68) (69)
CSMD1	Disorder of basal ganglia	49	down-regulated	(10) (26) (28) (29) (73)
CSMD1	Huntington's disease	33	down-regulated	(10) (29)
CSMD1	Hypoxia of brain	13	5.4E-5 p-value	(72)
CSMD1	Meningitis	28	up-regulated	(33) (8)
CSMD1	Mood disorder	38	3.6E-6 p-value	(74) (75) (76) (77)
CSMD1	Movement disorder	46	down-regulated	(10) (26) (28) (29) (73)
CSMD1	Multiple sclerosis	45	up-regulated	(10) (64) (78)
CSMD1	Nerve injury	23	down-regulated	(11) (12)
CSMD1	Neuropathy	29	down-regulated	(60) (11) (47)
CSMD1	Parkinson's disease	49	down-regulated	(10) (26) (28) (73)
CSMD1	Psychotic disorder	71	down-regulated	(79) (38) (66) (80)
CSMD1	Schizophrenia	71	down-regulated	(79) (38) (66) (80)
DKK4	Autistic disorder	33	up-regulated	(23)
DKK4	Disorder of basal ganglia	1	up-regulated	(6)
DKK4	Encephalomyelopathy	3	up-regulated	(2)
DKK4	Meningitis	28	down-regulated	(8)
DKK4	Mood disorder	43	down-regulated	(17) (3)
DKK4	Movement disorder	1	up-regulated	(6)
DKK4	Multiple sclerosis	4	up-regulated	(81)
DUSP4	Alzheimer's disease	1	down-regulated	(5) (52)
DUSP4	Anxiety disorder	38	up-regulated	(20)
DUSP4	Cerebrovascular disease	6	up-regulated	(41)
DUSP4	Disorder of basal ganglia	38	down-regulated	(48) (26) (27) (29) (6)
DUSP4	Disorder of brain	46	down-regulated	(32)
DUSP4	Encephalitis	29	up-regulated	(82)
DUSP4	Encephalomyelopathy	31	down-regulated	(83)
DUSP4	Huntington's disease	46	down-regulated	(27) (29)
DUSP4	Hypoxia of brain	16	up-regulated	(84) (41)
DUSP4	Meningitis	53	up-regulated	(8) (35) (53) (45)
DUSP4	Mood disorder	23	down-regulated	(85) (86)
DUSP4	Movement disorder	35	down-regulated	(48) (26) (27) (29) (6)
DUSP4	Multiple sclerosis	11	down-regulated	(63) (65)
DUSP4	Nerve injury	20	up-regulated	(12) (87) (88) (61) (13) (89)

DUSP4	Neural tube defect	29	down-regulated	(54)
DUSP4	Neuropathy	17	down-regulated	(60) (90) (88) (47) (89)
DUSP4	Paralytic syndrome	24	up-regulated	(91)
DUSP4	Parkinson's disease	12	down-regulated	(48) (26) (6)
DUSP4	Psychotic disorder	22	down-regulated	(15) (66)
DUSP4	Schizophrenia	22	down-regulated	(15) (66)
DUSP4	Sleep disorder	91	up-regulated	(56) (50) (58)
DUSP4	Spinocerebellar ataxia	51	down-regulated	(83)
EML5	Alzheimer's disease	11	down-regulated	(52)
EML5	Amnestic disorder	45	up-regulated	(92)
EML5	Dementia	11	down-regulated	(52)
EML5	Disorder of basal ganglia	66	up-regulated	(10) (26) (29)
EML5	Huntington's disease	78	up-regulated	(10) (29)
EML5	Meningitis	73	down-regulated	(8) (93) (35) (53) (45)
EML5	Movement disorder	63	up-regulated	(10) (26) (29)
EML5	Nerve injury	77	down-regulated	(60) (11) (12) (94) (95)
EML5	Neuropathy	73	down-regulated	(60) (11) (94)
EML5	Parkinson's disease	30	up-regulated	(26)
EML5	Psychotic disorder	79	9.5E-7 p-value	(38) (96)
EML5	Schizophrenia	79	9.5E-7 p-value	(38) (96)
EML5	Sleep disorder	76	down-regulated	(56) (50)
EVI5	Amnestic disorder	65	up-regulated	(97)
EVI5	Anxiety disorder	14	up-regulated	(98)
EVI5	Autistic disorder	29	up-regulated	(71) (1)
EVI5	Cerebral palsy	17	up-regulated	(99)
EVI5	Disorder of basal ganglia	34	up-regulated	(10) (48) (26) (27) (29)
EVI5	Huntington's disease	39	up-regulated	(10) (27) (29)
EVI5	Meningitis	49	up-regulated	(100) (33) (8) (34) (35) (45)
EVI5	Mood disorder	25	down-regulated	(101) (3)
EVI5	Motor neuron disease	3	down-regulated	(36) (62)
EVI5	Movement disorder	31	up-regulated	(10) (48) (26) (27) (29)
EVI5	Multiple sclerosis	100	6.5E-12 p-value	(102) (103) (104)
EVI5	Nerve injury	72	up-regulated	(12) (88) (105) (106)

				(107) (95)
EVI5	Neural tube defect	25	up-regulated	(54)
EVI5	Neuropathy	4	up-regulated	(90) (88)
EVI5	Parkinson's disease	23	down-regulated	(48) (26)
EVI5	Psychotic disorder	61	up-regulated	(108) (38) (17)
EVI5	Schizophrenia	62	up-regulated	(108) (38) (17)
EVI5	Sleep disorder	42	up-regulated	(56) (58)
FAM69A	Alzheimer's disease	1	down-regulated	(18)
FAM69A	Autistic disorder	1	down-regulated	(71)
FAM69A	Cerebral palsy	32	down-regulated	(99)
FAM69A	Dementia	1	down-regulated	(18)
FAM69A	Disorder of basal ganglia	1	up-regulated	(28) (109)
FAM69A	Disorder of brain	29	up-regulated	(31) (32)
FAM69A	Encephalitis	44	down-regulated	(110) (82)
FAM69A	Encephalomyelitis	29	down-regulated	(110)
FAM69A	Encephalomyelopathy	9	down-regulated	(91) (110)
FAM69A	Meningitis	7	down-regulated	(33)
FAM69A	Mood disorder	1	down-regulated	(85)
FAM69A	Motor neuron disease	1	up-regulated	(62)
FAM69A	Movement disorder	1	up-regulated	(28) (109)
FAM69A	Multiple sclerosis	90	0.8E-7 p-value	(102) (103)
FAM69A	Myoneural disorder	40	up-regulated	(111)
FAM69A	Nerve injury	17	down-regulated	(112) (87) (95)
FAM69A	Neuropathy	11	up-regulated	(91) (111)
FAM69A	Paralytic syndrome	20	down-regulated	(91)
FAM69A	Parkinson's disease	5	up-regulated	(28) (109)
FAM69A	Prion disease	6	down-regulated	(113)
FAM69A	Psychotic disorder	51	0.0E-6 p-value	(108) (38)
FAM69A	Schizophrenia	51	0.0E-6 p-value	(108) (38)
FAM69A	Sleep disorder	39	down-regulated	(56) (50)
FOXR2	Nerve injury	83	up-regulated	(11) (89)
FOXR2	Neuropathy	86	up-regulated	(11) (89)
GOLGA1	Alzheimer's disease	24	0.0007 p-value	(40)
GOLGA1	Autistic disorder	44	down-regulated	(23)
GOLGA1	Dementia	24	0.0007 p-value	(40)
GOLGA1	Disorder of basal ganglia	55	up-regulated	(10) (26) (28) (29)
GOLGA1	Disorder of brain	50	down-regulated	(31)
GOLGA1	Encephalomyelopathy	51	down-regulated	(114)
GOLGA1	Huntington's disease	52	up-regulated	(29)
GOLGA1	Meningitis	51	down-regulated	(100)
GOLGA1	Movement disorder	52	up-regulated	(10) (26) (28) (29)
GOLGA1	Multiple sclerosis	33	down-regulated	(81)

GOLGA1	Nerve injury	66	down-regulated	(12) (89)
GOLGA1	Neuropathy	35	down-regulated	(47) (89)
GOLGA1	Paralytic syndrome	61	up-regulated	(91)
GOLGA1	Parkinson's disease	55	up-regulated	(10) (26) (28)
GOLGA1	Psychotic disorder	50	0.0002 p-value	(38)
GOLGA1	Schizophrenia	51	0.0002 p-value	(38)
GOLGA1	Sleep disorder	91	down-regulated	(50)
GP2	Alzheimer's disease	1	up-regulated	(18)
GP2	Amnestic disorder	20	up-regulated	(115)
GP2	Anxiety disorder	1	down-regulated	(20)
GP2	Dementia	1	up-regulated	(18)
GP2	Disorder of basal ganglia	1	down-regulated	(27)
GP2	Huntington's disease	1	down-regulated	(27)
GP2	Meningitis	9	down-regulated	(8) (34)
GP2	Movement disorder	1	down-regulated	(27)
GP2	Nerve injury	35	down-regulated	(88)
GP2	Neuropathy	38	down-regulated	(88)
GP2	Psychotic disorder	12	up-regulated	(17)
GP2	Schizophrenia	12	up-regulated	(17)
GPR119	Alzheimer's disease	59	7.8E-5 p-value	(116)
GPR119	Anxiety disorder	48	down-regulated	(20)
GPR119	Dementia	58	7.8E-5 p-value	(116)
GPR119	Nerve injury	27	up-regulated	(11)
GPR119	Neuropathy	29	up-regulated	(11)
HACE1	Alzheimer's disease	1	down-regulated	(39) (5) (40) (69)
HACE1	Autistic disorder	1	up-regulated	(21)
HACE1	Cerebrovascular disease	1	up-regulated	(24)
HACE1	Dementia	1	down-regulated	(39) (5) (40) (69)
HACE1	Disorder of basal ganglia	11	down-regulated	(117) (26) (27) (28) (29)
HACE1	Encephalitis	1	down-regulated	(82)
HACE1	Huntington's disease	16	down-regulated	(117) (27) (29)
HACE1	Meningitis	3	up-regulated	(8) (45)
HACE1	Mood disorder	1	0.0003 p-value	(74)
HACE1	Movement disorder	8	down-regulated	(117) (26) (27) (28) (29)
HACE1	Multiple sclerosis	1	up-regulated	(78)
HACE1	Nerve injury	6	up-regulated	(12) (88) (105) (107)
HACE1	Neuropathy	1	down-regulated	(60) (88)
HACE1	Parkinson's disease	1	down-regulated	(26) (28)
HACE1	Psychotic disorder	7	0.5E-6 p-value	(108)

HACE1	Schizophrenia	7	0.5E-6 p-value	(108)
HACE1	Sleep disorder	8	up-regulated	(58)
HPGDS	Alzheimer's disease	37	4.0E-5 p-value	(118)
HPGDS	Amnestic disorder	49	up-regulated	(115) (59)
HPGDS	Anxiety disorder	27	up-regulated	(20)
HPGDS	Cerebral palsy	54	up-regulated	(99)
HPGDS	Childhood disorder of conduct and emotion	59	down-regulated	(119) (120)
HPGDS	Dementia	37	4.0E-5 p-value	(118)
HPGDS	Disorder of basal ganglia	37	down-regulated	(48) (27) (121)
HPGDS	Disorder of brain	44	down-regulated	(122)
HPGDS	Huntington's disease	42	down-regulated	(27) (121)
HPGDS	Meningitis	23	down-regulated	(33)
HPGDS	Movement disorder	34	down-regulated	(48) (27) (121)
HPGDS	Multiple sclerosis	13	up-regulated	(78)
HPGDS	Nerve injury	78	up-regulated	(112) (12) (87) (95) (13) (89)
HPGDS	Neuropathy	43	down-regulated	(60) (90) (46) (89)
HPGDS	Parkinson's disease	29	down-regulated	(48)
HPGDS	Prion disease	75	up-regulated	(37) (113)
HPGDS	Psychotic disorder	16	0.0003 p-value	(38)
HPGDS	Schizophrenia	16	0.0003 p-value	(38)
HPGDS	Sleep disorder	45	down-regulated	(50)
IGSF1	Amnestic disorder	39	up-regulated	(92) (97)
IGSF1	Autistic disorder	20	up-regulated	(23) (1)
IGSF1	Disorder of basal ganglia	60	up-regulated	(10) (48) (42) (27) (28) (29)
IGSF1	Disorder of brain	16	up-regulated	(32)
IGSF1	Encephalitis	47	down-regulated	(43)
IGSF1	Encephalomyelopathy	20	up-regulated	(2)
IGSF1	Epilepsy	14	up-regulated	(123)
IGSF1	Huntington's disease	70	up-regulated	(10) (27) (29)
IGSF1	Meningitis	31	up-regulated	(33) (8)
IGSF1	Mood disorder	6	up-regulated	(124)
IGSF1	Motor neuron disease	21	up-regulated	(62)
IGSF1	Movement disorder	57	up-regulated	(10) (48) (42) (27) (28) (29)
IGSF1	Multiple sclerosis	1	up-regulated	(9)
IGSF1	Nerve injury	48	down-regulated	(112) (11) (12) (87) (107) (89)

IGSF1	Neuropathy	32	down-regulated	(11) (88) (47) (89)
IGSF1	Parkinson's disease	29	down-regulated	(48) (42) (28)
IGSF1	Psychotic disorder	17	up-regulated	(38) (17)
IGSF1	Schizophrenia	18	up-regulated	(38) (17)
IGSF1	Sleep disorder	84	down-regulated	(56) (58)
ITFG1	Alzheimer's disease	44	down-regulated	(18) (5) (52)
ITFG1	Autistic disorder	12	down-regulated	(1)
ITFG1	Cerebral palsy	27	up-regulated	(125)
ITFG1	Cerebrovascular disease	9	down-regulated	(24) (41)
ITFG1	Chronic fatigue syndrome	78	up-regulated	(25)
ITFG1	Dementia	43	down-regulated	(18) (5) (52)
ITFG1	Disorder of basal ganglia	78	down-regulated	(10) (26) (28) (29) (6)
ITFG1	Disorder of brain	20	up-regulated	(31) (32)
ITFG1	Encephalomyelopathy	21	down-regulated	(83) (91)
ITFG1	Epilepsy	8	down-regulated	(123)
ITFG1	Huntington's disease	86	down-regulated	(10) (117) (29)
ITFG1	Hypoxia of brain	2	down-regulated	(41)
ITFG1	Meningitis	44	up-regulated	(33) (8) (34)
ITFG1	Mood disorder	37	down-regulated	(85) (3)
ITFG1	Movement disorder	75	down-regulated	(10) (26) (28) (29) (6)
ITFG1	Multiple sclerosis	24	down-regulated	(9) (10) (63) (65)
ITFG1	Nerve injury	28	down-regulated	(112) (12) (88) (106) (95) (13)
ITFG1	Neuropathy	10	down-regulated	(11) (91) (88) (47)
ITFG1	Paralytic syndrome	42	down-regulated	(91)
ITFG1	Parkinson's disease	62	down-regulated	(26) (28) (6)
ITFG1	Prion disease	20	down-regulated	(37) (113)
ITFG1	Psychotic disorder	22	down-regulated	(15)
ITFG1	Schizophrenia	23	down-regulated	(15)
ITFG1	Sleep disorder	1	down-regulated	(56)
ITFG1	Spinocerebellar ataxia	16	up-regulated	(83)
MAGEH1	Anxiety disorder	46	up-regulated	(20)
MAGEH1	Autistic disorder	22	down-regulated	(1)
MAGEH1	Disorder of basal ganglia	44	up-regulated	(26) (27) (6)
MAGEH1	Encephalomyelopathy	33	down-regulated	(83) (2)
MAGEH1	Huntington's disease	48	up-regulated	(27)
MAGEH1	Meningitis	41	up-regulated	(8) (34)
MAGEH1	Mood disorder	8	down-regulated	(126)
MAGEH1	Movement disorder	41	up-regulated	(26) (27) (6)

MAGEH1	Myoneural disorder	54	up-regulated	(111)
MAGEH1	Nerve injury	57	down-regulated	(11) (88) (127) (105) (106) (13)
MAGEH1	Neuropathy	41	up-regulated	(11) (90) (88) (127) (128) (111)
MAGEH1	Paralytic syndrome	40	up-regulated	(91)
MAGEH1	Parkinson's disease	36	down-regulated	(26) (6)
MAGEH1	Prion disease	30	down-regulated	(37)
MAGEH1	Psychotic disorder	22	down-regulated	(57)
MAGEH1	Schizophrenia	23	down-regulated	(57)
MAGEH1	Spinocerebellar ataxia	43	down-regulated	(83)
NALCN	Alzheimer's disease	68	down-regulated	(5) (40) (67)
NALCN	Amnestic disorder	54	down-regulated	(115) (129)
NALCN	Anxiety disorder	56	up-regulated	(20)
NALCN	Cerebrovascular disease	23	down-regulated	(41)
NALCN	Dementia	67	down-regulated	(5) (40) (67)
NALCN	Disorder of basal ganglia	44	up-regulated	(10) (26) (121) (6)
NALCN	Epilepsy	76	3.6E-6 p-value	(130)
NALCN	Huntington's disease	47	up-regulated	(10) (121)
NALCN	Hypoxia of brain	25	down-regulated	(41)
NALCN	Meningitis	48	down-regulated	(100)
NALCN	Mood disorder	45	3.3E-5 p-value	(131) (74)
NALCN	Movement disorder	41	up-regulated	(10) (26) (121) (6)
NALCN	Multiple sclerosis	8	down-regulated	(78)
NALCN	Myoneural disorder	39	down-regulated	(132)
NALCN	Nerve injury	55	down-regulated	(112) (12) (87) (88) (106) (95)
NALCN	Neuropathy	40	down-regulated	(132) (88) (47) (89)
NALCN	Parkinson's disease	39	up-regulated	(26) (6)
NALCN	Prion disease	30	down-regulated	(113)
NALCN	Psychotic disorder	51	up-regulated	(38) (66)
NALCN	Schizophrenia	52	up-regulated	(38) (66)
NCAM1	Amnestic disorder	1	down-regulated	(115)
NCAM1	Autistic disorder	1	down-regulated	(23)
NCAM1	Dementia	1	up-regulated	(51) (40)
NCAM1	Disorder of basal ganglia	32	down-regulated	(10) (48) (26) (28) (29) (109)
NCAM1	Huntington's disease	36	up-regulated	(29) (121)
NCAM1	Meningitis	33	up-regulated	(33) (8) (34)

NCAM1	Movement disorder	29	down-regulated	(10) (48) (26) (28) (29) (109)
NCAM1	Parkinson's disease	23	up-regulated	(10) (48) (26) (42) (28) (109)
NCAM1	Psychotic disorder	16	down-regulated	(57) (38) (66)
NCAM1	Schizophrenia	17	down-regulated	(57) (38) (66)
NCAM1	Sleep disorder	11	down-regulated	(56) (58)
NETO2	Amnestic disorder	41	down-regulated	(59)
NETO2	Anxiety disorder	36	up-regulated	(133) (20)
NETO2	Dementia	43	down-regulated	(18) (5) (52)
NETO2	Disorder of basal ganglia	79	down-regulated	(10) (26) (28) (29) (121) (6)
NETO2	Huntington's disease	90	down-regulated	(10) (29) (121)
NETO2	Mood disorder	21	down-regulated	(85)
NETO2	Movement disorder	76	down-regulated	(10) (26) (28) (29) (121) (6)
NETO2	Nerve injury	54	down-regulated	(12) (88) (106) (107) (95)
NETO2	Parkinson's disease	48	down-regulated	(10) (48) (26) (28) (6)
NETO2	Psychotic disorder	32	up-regulated	(15) (16)
NETO2	Schizophrenia	32	up-regulated	(15) (16)
NETO2	Sleep disorder	52	up-regulated	(56) (50)
NTRK3	Alzheimer's disease	26	up-regulated	(39)
NTRK3	Amnestic disorder	59	up-regulated	(92) (115)
NTRK3	Autistic disorder	48	down-regulated	(22) (23)
NTRK3	Cerebral palsy	65	down-regulated	(125)
NTRK3	Cerebrovascular disease	33	down-regulated	(41)
NTRK3	Chronic fatigue syndrome	85	down-regulated	(25)
NTRK3	Dementia	26	up-regulated	(39)
NTRK3	Developmental mental disorder	50	down-regulated	(22)
NTRK3	Disorder of basal ganglia	69	down-regulated	(48) (26) (27) (28) (29) (30)
NTRK3	Encephalitis	68	down-regulated	(82)
NTRK3	Huntington's disease	76	down-regulated	(27) (29)
NTRK3	Hypoxia of brain	36	down-regulated	(41)
NTRK3	Meningitis	80	down-regulated	(33) (8) (34) (35) (45)
NTRK3	Mental retardation	48	down-regulated	(22)
NTRK3	Movement disorder	66	down-regulated	(48) (26) (27) (28)

				(29) (30)
NTRK3	Multiple sclerosis	56	up-regulated	(9) (81) (65)
NTRK3	Nerve injury	91	down-regulated	(11) (12) (127) (107) (95) (89)
NTRK3	Neural tube defect	53	up-regulated	(54)
NTRK3	Neuropathy	68	down-regulated	(11) (134) (127) (47) (14) (89)
NTRK3	Parkinson's disease	53	down-regulated	(48) (26) (28) (30)
NTRK3	Prion disease	63	up-regulated	(37)
NTRK3	Psychotic disorder	94	up-regulated	(57) (38) (80)
NTRK3	Schizophrenia	94	up-regulated	(57) (38) (80)
NTRK3	Sleep disorder	64	down-regulated	(56) (50)
OPN5	Disorder of basal ganglia	27	down-regulated	(10)
OPN5	Meningitis	70	up-regulated	(8) (34)
OPN5	Movement disorder	24	down-regulated	(10)
OPN5	Neuropathy	29	down-regulated	(60)
OPN5	Parkinson's disease	35	down-regulated	(10)
OPN5	Psychotic disorder	68	up-regulated	(17)
OPN5	Schizophrenia	68	up-regulated	(17)
PAGE3	Disorder of basal ganglia	77	down-regulated	(48)
PAGE3	Movement disorder	74	down-regulated	(48)
PAGE3	Parkinson's disease	85	down-regulated	(48)
PAGE5	Disorder of basal ganglia	52	down-regulated	(48) (29) (6)
PAGE5	Huntington's disease	36	down-regulated	(29)
PAGE5	Meningitis	47	down-regulated	(34)
PAGE5	Movement disorder	49	down-regulated	(48) (29) (6)
PAGE5	Multiple sclerosis	36	up-regulated	(4)
PAGE5	Parkinson's disease	56	down-regulated	(48) (6)
PAGE5	Psychotic disorder	86	up-regulated	(17)
PAGE5	Schizophrenia	87	up-regulated	(17)
PHKB	Alzheimer's disease	2	down-regulated	(39) (18)
PHKB	Anxiety disorder	12	up-regulated	(133)
PHKB	Autistic disorder	7	up-regulated	(21) (23)
PHKB	Cerebral palsy	36	down-regulated	(125) (99)
PHKB	Childhood disorder of conduct and emotion	16	up-regulated	(119)
PHKB	Chronic fatigue syndrome	67	up-regulated	(25)
PHKB	Dementia	2	down-regulated	(39) (18)
PHKB	Disorder of basal ganglia	35	down-regulated	(48) (117) (26) (27) (29) (6)

PHKB	Disorder of brain	2	up-regulated	(32)
PHKB	Encephalomyelopathy	26	down-regulated	(83) (91)
PHKB	Epilepsy	1	down-regulated	(123)
PHKB	Huntington's disease	29	up-regulated	(117) (27) (29)
PHKB	Meningitis	35	down-regulated	(100) (8) (35) (53)
PHKB	Movement disorder	32	down-regulated	(48) (117) (26) (27) (29) (6)
PHKB	Multiple sclerosis	1	down-regulated	(81)
PHKB	Nerve injury	25	down-regulated	(87) (88) (61) (106) (107) (89)
PHKB	Neuropathy	23	down-regulated	(11) (91) (88) (89)
PHKB	Paralytic syndrome	46	down-regulated	(91)
PHKB	Parkinson's disease	36	down-regulated	(48) (26) (28) (109) (30) (6)
PHKB	Prion disease	15	up-regulated	(49) (113)
PHKB	Sleep disorder	1	up-regulated	(50)
PHKB	Spinocerebellar ataxia	9	up-regulated	(83)
PPP1R1C	Attention deficit hyperactivity disorder	1	0.0003 p-value	(135)
PPP1R1C	Developmental mental disorder	11	down-regulated	(22)
PPP1R1C	Disorder of basal ganglia	1	up-regulated	(26)
PPP1R1C	Meningitis	8	up-regulated	(8)
PPP1R1C	Mental retardation	9	down-regulated	(22)
PPP1R1C	Mood disorder	1	0.0008 p-value	(74)
PPP1R1C	Movement disorder	1	up-regulated	(26)
PPP1R1C	Multiple sclerosis	11	up-regulated	(64) (78)
PPP1R1C	Myoneural disorder	20	down-regulated	(132)
PPP1R1C	Nerve injury	26	up-regulated	(112) (11) (105) (13)
PPP1R1C	Neural tube defect	27	down-regulated	(54)
PPP1R1C	Neuropathy	17	down-regulated	(11) (132) (47)
PPP1R1C	Parkinson's disease	1	up-regulated	(26)
PPP1R1C	Psychotic disorder	4	7.9E-5 p-value	(38)
PPP1R1C	Schizophrenia	4	7.9E-5 p-value	(38)
PSMC1	Alzheimer's disease	41	up-regulated	(39) (51)
PSMC1	Anxiety disorder	40	up-regulated	(98)
PSMC1	Autistic disorder	23	down-regulated	(1)
PSMC1	Cerebrovascular disease	54	down-regulated	(24)

PSMC1	Dementia	41	up-regulated	(39) (51)
PSMC1	Disorder of basal ganglia	59	down-regulated	(10) (26) (42) (27) (30) (6)
PSMC1	Huntington's disease	48	down-regulated	(27)
PSMC1	Hypoxia of brain	40	up-regulated	(136)
PSMC1	Movement disorder	56	down-regulated	(10) (26) (42) (27) (30) (6)
PSMC1	Nerve injury	34	down-regulated	(106)
PSMC1	Neuropathy	67	down-regulated	(90) (47)
PSMC1	Parkinson's disease	62	down-regulated	(10) (26) (42) (28) (30) (6)
PSMC1	Prion disease	82	down-regulated	(49) (37)
PSMC1	Psychotic disorder	39	down-regulated	(57) (38)
PSMC1	Schizophrenia	40	down-regulated	(57) (38)
PSMC1	Sleep disorder	27	down-regulated	(56)
PTBP2	Amnestic disorder	6	down-regulated	(115)
PTBP2	Amyotrophic lateral sclerosis	10	down-regulated	(10)
PTBP2	Anxiety disorder	45	up-regulated	(20)
PTBP2	Autistic disorder	14	up-regulated	(21) (71)
PTBP2	Cerebral palsy	28	up-regulated	(125)
PTBP2	Disorder of basal ganglia	51	down-regulated	(117) (26) (27) (28) (109) (6)
PTBP2	Encephalomyelopathy	11	down-regulated	(2) (91)
PTBP2	Epilepsy	23	0.0002 p-value	(137)
PTBP2	Huntington's disease	31	up-regulated	(117) (27)
PTBP2	Meningitis	51	down-regulated	(8) (93) (35) (45)
PTBP2	Mood disorder	56	down-regulated	(85) (77) (126) (138)
PTBP2	Motor neuron disease	22	down-regulated	(10) (36) (62)
PTBP2	Movement disorder	48	down-regulated	(117) (26) (27) (28) (109) (6)
PTBP2	Nerve injury	47	down-regulated	(12) (87) (88) (105) (107)
PTBP2	Neuropathy	26	down-regulated	(60) (90) (91) (88) (128) (47)
PTBP2	Paralytic syndrome	32	up-regulated	(91)
PTBP2	Parkinson's disease	57	down-regulated	(26) (28) (109) (6)

PTBP2	Prion disease	17	down-regulated	(113)
PTBP2	Psychotic disorder	42	up-regulated	(38) (16)
PTBP2	Schizophrenia	42	up-regulated	(38) (16)
PTBP2	Sleep disorder	1	down-regulated	(56)
RP11	Amnestic disorder	30	up-regulated	(92)
RP11	Anxiety disorder	64	down-regulated	(98) (20)
RP11	Autistic disorder	52	up-regulated	(21) (22)
RP11	Cerebrovascular disease	27	down-regulated	(24)
RP11	Developmental mental disorder	68	up-regulated	(22)
RP11	Disorder of basal ganglia	70	down-regulated	(117) (27) (28) (29) (109)
RP11	Disorder of brain	49	down-regulated	(139)
RP11	Encephalomyelopathy	39	up-regulated	(83) (91)
RP11	Huntington's disease	82	down-regulated	(117) (27) (29)
RP11	Hypoxia of brain	24	up-regulated	(7)
RP11	Meningitis	81	down-regulated	(100) (8) (53) (45)
RP11	Mental retardation	65	up-regulated	(22)
RP11	Mood disorder	17	up-regulated	(3)
RP11	Movement disorder	67	down-regulated	(117) (27) (28) (29) (109)
RP11	Nerve injury	25	up-regulated	(60) (12) (13)
RP11	Neuropathy	43	up-regulated	(60) (90) (46) (91) (128) (140)
RP11	Paralytic syndrome	49	up-regulated	(91)
RP11	Parkinson's disease	34	down-regulated	(28) (109)
RP11	Prion disease	48	down-regulated	(49)
RP11	Psychotic disorder	41	up-regulated	(17)
RP11	Schizophrenia	41	up-regulated	(17)
RP11	Sleep disorder	59	down-regulated	(50)
RP11	Spinocerebellar ataxia	44	up-regulated	(83)
RP13	Alzheimer's disease	51	down-regulated	(39) (51) (40) (52)
RP13	Attention deficit hyperactivity disorder	79		(70)
RP13	Autistic disorder	68	down-regulated	(21) (71)
RP13	Cerebrovascular disease	19	down-regulated	(24)
RP13	Dementia	51	down-regulated	(39) (51) (40) (52)
RP13	Developmental mental disorder	99		(141)

RP13	Disorder of basal ganglia	25	up-regulated	(29) (30)
RP13	Encephalitis	55	down-regulated	(82)
RP13	Encephalomyelopathy	24	up-regulated	(91)
RP13	Huntington's disease	27	up-regulated	(29)
RP13	Hypoxia of brain	33	down-regulated	(136)
RP13	Meningitis	71	up-regulated	(100) (33) (34) (45)
RP13	Mental retardation	97		(141)
RP13	Movement disorder	23	up-regulated	(29) (30)
RP13	Nerve injury	24	down-regulated	(88) (61) (13)
RP13	Neuropathy	16	up-regulated	(91) (88)
RP13	Paralytic syndrome	44	up-regulated	(91)
RP13	Parkinson's disease	21	down-regulated	(30)
RP13	Sleep disorder	29	down-regulated	(56)
RP4	Anxiety disorder	25	down-regulated	(20)
RP4	Autistic disorder	25	down-regulated	(22)
RP4	Cerebral palsy	46	down-regulated	(125)
RP4	Developmental mental disorder	32	down-regulated	(22)
RP4	Disorder of basal ganglia	8	down-regulated	(27) (6)
RP4	Encephalitis	33	down-regulated	(43)
RP4	Encephalomyelopathy	16	up-regulated	(114)
RP4	Huntington's disease	9	down-regulated	(27)
RP4	Meningitis	34	down-regulated	(8)
RP4	Mental retardation	29	down-regulated	(22)
RP4	Mood disorder	36	3.1E-5 p-value	(76)
RP4	Motor neuron disease	3	down-regulated	(62)
RP4	Movement disorder	5	down-regulated	(27) (6)
RP4	Nerve injury	31	down-regulated	(87) (88) (61) (89)
RP4	Neuropathy	27	down-regulated	(46) (88) (89)
RP4	Parkinson's disease	4	up-regulated	(6)
RPL35	Alzheimer's disease	2	up-regulated	(39)
RPL35	Amnestic disorder	20	up-regulated	(92)
RPL35	Autistic disorder	30	up-regulated	(21)
RPL35	Cerebrovascular disease	16	up-regulated	(24)
RPL35	Dementia	2	up-regulated	(39)
RPL35	Disorder of basal ganglia	26	up-regulated	(27) (29) (30)
RPL35	Encephalitis	29	down-regulated	(110)
RPL35	Encephalomyelitis	40	down-regulated	(110)
RPL35	Encephalomyelopathy	6	down-regulated	(110)
RPL35	Huntington's disease	35	up-regulated	(27) (29)
RPL35	Hypoxia of brain	10	up-regulated	(7)
RPL35	Meningitis	87	up-regulated	(33) (8) (34) (35) (45)

RPL35	Mood disorder	4	down-regulated	(3)
RPL35	Motor neuron disease	23	up-regulated	(36)
RPL35	Movement disorder	23	up-regulated	(27) (29) (30)
RPL35	Multiple sclerosis	3	up-regulated	(4)
RPL35	Myoneural disorder	27	up-regulated	(132)
RPL35	Nerve injury	26	up-regulated	(11) (12) (88) (127)
RPL35	Neuropathy	28	up-regulated	(11) (90) (132) (88) (127) (47)
RPL35	Parkinson's disease	4	down-regulated	(30)
RPL35	Prion disease	15	down-regulated	(37)
RPL35	Psychotic disorder	1	0.0008 p-value	(38)
RPL35	Schizophrenia	1	0.0008 p-value	(38)
RPL35	Sleep disorder	43	down-regulated	(50) (58)
RPL5	Alzheimer's disease	3	down-regulated	(52)
RPL5	Amyotrophic lateral sclerosis	29	down-regulated	(19)
RPL5	Autistic disorder	23	up-regulated	(21) (71)
RPL5	Cerebrovascular disease	6	up-regulated	(24)
RPL5	Dementia	3	down-regulated	(52)
RPL5	Disorder of basal ganglia	33	up-regulated	(26) (27) (28) (29)
RPL5	Disorder of brain	12	up-regulated	(32)
RPL5	Encephalitis	58	down-regulated	(110) (142) (82)
RPL5	Encephalomyelitis	37	down-regulated	(110)
RPL5	Encephalomyelopathy	2	down-regulated	(110)
RPL5	Huntington's disease	40	up-regulated	(27) (29)
RPL5	Hypoxia of brain	1	up-regulated	(7)
RPL5	Meningitis	52	down-regulated	(100) (33) (8) (93) (45)
RPL5	Motor neuron disease	38	down-regulated	(36) (19)
RPL5	Movement disorder	30	up-regulated	(26) (27) (28) (29)
RPL5	Multiple sclerosis	70	2.5E-6 p-value	(102) (103)
RPL5	Myoneural disorder	17	up-regulated	(111)
RPL5	Nerve injury	22	down-regulated	(12) (134) (19) (95)
RPL5	Neuropathy	7	up-regulated	(90) (134) (128) (111)
RPL5	Paralytic syndrome	17	up-regulated	(91)
RPL5	Parkinson's disease	18	up-regulated	(26) (28)
RPL5	Prion disease	13	down-regulated	(37)
RPL5	Psychotic disorder	54	2.2E-6 p-value	(108) (38)

RPL5	Schizophrenia	55	2.2E-6 p-value	(108) (38)
RPL5	Sleep disorder	24	down-regulated	(56) (50)
RRAGB	Alzheimer's disease	22	down-regulated	(39) (5)
RRAGB	Dementia	21	down-regulated	(39) (5)
RRAGB	Disorder of basal ganglia	36	down-regulated	(10) (26) (27) (28) (6)
RRAGB	Disorder of brain	17	up-regulated	(32)
RRAGB	Encephalitis	27	down-regulated	(82)
RRAGB	Encephalomyelopathy	6	down-regulated	(2)
RRAGB	Huntington's disease	19	down-regulated	(10) (27)
RRAGB	Meningitis	11	up-regulated	(8)
RRAGB	Mood disorder	1	up-regulated	(3)
RRAGB	Motor neuron disease	1	up-regulated	(62)
RRAGB	Movement disorder	33	down-regulated	(10) (26) (27) (28) (6)
RRAGB	Multiple sclerosis	9	down-regulated	(10)
RRAGB	Nerve injury	48	down-regulated	(60) (112) (87) (88) (106)
RRAGB	Neuropathy	6	down-regulated	(11) (88) (89)
RRAGB	Parkinson's disease	41	down-regulated	(10) (26) (28) (6)
RRAGB	Psychotic disorder	13	down-regulated	(15) (16)
RRAGB	Schizophrenia	13	down-regulated	(15) (16)
RRAGB	Sleep disorder	18	down-regulated	(58)
RYR3	Alzheimer's disease	26	down-regulated	(18) (40)
RYR3	Anxiety disorder	63	up-regulated	(133) (98)
RYR3	Autistic disorder	21	up-regulated	(1)
RYR3	Cerebral palsy	85	up-regulated	(99)
RYR3	Cerebrovascular disease	65	6.5E-6 p-value	(72)
RYR3	Dementia	25	down-regulated	(18) (40)
RYR3	Developmental mental disorder	36	down-regulated	(22)
RYR3	Disorder of basal ganglia	56	up-regulated	(29) (6)
RYR3	Disorder of brain	49	up-regulated	(32)
RYR3	Encephalitis	50	up-regulated	(110)
RYR3	Encephalomyelitis	61	up-regulated	(110)
RYR3	Encephalomyelopathy	34	up-regulated	(2) (110)
RYR3	Epilepsy	60	0.7E-5 p-value	(130)
RYR3	Huntington's disease	68	up-regulated	(29)
RYR3	Meningitis	57	up-regulated	(33) (35) (45)
RYR3	Mental retardation	34	down-regulated	(22)
RYR3	Mood disorder	57	8.3E-6 p-value	(143) (74)
RYR3	Movement disorder	53	up-regulated	(29) (6)

RYR3	Multiple sclerosis	24	up-regulated	(63) (65)
RYR3	Myoneural disorder	46	up-regulated	(132)
RYR3	Nerve injury	70	down-regulated	(112) (12) (94) (105) (106) (107)
RYR3	Neuropathy	44	down-regulated	(90) (46) (94) (132) (47)
RYR3	Parkinson's disease	10	up-regulated	(6)
RYR3	Prion disease	47	down-regulated	(37)
RYR3	Psychotic disorder	57	up-regulated	(144) (57) (15) (38) (145)
RYR3	Schizophrenia	58	up-regulated	(144) (57) (15) (38) (145)
RYR3	Sleep disorder	46	up-regulated	(56) (50)
SCAI	Alzheimer's disease	38	down-regulated	(39) (18) (40)
SCAI	Amyotrophic lateral sclerosis	41	up-regulated	(10)
SCAI	Autistic disorder	16	up-regulated	(21)
SCAI	Cerebrovascular disease	14	down-regulated	(41)
SCAI	Dementia	38	down-regulated	(39) (18) (40)
SCAI	Disorder of basal ganglia	77	down-regulated	(28) (29) (6)
SCAI	Huntington's disease	66	down-regulated	(29)
SCAI	Hypoxia of brain	17	down-regulated	(41)
SCAI	Meningitis	54	down-regulated	(8) (35)
SCAI	Mood disorder	26	down-regulated	(85) (3)
SCAI	Motor neuron disease	38	up-regulated	(10)
SCAI	Movement disorder	74	down-regulated	(28) (29) (6)
SCAI	Multiple sclerosis	3	down-regulated	(9)
SCAI	Nerve injury	41	up-regulated	(60) (12) (61)
SCAI	Neuropathy	14	up-regulated	(47)
SCAI	Parkinson's disease	78	down-regulated	(28) (6)
SCAI	Prion disease	43	up-regulated	(49) (113)
SCAI	Psychotic disorder	35	down-regulated	(57) (15) (38)
SCAI	Schizophrenia	35	down-regulated	(57) (15) (38)
SCAI	Sleep disorder	53	up-regulated	(56) (50) (58)
SEMA3A	Alzheimer's disease	1	5.9E-5 p-value	(40)
SEMA3A	Amnestic disorder	1	down-regulated	(59)
SEMA3A	Autistic disorder	1	down-regulated	(71)
SEMA3A	Childhood disorder of conduct and emotion	26	up-regulated	(119) (120)
SEMA3A	Dementia	1	5.9E-5 p-value	(40)
SEMA3A	Disorder of basal ganglia	7	down-regulated	(10) (48) (27) (121)

SEMA3A	Huntington's disease	17	down-regulated	(10) (27) (121)
SEMA3A	Lissencephaly	100		(146)
SEMA3A	Mood disorder	1	0.0003 p-value	(76)
SEMA3A	Motor neuron disease	1	up-regulated	(36)
SEMA3A	Movement disorder	4	down-regulated	(10) (48) (27) (121)
SEMA3A	Multiple sclerosis	1	up-regulated	(65) (78)
SEMA3A	Nerve injury	8	up-regulated	(11) (12) (88)
SEMA3A	Neuropathy	71	down-regulated	(11) (88) (47) (140)
SEMA3A	Parkinson's disease	1	up-regulated	(48)
SEMA3A	Prion disease	45	2.7E-6 p-value	(147)
SEMA3A	Psychotic disorder	26	down-regulated	(38) (66) (86)
SEMA3A	Schizophrenia	26	down-regulated	(38) (66) (86)
SEMA3A	Sleep disorder	30	up-regulated	(56) (50)
SLC20A2	Amnestic disorder	19	up-regulated	(59)
SLC20A2	Autistic disorder	7	up-regulated	(1)
SLC20A2	Disorder of basal ganglia	28	down-regulated	(10) (29) (6)
SLC20A2	Disorder of brain	26	up-regulated	(31) (32)
SLC20A2	Encephalomyelopathy	14	down-regulated	(2)
SLC20A2	Huntington's disease	29	down-regulated	(10) (29)
SLC20A2	Meningitis	8	up-regulated	(8) (53)
SLC20A2	Mood disorder	19	8.5E-5 p-value	(74)
SLC20A2	Motor neuron disease	5	down-regulated	(62)
SLC20A2	Movement disorder	25	down-regulated	(10) (29) (6)
SLC20A2	Multiple sclerosis	50	up-regulated	(9) (4) (65) (78)
SLC20A2	Nerve injury	50	up-regulated	(112) (12) (87) (88) (107) (95)
SLC20A2	Neuropathy	28	down-regulated	(148) (90) (88) (47) (14)
SLC20A2	Paralytic syndrome	24	down-regulated	(91)
SLC20A2	Parkinson's disease	24	down-regulated	(6)
SLC20A2	Prion disease	40	up-regulated	(49) (37)
SLC20A2	Psychotic disorder	17	up-regulated	(57) (17)
SLC20A2	Schizophrenia	17	up-regulated	(57) (17)
SLC20A2	Sleep disorder	10	down-regulated	(56)
SLC25A14	Alzheimer's disease	27	down-regulated	(39) (18) (116)
SLC25A14	Autistic disorder	1	down-regulated	(1)
SLC25A14	Cerebral palsy	20	down-regulated	(125)
SLC25A14	Dementia	26	down-regulated	(39) (18) (116)
SLC25A14	Disorder of basal ganglia	45	down-regulated	(10) (26) (42) (29) (6)
SLC25A14	Encephalitis	24	up-regulated	(142)

SLC25A14	Encephalomyelopathy	12	up-regulated	(83) (2)
SLC25A14	Huntington's disease	47	down-regulated	(10) (29)
SLC25A14	Meningitis	16	down-regulated	(8)
SLC25A14	Movement disorder	42	down-regulated	(10) (26) (42) (29) (6)
SLC25A14	Multiple sclerosis	2	down-regulated	(63) (78)
SLC25A14	Nerve injury	27	down-regulated	(12) (87) (94) (88) (107)
SLC25A14	Neuropathy	18	down-regulated	(94) (88) (128)
SLC25A14	Parkinson's disease	41	down-regulated	(10) (48) (26) (42) (6)
SLC25A14	Prion disease	29	down-regulated	(37)
SLC25A14	Psychotic disorder	25	up-regulated	(15) (17)
SLC25A14	Schizophrenia	25	up-regulated	(15) (17)
SLC25A14	Spinocerebellar ataxia	14	up-regulated	(83)
SMARCAD1	Alzheimer's disease	19	down-regulated	(39) (118)
SMARCAD1	Amnestic disorder	1	up-regulated	(92)
SMARCAD1	Anxiety disorder	28	up-regulated	(149)
SMARCAD1	Autistic disorder	1	down-regulated	(23) (1)
SMARCAD1	Cerebrovascular disease	11	up-regulated	(24)
SMARCAD1	Dementia	18	down-regulated	(39) (118)
SMARCAD1	Disorder of basal ganglia	1	up-regulated	(117) (27)
SMARCAD1	Encephalomyelopathy	1	down-regulated	(83)
SMARCAD1	Huntington's disease	11	up-regulated	(117) (27)
SMARCAD1	Meningitis	39	down-regulated	(100) (33) (8) (34)
SMARCAD1	Mood disorder	13	up-regulated	(149) (126) (3)
SMARCAD1	Movement disorder	1	up-regulated	(117) (27)
SMARCAD1	Nerve injury	17	down-regulated	(112) (11) (94) (88) (95)
SMARCAD1	Neuropathy	14	down-regulated	(11) (94) (88) (47)
SMARCAD1	Paralytic syndrome	11	up-regulated	(91)
SMARCAD1	Prion disease	12	down-regulated	(49)
SMARCAD1	Psychotic disorder	1	0.0002 p-value	(38)
SMARCAD1	Schizophrenia	1	0.0002 p-value	(38)
SMARCAD1	Sleep disorder	26	up-regulated	(56) (50)
SMARCAD1	Spinocerebellar ataxia	8	down-regulated	(83)
SNORA42	Attention deficit hyperactivity disorder	90	4.9E-6 p-value	(150)
SNORA42	Encephalomyelopathy	51	up-regulated	(2)
SNORA42	Neuropathy	52	up-regulated	(140)

SNORA66	Autistic disorder	33	down-regulated	(71)
SNORA66	Multiple sclerosis	100	2.5E-6 p-value	(102) (103)
SNORA66	Psychotic disorder	83	2.2E-6 p-value	(108) (38)
SNORA66	Schizophrenia	83	2.2E-6 p-value	(108) (38)
SNTG1	Alzheimer's disease	1	down-regulated	(18)
SNTG1	Cerebrovascular disease	1	down-regulated	(41)
SNTG1	Dementia	1	down-regulated	(18)
SNTG1	Developmental mental disorder	68	down-regulated	(151)
SNTG1	Disorder of basal ganglia	30	down-regulated	(10) (48) (26) (29)
SNTG1	Huntington's disease	38	down-regulated	(10) (29)
SNTG1	Hypoxia of brain	7	down-regulated	(84) (41)
SNTG1	Meningitis	1	up-regulated	(8)
SNTG1	Mental disorder	100	down-regulated	(151)
SNTG1	Movement disorder	27	down-regulated	(10) (48) (26) (29)
SNTG1	Multiple sclerosis	3	up-regulated	(9) (65)
SNTG1	Neuropathy	1	down-regulated	(47)
SNTG1	Parkinson's disease	13	down-regulated	(10) (48) (26)
SNTG1	Sleep disorder	5	down-regulated	(50)
SNX19	Disorder of basal ganglia	49	down-regulated	(26) (27) (29) (6)
SNX19	Encephalomyelopathy	12	down-regulated	(91)
SNX19	Huntington's disease	55	down-regulated	(27) (29)
SNX19	Meningitis	67	up-regulated	(100) (33) (53)
SNX19	Mood disorder	23	down-regulated	(126)
SNX19	Movement disorder	46	down-regulated	(26) (27) (29) (6)
SNX19	Multiple sclerosis	12	down-regulated	(81)
SNX19	Myoneural disorder	44	down-regulated	(111)
SNX19	Nerve injury	32	down-regulated	(11) (12) (127)
SNX19	Neuropathy	43	down-regulated	(11) (90) (46) (91) (127) (111)
SNX19	Paralytic syndrome	33	down-regulated	(91)
SNX19	Parkinson's disease	38	down-regulated	(26) (6)
SNX19	Prion disease	36	up-regulated	(37)
SNX19	Psychotic disorder	82	down-regulated	(57) (79) (38) (80)
SNX19	Schizophrenia	83	down-regulated	(57) (79) (38) (80)
SNX19	Sleep disorder	51	up-regulated	(56) (50) (58)
SOD3	Alzheimer's disease	1	down-regulated	(39) (40)

SOD3	Anxiety disorder	1	up-regulated	(152)
SOD3	Cerebrovascular disease	1	down-regulated	(24)
SOD3	Dementia	18	up-regulated	(153) (39) (40)
SOD3	Disorder of basal ganglia	1	up-regulated	(10) (29)
SOD3	Disorder of brain	1	down-regulated	(32) (122)
SOD3	Huntington's disease	1	up-regulated	(10) (29)
SOD3	Meningitis	2	down-regulated	(33) (8) (53)
SOD3	Motor neuron disease	1	down-regulated	(36)
SOD3	Movement disorder	1	up-regulated	(10) (29)
SOD3	Nerve injury	20	up-regulated	(112) (12) (87) (88) (107) (95)
SOD3	Neuropathy	20	up-regulated	(88) (47)
SOD3	Prion disease	32	up-regulated	(49) (37) (113)
SOD3	Psychotic disorder	1	up-regulated	(57)
SOD3	Schizophrenia	1	up-regulated	(57)
SOD3	Sleep disorder	1	up-regulated	(50)
SPATA7	Alzheimer's disease	23	down-regulated	(5)
SPATA7	Autistic disorder	39	down-regulated	(1)
SPATA7	Dementia	23	down-regulated	(5)
SPATA7	Disorder of basal ganglia	71	up-regulated	(10) (117) (26) (29)
SPATA7	Disorder of brain	77	up-regulated	(31) (139)
SPATA7	Encephalomyelopathy	36	up-regulated	(2)
SPATA7	Huntington's disease	81	up-regulated	(117) (29)
SPATA7	Meningitis	54	up-regulated	(8) (35)
SPATA7	Mood disorder	30	down-regulated	(3)
SPATA7	Movement disorder	68	up-regulated	(10) (117) (26) (29)
SPATA7	Nerve injury	76	down-regulated	(87) (88) (61) (107)
SPATA7	Neuropathy	61	down-regulated	(88)
SPATA7	Parkinson's disease	50	down-regulated	(10) (26)
SPATA7	Psychotic disorder	75	down-regulated	(15) (38)
SPATA7	Schizophrenia	76	down-regulated	(15) (38)
SPATA7	Sleep disorder	98	down-regulated	(56) (50)
ST18	Alzheimer's disease	63	down-regulated	(39) (118) (5)
ST18	Amnestic disorder	37	up-regulated	(92)
ST18	Dementia	62	down-regulated	(39) (118) (5)
ST18	Disorder of basal ganglia	68	up-regulated	(26) (27) (28) (29) (109) (121)
ST18	Disorder of brain	69	up-regulated	(32) (139)
ST18	Epilepsy	58	4.8E-5 p-value	(130)
ST18	Huntington's disease	76	up-regulated	(27) (29) (121)
ST18	Mood disorder	35	down-regulated	(144)

ST18	Movement disorder	65	up-regulated	(26) (27) (28) (29) (109) (121)
ST18	Multiple sclerosis	53	down-regulated	(63) (65)
ST18	Nerve injury	49	up-regulated	(60) (12) (107)
ST18	Neuropathy	46	down-regulated	(90) (47)
ST18	Parkinson's disease	51	up-regulated	(26) (28) (109)
ST18	Prion disease	49	down-regulated	(113)
ST18	Psychotic disorder	48	up-regulated	(66) (17)
ST18	Schizophrenia	48	up-regulated	(66) (17)
ST18	Sleep disorder	36	down-regulated	(56)
STYK1	Alzheimer's disease	52	down-regulated	(5) (40) (52)
STYK1	Dementia	51	down-regulated	(5) (40) (52)
STYK1	Disorder of basal ganglia	49	down-regulated	(10)
STYK1	Huntington's disease	55	down-regulated	(10)
STYK1	Hypoxia of brain	33	up-regulated	(84)
STYK1	Mood disorder	8	0.0003 p-value	(74)
STYK1	Movement disorder	47	down-regulated	(10)
STYK1	Neural tube defect	100	down-regulated	(54)
STYK1	Neuropathy	7	down-regulated	(60)
STYK1	Parkinson's disease	38	down-regulated	(10)
STYK1	Psychotic disorder	41	down-regulated	(15) (38)
STYK1	Schizophrenia	41	down-regulated	(15) (38)
TMEM135	Cerebral palsy	57	up-regulated	(99)
TMEM135	Dementia	24	down-regulated	(39) (18)
TMEM135	Disorder of basal ganglia	43	down-regulated	(117) (26) (28) (29) (109) (6)
TMEM135	Disorder of brain	44	up-regulated	(31) (32)
TMEM135	Mood disorder	22	down-regulated	(85)
TMEM135	Paralytic syndrome	62	up-regulated	(91)
TMEM135	Parkinson's disease	47	down-regulated	(10) (26) (28) (109) (6)
TMEM135	Psychotic disorder	54	up-regulated	(57) (66) (16)
TMEM135	Schizophrenia	54	up-regulated	(57) (66) (16)
TRPS1	Alzheimer's disease	19	up-regulated	(39) (18) (5) (40)
TRPS1	Autistic disorder	1	up-regulated	(21)
TRPS1	Cerebrovascular disease	23	5.0E-5 p-value	(72)
TRPS1	Dementia	18	up-regulated	(39) (18) (5) (40)
TRPS1	Disorder of basal ganglia	57	up-regulated	(117) (26) (28) (29) (109) (6)
TRPS1	Encephalomyelopathy	1	down-regulated	(83)

TRPS1	Huntington's disease	66	up-regulated	(10) (117) (27) (29) (121)
TRPS1	Hypoxia of brain	14	up-regulated	(84) (7)
TRPS1	Meningitis	51	up-regulated	(8) (35) (45)
TRPS1	Mood disorder	1	0.0004 p-value	(74)
TRPS1	Motor neuron disease	13	down-regulated	(62)
TRPS1	Movement disorder	54	up-regulated	(117) (26) (28) (29) (109) (6)
TRPS1	Multiple sclerosis	27	up-regulated	(10) (64) (78)
TRPS1	Nerve injury	27	up-regulated	(112) (11) (95) (89)
TRPS1	Neuropathy	29	up-regulated	(11) (90) (128) (47) (14) (89)
TRPS1	Parkinson's disease	36	up-regulated	(26) (28) (109) (6)
TRPS1	Psychotic disorder	18	up-regulated	(15) (38) (66)
TRPS1	Schizophrenia	18	up-regulated	(15) (38) (66)
TRPS1	Sleep disorder	15	down-regulated	(50)
TRPS1	Spinocerebellar ataxia	12	down-regulated	(83)
VANGL1	Autistic disorder	1	down-regulated	(21) (22)
VANGL1	Disorder of basal ganglia	1	up-regulated	(29)
VANGL1	Epilepsy	11	down-regulated	(154)
VANGL1	Huntington's disease	1	up-regulated	(29)
VANGL1	Meningitis	1	up-regulated	(33) (8)
VANGL1	Mood disorder	1	down-regulated	(76) (3)
VANGL1	Neural tube defect	100		(146)
VANGL1	Psychotic disorder	1	down-regulated	(66)
VANGL1	Schizophrenia	1	down-regulated	(66)
VDAC3	Anxiety disorder	27	up-regulated	(98) (20)
VDAC3	Autistic disorder	18	up-regulated	(21) (1)
VDAC3	Dementia	20	down-regulated	(18) (51)
VDAC3	Disorder of basal ganglia	48	down-regulated	(10) (26) (42) (28) (29) (6)
VDAC3	Encephalomyelopathy	50	down-regulated	(2) (114)
VDAC3	Meningitis	65	up-regulated	(33) (8) (34) (53)
VDAC3	Myoneural disorder	56	up-regulated	(111)
VDAC3	Parkinson's disease	53	down-regulated	(10) (26) (42) (28) (6)
WDR38	Disorder of basal ganglia	41	up-regulated	(29)
WDR38	Huntington's disease	54	up-regulated	(29)
WDR38	Meningitis	38	up-regulated	(8)

WDR38	Movement disorder	38	up-regulated	(29)
WDR38	Multiple sclerosis	40	up-regulated	(78)
WDR38	Nerve injury	75	up-regulated	(11) (12) (87) (107) (89)
WDR38	Neuropathy	64	up-regulated	(11) (89)
WDR38	Psychotic disorder	54	down-regulated	(38) (66)
WDR38	Schizophrenia	54	down-regulated	(38) (66)
ZC3H14	Alzheimer's disease	9	up-regulated	(18)
ZC3H14	Amyotrophic lateral sclerosis	33	down-regulated	(10)
ZC3H14	Anxiety disorder	43	up-regulated	(98) (20)
ZC3H14	Autistic disorder	16	up-regulated	(21)
ZC3H14	Cerebrovascular disease	29	up-regulated	(24)
ZC3H14	Dementia	8	up-regulated	(18)
ZC3H14	Disorder of basal ganglia	59	up-regulated	(48) (26) (27) (29) (109)
ZC3H14	Disorder of brain	16	down-regulated	(32)
ZC3H14	Encephalitis	41	down-regulated	(110)
ZC3H14	Encephalomyelitis	52	down-regulated	(110)
ZC3H14	Encephalomyelopathy	18	down-regulated	(110)
ZC3H14	Huntington's disease	63	up-regulated	(27) (29)
ZC3H14	Meningitis	51	down-regulated	(8) (34)
ZC3H14	Mood disorder	25	down-regulated	(85) (3)
ZC3H14	Motor neuron disease	30	down-regulated	(10)
ZC3H14	Movement disorder	56	up-regulated	(48) (26) (27) (29) (109)
ZC3H14	Multiple sclerosis	57	down-regulated	(81) (78)
ZC3H14	Myoneural disorder	49	up-regulated	(111)
ZC3H14	Nerve injury	24	down-regulated	(11) (107) (89)
ZC3H14	Neuropathy	32	down-regulated	(11) (111) (89)
ZC3H14	Paralytic syndrome	41	up-regulated	(91)
ZC3H14	Parkinson's disease	53	up-regulated	(48) (26) (109)
ZC3H14	Prion disease	43	up-regulated	(37) (113)
ZC3H14	Psychotic disorder	37	down-regulated	(57) (38)
ZC3H14	Schizophrenia	38	down-regulated	(57) (38)
ZC3H14	Sleep disorder	68	down-regulated	(56) (50) (58)

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