

Supplementary Online Content

Identification of a Diagnosis-Selective Neurobiological Substrate for Bipolar Disorder, Major Depressive Disorder, and Schizophrenia: A Meta-Analysis of 57,717 Subjects

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This supplementary material has been provided by the authors to give readers additional information about their work.

eMethods 1. Data search

A systematic literature search was performed covering all peer-reviewed articles from inception to December 1, 2024, without restrictions on the publication year. The MEDLINE database (<https://pubmed.ncbi.nlm.nih.gov/>) was accessed via the PubMed search engine to identify voxel-based morphometry (VBM) experiments reporting data related to subjects with bipolar disorder (BD), major depressive disorder (MDD), and schizophrenia (SZ). Separate queries were constructed for each disorder as follows:

- “BD” query in MEDLINE (using PubMed Advanced Search Builder):
 (“Bipolar disorder” [Title/Abstract] OR “BD” [Title/Abstract] OR “Bipolar” [Title/Abstract]) AND (“voxel-based morphometry” [Title/Abstract] OR “VBM” [Title/Abstract]);
- “MDD” query in MEDLINE (using PubMed Advanced Search Builder):
 (“Major depressive disorder” [Title/Abstract] OR “MDD” [Title/Abstract] OR “Depression” [Title/Abstract]) AND (“voxel-based morphometry” [Title/Abstract] OR “VBM” [Title/Abstract]);
- “SZ” query in MEDLINE (using PubMed Advanced Search Builder):
 (“Schizophrenia” [Title/Abstract] OR “SZ” [Title/Abstract]) AND (“voxel-based morphometry” [Title/Abstract] OR “VBM” [Title/Abstract]).

In addition, another standardized search was conducted using the BrainMap database (<http://brainmap.org/>). This search aimed to retrieve VBM data related to other psychiatric disorders and neurological diseases showing significant gray matter reductions, excluding BD, MDD, and SZ results. Relevant data were identified from the VBM sector [1] of the BrainMap database using the following search algorithm:

- “Non-BD Non-MDD Non-SZ” query in BrainMap (via Sleuth v.3.0.4 software package; <https://www.brainmap.org/sleuth/>):
 [Diagnosis matches either IS NOT bipolar disorder AND IS NOT major depressive disorder AND IS NOT schizophrenia] “+” [Experiments context is disease effects] “+” [Experiments contrast is gray matter] “+” [Observed changes match controls > patients].

Notably, the search interface of the Sleuth software systematically organizes BrainMap’s paradigm class entries. This feature facilitates the pooling of experiments of interest, rather than isolating them based on domain-specific keywords.

eMethods 2. Data selection

Standard Criteria. To be deemed eligible, VBM experiments were required to have been published in peer-reviewed English language journals and to statistically contrast gray matter volume and/or concentration between a clinical group and a cohort of healthy controls. Only experiments reporting whole-brain analyses accompanied by stereotactic coordinates (x, y, z) in Talairach or Montreal Neurological Institute (MNI) space were included. This selection process was implemented to mitigate potential biases associated with region-of-interest (ROI) analyses and to minimize spatial inaccuracies [2, 3].

Clinical Criteria. For experiments involving individuals with BD, MDD, and SZ, the clinical groups were required to include participants with diagnoses established according to standardized DSM or ICD criteria. For experiments involving other psychiatric disorders and neurological diseases, only experiments categorized as "disease effects context" within the BrainMap VBM database were eligible. No restrictions were applied regarding the participants' age, sex, or diagnostic subtype. Experiments involving clinical conditions potentially associated with BD, MDD, or SZ were considered for inclusion, provided that none of the participants had a reported diagnosis of BD, MDD, or SZ. Experiments including medicated individuals were not excluded, given their significant representation in the literature [4–7]. However, only experiments that reported between-group differences attributable to diagnosis were eligible; experiments primarily examining pharmacological treatment effects were excluded [2, 3].

Technical Criteria. To minimize possible redundancy due to overlapping patient groups, strict measures were adopted both within and between experiments. If multiple experiments by the same first author described the same clinical group and reported identical stereotactic coordinates, only the earliest publication was retained for analysis. In cases where multiple experiments were presented in a single publication, analyses involving the same patient group or its subgroups were excluded, ensuring that only experiments describing nonredundant clinical groups were included [2]. Duplicate findings across experiments by different first authors that analyzed the same participant cohort were identified and excluded through post hoc analyses using the GingerALE software package (v.3.0.2; <https://www.brainmap.org/software.html#GingerALE>).

eMethods 3. Anatomical likelihood estimation analysis

The anatomical likelihood estimation (ALE) is a quantitative voxel-based meta-analysis technique utilized to assess the neuroanatomical spatial convergence of findings through statistical comparisons across a selected sample of neuroimaging experiments from existing literature [8, 9]. In ALE, a three-dimensional Gaussian probability distribution is centered on each focus derived from experimental data (i.e., the local maximum coordinate of gray matter variation):

$$p(d) = \frac{1}{\sigma^3 \sqrt{(2\pi)^3}} e^{-\frac{d^2}{2\sigma^2}}$$

Here, d denotes the Euclidean distance between the voxel and the focus and σ represents spatial uncertainty determined by the full-width half-maximum (FWHM):

$$\sigma = \frac{FWHM}{\sqrt{8 \ln 2}}$$

The ALE procedure generates modeled activation (MA) maps for each selected experiment by combining Gaussian probability distributions derived from experimental foci [10]. Subsequently, a final ALE map is constructed by combining all MA maps. Significant convergence is assessed by comparing these ALE scores to an empirical null distribution representing random spatial overlap between experiments while accounting for the fixed within-study distribution of foci. In this analysis, a random-effects approach is applied, which evaluates above-chance convergence across experiments [11]; thus, the observed ALE scores are then tested against the null distribution to determine whether the spatial convergence of reported coordinates exceeds what would be expected by chance.

eMethods 4. Bayes fACTor mOdeliNg analysis

Bayes fACTor mOdeliNg (BACON) [12] was developed as a neuroimaging coordinate-based meta-analytic method to derive posterior probability distributions concerning variation in gray matter selectivity associated with a given brain disorder. This method integrates Bayes Factor (BF) [13] calculations and unthresholded maps generated using the ALE method [9].

The Bayes' theorem, represented in Equation 1, serves as the basis for expressing relative belief, also referred to as the BF:

$$\frac{P(H_0|D)}{P(H_1|D)} = \frac{P(D|H_0) P(H_0)}{P(D|H_1) P(H_1)} \quad (1)$$

Where D denotes the measurement of gray matter variation at a given voxel derived from the ALE meta-analyses (i.e., disorder of interest map, and non-disorder of interest map); H_0 represents the hypothesis positing the occurrence of the disorder of interest at that voxel; and H_1 corresponds to the hypothesis asserting the occurrence of any other disorder (i.e., the negation of H_0). Using BACON, the probability that a measured variation (D) in each voxel of the brain indicates the presence of the disorder of interest (H_0) can be computed. Due to the absence of prior knowledge about the hypotheses' probabilities, they were assumed to have equal priors, a principle validated in prior studies [12, 14, 15]. Therefore, the Bayes Factor BF_{01} can be redefined as:

$$BF_{01} = \frac{P(D|H_0)}{P(D|H_1)} \quad (2)$$

By considering that the sum of posterior probabilities H_0 and H_1 must equal 1, Equation 2 can be transformed as follows:

$$BF_{01} = \frac{P(H_0|D)}{1-P(H_0|D)} \quad (3)$$

The Bayes Factor BF_{01} provides the degree of evidence for the two hypotheses: a value $BF_{01} > 1$ indicates evidence favoring H_0 , whereas $BF_{01} < 1$ favors H_1 . Inverting Equation 3, the posterior probability of the disorder of interest for each voxel can be expressed as follows:

$$P(H_0|D) = \frac{BF_{01}}{BF_{01}+1} \quad (4)$$

This formulation enables the direct computation of posterior probabilities for the hypothesis of interest using the Bayes Factor BF_{01} .

eMethods 5. Fail-safe analysis

The fail-safe approach is a statistical quantitative method utilized in medical and psychological meta-analyses [16]. In recent years, it has been adapted for use in the neuroimaging coordinate-based meta-analysis (CBMA) and domain to assess the robustness of ALE findings in relation to potential “file-drawer” publication biases [17]. This method operates under the assumption that unpublished experiments with opposing results exist and estimates how many such counter-evidence experiments can be added to a CBMA before its results are invalidated. Specifically, this approach incrementally introduces simulated noise (representing unreported experiments) into the meta-analytic dataset and assesses the stability of the original findings.

In our analysis, the fail-safe procedure was employed to address the possibility that BrainMap lacks a sufficient number of experiments with contradicting evidence. For this purpose, we applied the publicly available R script developed by Acar et al. [17] (<https://github.com/NeuroStat/GenerateNull>). The pipeline for this method involves two primary phases: noise generation and robustness estimation.

During the noise generation phase, simulated noise experiments are created. To ensure the realism of the generated data, the algorithm is constrained by the distributions of x-y-z coordinates of gray matter variation and the number of clinical subjects reported in the included experiments. For example, if the experiments in the meta-analytic dataset of interest reported 1–30 significant foci of variation, the simulated noise experiments are generated within this same range. These constraints aim to ensure that the noise closely mimics plausible experimental data. Following this, the positions of the generated coordinates are randomized within the same gray matter mask used in the BACON framework. This process is performed independently for all datasets representing conditions outside the primary interest (i.e., Non-BD, Non-MDD, and Non-SZ).

Then, the simulated noise data and those of the original meta-analytic sample are combined and fed into the algorithm to perform the ALE [9]. This stage ensures that the analysis accounts for potential conflicting results absent from the datasets of no interest. The procedure involves multiple iterations for each dataset of no interest, increasing the proportion of simulated noise data incrementally in each run (i.e., 6%, 10%, and 30%). For example, at the 30% noise threshold of the primary analysis, the non-BD dataset is augmented with 115 simulated random experiments, the non-MDD dataset with 112 experiments, and the non-SZ dataset with 100 experiments. The ALE maps generated at each noise level are then integrated with the BACON framework to investigate the robustness of primary and additional findings. This is achieved by systematically evaluating the ability of BACON to maintain significant clusters of variation selectivity as noise levels increase. BACON maps are generated for every noise condition and subsequently compared to the original BACON map (generated before introducing simulated noise). This procedure offers an empirical assessment of how robust the BACON-derived results are to the potential influence of publication bias.

eMethods 6. Functional and behavioral analyses.

First, we assessed the normal pattern of task-based coactivation for each BACON-derived cluster of gray matter selectivity that survived our robustness analysis via meta-analytic connectivity modeling (MACM) [18, 19]. This approach identifies brain areas that are consistently coactivating with a given ROI across a wide range of neuroimaging experiments. The analysis was performed using the BrainMap functional database [10, 20], which focuses on functional MRI experiments of healthy participants involved in normal mapping task-based experiments without interventions or group comparisons. At the time of analysis (December 2024), 8,377 eligible experiments were included, each reporting results as stereotaxic coordinates. The MACM process began by identifying all the experiments within the database that reported at least one activation coordinate in the ROI selected. ALE meta-analysis was subsequently employed to evaluate convergence across the coordinates from these experiments. Significant coactivation outside the ROI was determined via ALE-based methods with a cluster-level familywise error correction threshold of $P < 0.05$ and a cluster-forming threshold of $P < 0.001$ [9].

Second, we used the Behavioral plugin [21] in Mango software (v.4.0) to statistically associate each task-based coactivation network identified via MACM with corresponding physiological mental processes by testing which functional neuroimaging task is more likely to activate a user-selected region of interest. This automated analysis is based on 9,400 functional MRI studies in healthy participants and classifies mental operations into five domains (i.e. cognition, perception, interoception, emotion, and action), which are further divided into 60 subdomains. A detailed taxonomy can be found at <https://brainmap.org/taxonomy/behaviors/>. A Bonferroni-corrected threshold at $P < 0.05$ was adopted to designate statistically significant behavioral associations [6, 21].

eTable 1. Experiments included in Bayes fAcToR mOdeliNg analysis: BD dataset

First author	Year	PMID	Experimental group diagnosis (details of the group)	Subjects	Controls	Foci
Adleman N E	2012	22650379	Bipolar Disorder	55	66	2
Adler C M	2005	15922309	Bipolar Disorder	32	27	1
Alonso-Lana S	2016	27448153	Bipolar Disorder	33	28	1
Altamura A C	2018	29223329	Bipolar Disorder	46	56	4
Altamura A C	2018	29223329	Bipolar Disorder	62	56	10
Amann B L	2016	25968549	Bipolar Disorder	45	45	1
Ambrosi E	2013	23489395	Bipolar Disorder	20	21	8
Brown G G	2011	21924872	Bipolar Disorder	15	21	19
Cai Y	2015	25502401	Bipolar Disorder	23	23	2
Castro-Fornieles J	2018	28707138	Bipolar Disorder	15	70	3
Chang M	2018	29036668	Bipolar Disorder	86	156	12
Chen X	2007	17464719	Bipolar Disorder	24	25	1
Chen L	2018	30069426	Bipolar Disorder	43	47	2
Cui L	2011	21138758	Bipolar Disorder	24	36	7
Doris A	2004	15033185	Bipolar Disorder	11	16	34
Eker C	2014	24589068	Bipolar Disorder	28	30	3
Farrow T F D	2005	15993858	Bipolar Disorder	8	22	12
Gao W	2013	23477846	Bipolar Disorder	18	18	1
Gao W	2021	33714175	Bipolar Disorder (Psychotic)	28	19	7
Gao W	2021	33714175	Bipolar Disorder (Non-Psychotic)	26		4
Gold A L	2016	27871637	Bipolar Disorder	20	53	1
Ha T H	2009	19429131	Bipolar Disorder	23	23	19
Ha T H	2009	19429131	Bipolar Disorder	23	23	7
Hajek T	2013	22818781	Bipolar Disorder	19	18	1
Hajek T	2014	25074491	Bipolar Disorder	33	11	5
Haldane M	2008	18308812	Bipolar Disorder	44	44	12
Haller S	2011	21284917	Bipolar Disorder	19	47	1
Hozier F	2021	31983348	Bipolar Disorder	269	316	10
Janssen J	2008	18827723	Bipolar Disorder	20	51	1
Keramatian K	2021	32419481	Bipolar Disorder	61	43	1
Kim D	2013	23769608	Bipolar Disorder	49	50	3
Lee J	2017	28963911	Bipolar Disorder	21	21	5
Lee DK	2020	32379845	Bipolar Disorder	65	65	2
Li M	2011	21236649	Bipolar Disorder	24	36	5
Li H	2020	33023515	Bipolar Disorder	44	36	6
Lochhead R A	2004	15184034	Bipolar Disorder	11	31	1
Lyoo I K	2004	15013835	Bipolar Disorder	39	43	4
Maggioni E	2017	29136642	Bipolar Disorder	176	383	3
Matsubara T	2016	28030612	Bipolar Disorder	10	26	2
McIntosh A M	2004	15476683	Bipolar Disorder	19	49	2
Metin B	2023	37166512	Bipolar Disorder	37	27	3
Minuzzi L	2017	29232965	Bipolar Disorder	32	36	2
Molina V	2011	21188405	Bipolar Disorder	19	24	2
Narita K	2011	21115089	Bipolar Disorder	31	84	13
Nugent A C	2006	16256376	Bipolar Disorder (Medicated)	20	65	1
Nugent A C	2006	16256376	Bipolar Disorder (Unmedicated)	16		2
Poletti A	2016	26454335	Bipolar Disorder	206	136	1
Redlich R	2014	25188810	Bipolar Disorder	58	58	8
Repple J	2017	28239946	Bipolar Disorder	39	42	2
Rocha-Rego V	2013	23734914	Bipolar Disorder (Cohort 1)	26	26	5
Rocha-Rego V	2013	23734914	Bipolar Disorder (Cohort 2)	14	14	5
Rossi R	2013	23146251	Bipolar Disorder	14	40	20
Sani G	2016	26782273	Bipolar Disorder	78	78	7
Saricicek A	2015	26233321	Bipolar Disorder	28	29	1
Sheperd A M	2015	25268788	Bipolar Disorder	30	34	6
Singh A	2022	33846953	Bipolar Disorder	20	20	1
Song J	2015	26056452	Bipolar Disorder	44	35	3
Song H	2020	32571005	Bipolar Disorder	36	29	9
Stanfield A C	2009	19267696	Bipolar Disorder	66	66	2
Sun N	2020	32389612	Bipolar Disorder	30	31	7
Tang LR	2014	25218414	Bipolar Disorder	27	27	24
Thiel K	2024	38332015	Bipolar Disorder (Type I)	73	136	6
Thiel K	2024	38332015	Bipolar Disorder (Type II)	63		1
Tost H	2010	19419772	Bipolar Disorder	42	42	17
Vai B	2020	32238313	Bipolar Disorder	74	74	4
Wang F	2011	21666263	Bipolar Disorder	41	77	17
Wang X	2019	30905048	Bipolar Disorder	30	31	6
Watson D R	2012	22056751	Bipolar Disorder	24	24	1
Xiao Q	2020	32158006	Bipolar Disorder	21	18	3
Xiao Q	2020	32158006	Bipolar Disorder	19	18	3
Yang Y	2022	35757556	Bipolar Disorder	42	95	6
Yatham L N	2007	17988358	Bipolar Disorder	15	15	3

Zhang Y N	2021	33644197	Bipolar Disorder	13	20	4
TOTAL				2959	3602	420

eTable 2. Experiments included in Bayes fACTor mODElinG analysis: MDD dataset

First author	Year	PMID	Experimental group diagnosis (details of the group)	Subjects	Controls	Foci
Abe O	2010	19959342	Major depressive disorder	21	42	9
Aleman S	2013	23433857	Major depressive disorder	12	21	4
Arnone D	2009	38553590	Major depressive disorder	25	35	4
Arnone D	2013	23128153	Major depressive disorder	39	66	5
Begouiganan L	2009	19071222	Major depressive disorder	21	21	6
Cai Y	2015	25502401	Major depressive disorder	23	23	1
Camilleri	2020	31884221	Major depressive disorder	85	86	1
Chaney A	2014	23900024	Major depressive disorder	37	46	2
Chen M	2020	32664021	Major depressive disorder	22	22	2
Chen L	2018	30069426	Major depressive disorder	36	47	3
Cheng YQ	2010	20594947	Major depressive disorder	68	68	1
Dai N	2020	32447184	Major depressive disorder	166	166	1
Fang J	2015	26125296	Major depressive disorder	20	18	7
Frodl T	2008	18838632	Major depressive disorder	38	30	65
Gong Q	2011	21134472	Major depressive disorder	23	42	9
Grieve SM	2013	24273717	Major depressive disorder	102	34	41
Guo W	2014	24863419	Major depressive disorder (First-Episode)	24		1
Guo W	2014	24863419	Major depressive disorder (Recurrent)	21	44	1
Harada K	2016	27344619	Major depressive disorder	45	61	6
Harada K	2018	29472854	Major depressive disorder	16	30	1
Hellewell SC	2019	31341158	Major depressive disorder	98	66	10
Hwang JP	2010	20430976	Major depressive disorder	70	26	3
Igata N	2017	28638109	Major depressive disorder	27	44	3
Inkster B	2011	20977527	Major depressive disorder	145	183	1
Jiang X	2021	33096331	Major depressive disorder	20	30	2
Jiang Y	2019	30149746	Major depressive disorder	20	20	4
Jung J	2014	25200096	Major depressive disorder	50	29	2
Kandilarova S	2019	31234950	Major depressive disorder	39	42	3
Klauser P	2015	25462395	Major depressive disorder	56	33	1
Kim MJ	2008	18930633	Major depressive disorder	22	25	4
Kong L	2014	24427263	Major depressive disorder	28	28	2
Lai CH	2014	24445133	Major depressive disorder	38	27	5
Lai CH	2015	26208214	Major depressive disorder	53	54	6
Lee HY	2011	21546094	Major depressive disorder	47	51	21
Li CT	2010	19931620	Major depressive disorder	25	25	3
Li Y	2019	31176187	Major depressive disorder	56	56	6
Liu CH	2014	24406440	Major depressive disorder	19	19	2
Liu P	2020	32421626	Major depressive disorder (With Gastrointestinal Symptoms)	36		1
Liu P	2020	32421626	Major depressive disorder (Without Gastrointestinal Symptoms)	22	27	1
Liu P	2019	31190826	Major depressive disorder	49	30	4
Lu S	2019	30831535	Major depressive disorder	30	48	1
Machino A	2012	25064808	Major depressive disorder	29	29	5
Machino A	2014	25064808	Major depressive disorder	29	29	1
Mak AK	2009	19596037	Major depressive disorder	17	17	11
Meng Q	2020	32631032	Major depressive disorder	159	53	1
Mutschler I	2019	25051163	Major depressive disorder	26	26	3
Opel N	2019	31304733	Major depressive disorder	506	358	3
Opel N	2016	26355299	Major depressive disorder	20	20	8
Oudega M L	2014	24686000	Major depressive disorder	55	23	5
Ozalay O	2016	27136662	Major depressive disorder	24	24	1
Peng J	2010	20466498	Major depressive disorder	22	30	18
Perico CAM	2011	21320250	Major depressive disorder	20	94	2
Redlich R	2014	25188810	Major depressive disorder	58	58	8
Ribeiz S R I	2013	24244606	Major depressive disorder	30	22	1
Salvadore G	2011	21073959	Major depressive disorder	58	107	6
Scheuerecker J	2010	20569645	Major depressive disorder	13	15	11
Serra-Blasco M	2013	23620451	Major depressive disorder	22	32	12
Shad MU	2012	22537357	Major depressive disorder	22	22	11
Shah PJ	1998	9828995	Major depressive disorder	20	20	6
Shen Z	2016	27668175	Major depressive disorder	147	130	6
Smith GS	2010	19173332	Major depressive disorder	16	13	6
Soriano-Mas C	2011	20875637	Major depressive disorder	70	40	1
Stratmann M	2014	25051163	Major depressive disorder	132	132	5
Tae WS	2015	19596030	Major depressive disorder	20	21	19
Tang Y	2007	17825533	Major depressive disorder	14	13	2
Ueda I	2016	26960194	Major depressive disorder	30	48	1
van Eijndhoven P	2013	23929204	Major depressive disorder	20	31	1
van Tol MJ	2010	20921116	Major depressive disorder	68	65	2
van Tol MJ	2014	24176247	Major depressive disorder	20	20	5
Vasic N	2008	18191459	Major depressive disorder	15	14	3
Wagner G	2011	20832482	Major depressive disorder	30	30	9
Wang J	2021	33505257	Major depressive disorder	36	27	1
Xie C	2012	22909988	Major depressive disorder	18	25	7

Yang X	2015	26425096	Major depressive disorder	50	50	1
Yang S	2017	28843886	Major depressive disorder	84	84	3
Yang Y	2022	35757556	Major depressive disorder	85	95	4
Yang Y	2020	32157476	Major depressive disorder	187	103	8
Yuan Y	2008	18550031	Major depressive disorder	19	16	3
Zhang X	2012	22129771	Major depressive disorder	33	32	1
Zhang Y	2020	33551870	Major depressive disorder	30	63	2
Zhuo C	2017	27766588	Major depressive disorder	45	48	1
Zou K	2010	19897176	Major depressive disorder	23	23	2
TOTAL				4116	3867	461

eTable 3. Experiments included in Bayes fACTor mODEliNg analysis: SZ dataset

First Author	Year	PMID	Experimental group diagnosis (details of the group)	Subjects	Controls	Foci
Adamu M J	2023	37275974	Schizophrenia	72	74	8
Amann B L	2016	25968549	Schizophrenia	45	18	9
Ananth H	2002	12202269	Schizophrenia	20	20	13
Anderson V M	2015	25716781	Schizophrenia	15	20	7
Antonova E	2005	16039619	Schizophrenia	45	40	4
Asami T	2012	21924364	Schizophrenia	33	36	6
Bassitt D P	2007	16960651	Schizophrenia	50	30	4
Bonilha L	2008	11040111	Schizophrenia	14	13	9
Brown G G	2011	21924872	Schizophrenia	17	21	9
Cai J	2022	35873260	Schizophrenia	60	40	2
Casella NG	2010	20452187	Schizophrenia	19	90	12
Chang M	2016	27723806	Schizophrenia	60	71	9
Chen Z	2011	24443827	Schizophrenia	86	86	2
Del Vecchio G	2017	28290743	Schizophrenia	61	59	2
Donohoe G	2011	20934520	Schizophrenia	70	38	10
Douaud G	2007	17698497	Schizophrenia	25	25	23
Egashira K	2014	25358262	Schizophrenia	24	41	5
Farrow T F D	2005	15993858	Schizophrenia	25	22	19
Ferri F	2012	22361253	Schizophrenia	19	19	1
Frascarelli M	2023	36715578	Schizophrenia	16	19	1
Garcia-Marti G	2008	17716795	Schizophrenia	17	19	5
Giuliani L	2005	39753575	Schizophrenia	41	34	14
Gou N	2022	35492688	Schizophrenia (Violent)	31		5
Gou N	2022	35492688	Schizophrenia (Non-Violent)	39	43	5
Guo X	2013	24391807	Schizophrenia	30	33	6
Guo W	2015	26496253	Schizophrenia	49	46	6
Guo F	2019	31233895	Schizophrenia	33	33	21
Ha T H	2004	15664796	Schizophrenia	35	35	13
Henze R	2011	20572905	Schizophrenia	13	13	2
Herold R	2009	19016669	Schizophrenia	29	21	38
Hidese S	2018	29702462	Schizophrenia	83	130	8
Hirao K	2008	18774263	Schizophrenia	20	20	6
Horacek J	2011	21599563	Schizophrenia	44	56	13
Hu M	2013	23360727	Schizophrenia	55	59	1
Huang P	2015	26403064	Schizophrenia	18	26	3
Janssen J	2008	18827723	Schizophrenia	25	51	2
Jayakumar PN	2005	15866362	Schizophrenia	18	18	10
Jiang Y	2018	29668409	Schizophrenia	30	126	26
Job DE	2003	14511796	Schizophrenia	34	36	8
Kasperek T	2009	19647777	Schizophrenia	32	18	5
Kawada R	2009	19625009	Schizophrenia	26	26	13
Kawasaki Y	2007	17045492	Schizophrenia	30	30	9
Kenneth Martin A	2014	25453991	Schizophrenia	26	50	9
Kim GW	2017	28520743	Schizophrenia	22	22	4
Kong L	2015	25595222	Schizophrenia	22	20	17
Koutsouleris N	2007	18054834	Schizophrenia	175	177	34
Kubicki M	2002	12498745	Schizophrenia	16	18	1
Lei W	2015	26409573	Schizophrenia	88	44	1
Lei W	2019	31059954	Schizophrenia	14	32	1
Li C	2019	31377989	Schizophrenia	86	86	34
Liao J	2015	25937503	Schizophrenia	93	99	12
Lui S	2009	19168334	Schizophrenia	10	10	9
Lui S	2009	18981063	Schizophrenia	68	68	3
Ma M	2021	34354618	Schizophrenia	64	65	3
Marti-Bonmati L	2007	17641373	Schizophrenia	21	10	8
McDonald C	2005	15863740	Schizophrenia	25	52	12
McIntosh A M	2004	8050090	Schizophrenia	26	49	4
Meda S A	2008	18378428	Schizophrenia (First-Episode)	34		37
Meda S A	2008	18378428	Schizophrenia (Chronic)	21	34	31
Meisenzahl E M	2008	18703313	Schizophrenia (First-Episode)	72		67
Meisenzahl E M	2008	18703313	Schizophrenia (Chronic)	93	177	48
Molina V	2010	20153145	Schizophrenia	30	40	3
Molina V	2011	21188405	Schizophrenia	17	41	11
Moorhead T W	2005	15110009	Schizophrenia	25	29	14
Nakamura K	2013	23508623	Schizophrenia	34	51	1
Neugebauer K	2019	31105606	Schizophrenia	18	19	21
O'Daly O	2007	17720459	Schizophrenia	28	32	7
Oertel-Knochel V	2012	22464726	Schizophrenia	31	37	8
Ohnishi T	2006	16330500	Schizophrenia	19	38	19
Ortiz-Gil J	2011	21727234	Schizophrenia	23	39	1
Paillere-Martinot M L	2001	11378311	Schizophrenia	20	20	9
Poepl T B	2014	24423214	Schizophrenia	20	30	3

Poletti S	2016	26454335	Schizophrenia	96	136	8
Pomarol-Clotet E	2010	20065955	Schizophrenia	31	31	2
Price G	2010	19632338	Schizophrenia	41	47	4
Qiu L	2011	21991357	Schizophrenia	33	29	23
Rametti G	2010	20547448	Schizophrenia	23	23	1
Ren W	2013	23732942	Schizophrenia	100	100	6
Rose E J	2014	25044277	Schizophrenia	163	150	15
Salgado-Pineda P	2003	12814586	Schizophrenia	13	13	15
Salgado-Pineda P	2011	21095105	Schizophrenia	14	14	5
Sans-Sansa B	2013	23522907	Schizophrenia	31	59	5
Sarro S	2013	23222039	Schizophrenia	81	61	3
Schaufelberger M S	2007	18055927	Schizophrenia	62	94	6
Schiffer B	2010	20647266	Schizophrenia	12	14	11
Schuster C	2012	21205677	Schizophrenia	27	40	12
Shapleske J	2002	12427683	Schizophrenia	72	32	9
Shen C L	2023	36604437	Schizophrenia (15-Year Group)	36	72	3
Shen C L	2023	36604437	Schizophrenia (25-Year Group)	39	78	6
Sheng J	2013	23769260	Schizophrenia	33	41	15
Sigmundsson T	2001	11156806	Schizophrenia	27	27	5
Singh S	2014	24562867	Schizophrenia	14	14	3
Singh S	2015	25963262	Schizophrenia	14	14	22
Smesny S	2010	20478385	Schizophrenia (First-Episode)	13		4
Smesny S	2010	20478385	Schizophrenia (Chronic)	11	25	16
Spalthoff R	2018	30049600	Schizophrenia	51	102	6
Suzuki M	2002	11955962	Schizophrenia	45	42	5
Tan S	2015	26406464	Schizophrenia	18	17	5
Tang J	2012	22802957	Schizophrenia	29	34	1
Tian L	2011	22174900	Schizophrenia	30	29	50
Tomelleri L	2009	19717283	Schizophrenia	45	79	2
Torres U S	2016	27354958	Schizophrenia (Chronic)	99		15
Torres U S	2016	27354958	Schizophrenia (First-Episode)	62	151	5
Tregellas J R	2007	17336502	Schizophrenia	64	32	9
Van Ascsche L	2024	37577955	Schizophrenia	35	36	2
van Tol MJ	2014	25061563	Schizophrenia	51	51	7
Venkatasubramanian G	2010	20174515	Schizophrenia	30	27	14
Voets N L	2008	18793730	Schizophrenia	25	25	20
Wang J	2017	29166884	Schizophrenia	18	21	3
Watson DR	2012	22056751	Schizophrenia	25	25	2
Whitford T J	2005	16677830	Schizophrenia	31	30	12
Wilke M	2001	11304078	Schizophrenia	48	48	11
Witthaus H	2009	19616415	Schizophrenia	23	29	7
Wolf R C	2008	18434103	Schizophrenia	28	14	12
Wu H	2022	36221050	Schizophrenia	74	53	6
Xu L	2009	18266214	Schizophrenia	120	120	55
Yamada M	2007	17240165	Schizophrenia	20	20	6
Yang ZY	2019	31629132	Schizophrenia	37	28	12
Yang Y	2022	35757556	Schizophrenia	70	95	4
Yoshihara Y	2008	19102744	Schizophrenia	18	18	1
Zhang Y	2015	26281967	Schizophrenia	37	30	1
Zhao X	2022	35751735	Schizophrenia	52	29	7
Zhuo C	2017	28143464	Schizophrenia	95	93	10
TOTAL				5015	5436	1295

eTable 4. Experiments included in Bayes fACTor mODEliNg analysis: BrainMap psychiatric disorders dataset.

First author	Year	BrainMap ID	Experimental group diagnosis (details of the group)	Subjects	Controls	Foci
Abell F	1999	12060002	Autism Spectrum Disorder	15	15	3
Ahmed F	2012	14110027	Post Traumatic Stress Disorder	21	32	3
Ahrendts J	2011	13100086	Attention Deficit Hyperactivity Disorder	31	31	2
Altena E	2010	11040009	Insomnia Disorder	24	13	3
Amianto F	2021	21080051	Bulimia Nervosa	13	14	2
Asami T	2009	11040040	Panic Disorder	24	24	14
Bertsch K	2013	15090036	Antisocial Personality Disorder (With Borderline Personality Disorder)	13		20
Bertsch K	2013	15090036	Antisocial Personality Disorder (Without Borderline Personality Disorder)	12	14	30
Boddaert N	2004	8060159	Autism Spectrum Disorder	21	12	4
Boghi A	2011	13100004	Anorexia Nervosa	21	27	19
Bonath B	2018	19120002	Attention Deficit Hyperactivity Disorder	18	18	12
Bossini L	2017	21120112	Post Traumatic Stress Disorder	19	19	5
Brambati S M	2004	8050024	Specific Learning Disorder	10	11	9
Brieber S	2007	10010005	Attention Deficit Hyperactivity Disorder	15	15	9
Brieber S	2007	10010005	Autism Spectrum Disorder	15	15	6
Brooks S J	2011	13100007	Anorexia Nervosa	14	21	5
Brooks S J	2013	18100012	Binge Eating Disorder	59	97	1
Brenneis C	2005	8050031	Narcolepsy	12	12	3
Brown W E	2001	8050033	Specific Learning Disorder	16	14	8
Brunner R	2010	11040043	Borderline Personality Disorder	20	20	3
Budhiraja M	2017	21090085	Conduct Disorder	31	25	4
Cai J	2018	19120003	Autism Spectrum Disorder	38	27	3
Carmona S	2005	8060164	Attention Deficit Hyperactivity Disorder	25	25	17
Castro-Fornieles J	2009	9050023	Anorexia Nervosa	12	9	3
Castro-Manglano P D	2011	13100191	Schizoaffective Disorder	18	20	10
Chanraud S	2007	8050039	Substance Use Disorder	31	28	10
Chanraud S	2009	11040189	Substance Use Disorder	24	24	14
Chao L L	2012	14110028	Post Traumatic Stress Disorder (Medicated)	17		3
Chao L L	2012	14110028	Post Traumatic Stress Disorder (Unmedicated)	15	20	2
Chen S	2006	8050042	Post Traumatic Stress Disorder	12	12	4
Chen S	2009	11040190	Post Traumatic Stress Disorder	12	12	3
Chen Y	2012	14110029	Post Traumatic Stress Disorder	10	10	1
Cheng B	2015	16010005	Post Traumatic Stress Disorder	30	30	3
Cheng Y	2011	12060004	Autism Spectrum Disorder (Asperger's Syndrome)	11		13
Cheng Y	2011	12060004	Autism Spectrum Disorder (Primary Autism)	12	25	3
Corbo V	2005	8050044	Post Traumatic Stress Disorder	14	14	5
Craig M C	2007	11080274	Autism Spectrum Disorder	14	19	5
D'Agata F	2015	21080069	Anorexia Nervosa	21		7
D'Agata F	2015	21080069	Bulimia Nervosa	18	17	2
Dalwani M	2011	15090038	Conduct Disorder	25	19	4
de Oliveira-Souza R	2008	11040185	Antisocial Personality Disorder	15	15	22
Eckart C	2011	13100106	Post Traumatic Stress Disorder	20	13	5
Ecker C	2010	13100108	Autism Spectrum Disorder	22	22	14
Ecker C	2012	13100107	Autism Spectrum Disorder	89	89	11
Eckert M A	2005	8060170	Specific Learning Disorder	13	13	5
Fahim C	2012	20060011	Oppositional Defiant Disorder	18	20	1
Fairchild G	2011	15090039	Conduct Disorder (Early-Onset)	36		6
Fairchild G	2011	15090039	Conduct Disorder (Adolescent-Onset)	27	27	4
Foster N E	2015	19120005	Autism Spectrum Disorder	38	46	1
Freitag C M	2008	19120006	Autism Spectrum Disorder	15	15	1
Friedrich H C	2012	13100020	Anorexia Nervosa (Without Weight-Restored)	12		8
Friedrich H C	2012	13100020	Anorexia Nervosa Patients (With Weight-Restored)	13	14	2
Galandra C	2018	21090079	Substance Use Disorder	23	18	16
Gao Y	2021	21090080	Conduct Disorder	34	34	3
Gaudio S	2011	13100024	Anorexia Nervosa	15	16	3
Gilbert A R	2008	9050032	Obsessive Compulsive Disorder	25	20	7
Gregory S	2012	15090040	Psychopathy	17	22	18
Greimel E	2013	19120006	Autism Spectrum Disorder	47	51	4
Guggenmos M	2017	21020006	Substance Use Disorder	119	97	22
Hakamata Y	2007	11040195	Post Traumatic Stress Disorder	14	70	1
He N	2015	19120007	Attention Deficit Hyperactivity Disorder	37	35	4
Herringa R	2012	14110033	Post Traumatic Stress Disorder	13	28	4
Hoefl F	2007	13100121	Specific Learning Disorder	19	19	6
Huebner T	2008	11040094	Conduct Disorder	23	23	3
Hyde K L	2010	11040196	Autism Spectrum Disorder	15	13	3
Iannaccone R	2015	19120008	Attention Deficit Hyperactivity Disorder	18	18	3
Jagger-Rickels A C	2018	19120001	Attention Deficit Hyperactivity Disorder	41		15
Jagger-Rickels A C	2018	19120001	Specific Learning Disorder	17	32	12
Jang D P	2007	11080278	Substance Use Disorder	20	20	12
Johnston B A	2014	19120009	Attention Deficit Hyperactivity Disorder	34	34	12
Joos A	2010	10060042	Anorexia Nervosa	12	18	7

Kappel V	2014	19120010	Attention Deficit Hyperactivity Disorder (Adults)	16		5
Kappel V	2014	19120010	Attention Deficit Hyperactivity Disorder (Children)	14	20	3
Karlsson H	2014	18090003	Binge Eating Disorder	23	22	7
Kasai K	2008	12070015	Post Traumatic Stress Disorder	18	23	7
Kaufman	2013	21070046	Autism Spectrum Disorder	10	10	1
Kaufmann C	2002	8050076	Narcolepsy	12	32	19
Kawasaki Y	2004	11080309	Schizotypal Disorder	25	50	4
Ke X	2008	11040048	Autism Spectrum Disorder	17	15	1
Kim S J	2009	11040050	Narcolepsy	17	17	29
Kobel M	2010	13100130	Attention Deficit Hyperactivity Disorder	14	12	1
Koprivova J	2009	11040051	Obsessive Compulsive Disorder	14	15	30
Kronbichler M	2008	11080295	Specific Learning Disorder	13	15	9
Kumar U	2017	19120011	Attention Deficit Hyperactivity Disorder	18	18	4
Kurth F	2011	12060005	Autism Spectrum Disorder	52	52	1
Kwon H	2004	8050081	Autism Spectrum Disorder (Asperger's Syndrome)	11	13	3
Lai C H	2012	16080066	Panic Disorder	30	21	4
Lai C H	2015	17050006	Panic Disorder	53	54	2
Leutgeb V	2016	22030018	Borderline Personality Disorder	20	19	3
Li L	2006	8050084	Post Traumatic Stress Disorder	12	12	4
Li X	2015	19120024	Attention Deficit Hyperactivity Disorder	30	30	2
Liao M	2013	20070026	Anxiety Disorder	26	25	1
Lim L	2013	19120012	Attention Deficit Hyperactivity Disorder	29	29	3
Ludolph A G	2006	8060209	Tourette Syndrome	14	15	2
Ma Z	2019	21110103	Generalized Anxiety Disorder	15	28	2
Maier S	2016	19120015	Attention Deficit Hyperactivity Disorder	131	95	1
Mannerkoski M K	2009	11040199	Intellectual Disability	26	39	2
Massana G	2003	8050087	Panic Disorder	18	18	1
Massimo L	2009	11040200	Persistent Depressive Disorder	9		22
Massimo L	2009	11040200	Histrionic Personality Disorder	5	27	24
Matsumoto R	2010	13100139	Obsessive Compulsive Disorder	16	32	4
McAlonan G M	2007	13100043	Attention Deficit Hyperactivity Disorder	28	31	8
McAlonan G M	2005	12060007	Autism Spectrum Disorder	17	17	13
McAlonan G M	2008	11040026	Autism Spectrum Disorder (High Functioning Autism)	17		8
McAlonan G M	2008	11040026	Autism Spectrum Disorder (Asperger's Syndrome)	16	55	4
McAlonan G M	2002	12060006	Autism Spectrum Disorder	17	24	9
Mengotti P	2011	12060001	Autism Spectrum Disorder (Children)	7	7	2
Mengotti P	2011	12060001	Autism Spectrum Disorder	20	22	2
Milham M P	2005	8050094	Anxiety Disorder	17	34	6
Moon C	2014	21110106	Generalized Anxiety Disorder	13	9	5
Moon C	2015	21110105	Generalized Anxiety Disorder	17	17	5
Moon C	2018	21060016	Obsessive Compulsive Disorder	18	18	3
Moorhead T W	2005	8090183	Specific Learning Disorder	18	29	9
Muller S	2013	19120018	Autism Spectrum Disorder	12	12	10
Muller-Vahl K R	2009	11040201	Tourette Syndrome	19	20	14
Na K S	2013	17050007	Panic Disorder (Without Agoraphobia)	22		2
Na K S	2013	17050007	Panic Disorder (With Agoraphobia)	12	22	7
Nardo D	2010	11050255	Post Traumatic Stress Disorder	21	22	5
Niedtfeld I	2013	14110036	Borderline Personality Disorder	60	60	2
O'Doherty D C M	2017	21120115	Post Traumatic Stress Disorder	25	25	26
Overmeyer S	2001	13100054	Attention Deficit Hyperactivity Disorder	18	16	9
Pannacciulli N	2006	8050103	Binge Eating Disorder	24	36	7
Pujol J	2004	13100059	Obsessive Compulsive Disorder	72	72	3
Ramos-Quiroga J A	2016	19120017	Attention Deficit Hyperactivity Disorder	44	44	3
Riva D	2011	12060008	Autism Spectrum Disorder	21	21	13
Rocha-Rego V	2012	14110031	Post Traumatic Stress Disorder	16	16	2
Roman-Urrestarazu A	2016	19120019	Attention Deficit Hyperactivity Disorder	49	34	1
Rossi R	2012	17050008	Borderline Personality Disorder	26	26	39
Salmond C H	2005	8050117	Autism Spectrum Disorder	14	13	2
Salmond C H	2007	12060009	Autism Spectrum Disorder (Low Functioning)	9	9	6
Sasayama D	2010	13100160	Attention Deficit Hyperactivity Disorder	10	17	9
Schiffer B	2007	8050120	Pedophilic Disorder	18	24	2
Schwartz D L	2010	10030032	Substance Use Disorder	61	44	4
Seidman L J	2019	19120020	Attention Deficit Hyperactivity Disorder	74	54	3
Sethi A	2017	19120021	Attention Deficit Hyperactivity Disorder	30	30	2
Shott M E	2015	18100011	Binge Eating Disorder	18	24	8
Silani G	2005	8060227	Specific Learning Disorder	32	32	1
Sobanski T	2010	11040145	Panic Disorder	17	17	2
Spencer M D	2006	8050129	Intellectual Disability	63	72	2
Steinbrink C	2008	9050065	Specific Learning Disorder	7	7	2
Stevens M C	2019	19120016	Attention Deficit Hyperactivity Disorder	24	24	1
Strawn J R	2013	21110107	Generalized Anxiety Disorder	15	28	2
Suchan B	2010	11040077	Anorexia Nervosa	15	15	2
Sui S G	2010	13100070	Post Traumatic Stress Disorder	11	12	11
Szesko P R	2008	11040103	Obsessive Compulsive Disorder	37	26	3
Tanabe J	2009	9050067	Substance Use Disorder	19	20	1
Tavanti M	2012	13100174	Post Traumatic Stress Disorder	25	25	26
Thomaes K	2010	13100176	Post Traumatic Stress Disorder	31	28	5

Tiihonen J	2008	9050069	Psychopathy	12		2
Tiihonen J	2008	9050069	Antisocial Personality Disorder	26	25	31
Toal F	2010	12060010	Autism Spectrum Disorder	65	33	3
Togao O	2010	13100178	Obsessive Compulsive Disorder	23	26	6
Tomoda A	2009	11050264	Dissociative Identity Disorder	23	14	1
Uchida R R	2008	9050085	Panic Disorder	19	20	1
Valente A A Jr	2005	8060229	Obsessive Compulsive Disorder	19	15	2
Van den Heuvel O A	2009	11040186	Obsessive Compulsive Disorder	55	50	5
van Tol M J	2010	13100073	Anxiety Disorder	68	65	1
van Wingen G	2013	19120027	Attention Deficit Hyperactivity Disorder (Without Cocaine Dependence)	14		2
van Wingen G	2013	19120027	Attention Deficit Hyperactivity Disorder (With Cocaine Dependence)	10	15	2
Villemointeix T	2015	19120022	Attention Deficit Hyperactivity Disorder (Met158-Carriers)	28	15	1
Villemointeix T	2015	19120022	Attention Deficit Hyperactivity Disorder (Val158 homozygotes)	10	25	1
Wang H	2022	22020014	Autism Spectrum Disorder (Pediatric)	24	19	2
Wang H	2022	22020014	Autism Spectrum Disorder (Adult)	10	13	1
Wang J	2007	13100076	Attention Deficit Hyperactivity Disorder	12	12	4
Wang L	2019	19120013	Attention Deficit Hyperactivity Disorder	30	25	3
Watkins K E	2002	8060231	Language Disorder	10	17	10
Yoneyama E	2003	8090206	Schizotypal Personality Disorder	14	28	3
Yang Q	2018	19120025	Autism Spectrum Disorder	16	16	3
Yoo H K	2005	8050150	Panic Disorder	18	18	7
Yoo S Y	2008	11040184	Obsessive Compulsive Disorder (Female)	24	24	4
Yoo S Y	2009	11040185	Obsessive Compulsive Disorder (Male)	47	47	5
Zhang J	2011	13100080	Post Traumatic Stress Disorder	10	10	3
Zhang J	2018	21080075	Conduct Disorder	60	60	3
Zhang X	2018	21120121	Post Traumatic Stress Disorder	35	36	1
Zhao Y	2019	19120026	Attention Deficit Hyperactivity Disorder	36	36	6
TOTAL				4246	4234	1137

eTable 5. Experiments included in Bayes fACtor mOdeliNg analysis: BrainMap psychiatric disorders and neurological diseases dataset.

First author	Year	BrainMap ID	Experimental group diagnosis (details of the group)	Subjects	Controls	Foci
Abele M	2007	11040215	Spinocerebellar Ataxia	14	14	1
Abell F	1999	12060002	Autism Spectrum Disorder	15	15	3
Adlam A L R	2006	8060152	Primary Progressive Aphasia	7	22	6
Agosta F	2007	8060153	Amyotrophic Lateral Sclerosis	25	18	4
Agosta F	2010	13100084	Progressive Supranuclear Palsy	20	24	16
Agosta F	2011	13100085	Alzheimer's Disease	23	15	32
Agosta F	2011	13100085	Mild Cognitive Impairment	15	0	1
Agosta F	2013	23090001	Parkinson's Disease	54	42	4
Agostini A	2013	16030040	Chronic Pain (Crohn's Disease)	18	18	4
Ahmed F	2012	14110027	Post Traumatic Stress Disorder	21	32	3
Ahmed R M	2019	22050051	Alzheimer's Disease	16		9
Ahmed R M	2019	22050051	Frontotemporal Dementia	28	19	13
Ahrendts J	2011	13100086	Attention Deficit Hyperactivity Disorder	31	31	2
Alcauter S	2011	11080265	Spinocerebellar Ataxia	9	9	65
Altena E	2010	11040009	Insomnia Disorder	24	13	3
Amianto F	2021	21080051	Bulimia Nervosa	13	14	2
Antonini G	2004	8050005	Myotonic Dystrophy	22	22	21
As-Sanie S	2012	13110201	Chronic Pain (With Endometriosis)	17	17	7
As-Sanie S	2012	13110201	Chronic Pain (Without Endometriosis)	15	14	4
As-Sanie S	2012	13110201	Chronic Pain	6	12	1
Asami T	2009	11040040	Panic Disorder	24	24	14
Ash S	2011	13100089	Lewy Body Dementia	11	16	43
Ash S	2009	13100090	Progressive Non-Fluent Aphasia	6		3
Ash S	2009	13100090	Semantic Dementia (Without Social/Executive Disorder)	7	10	3
Ash S	2009	13100090	Semantic Dementia (With Social/Executive Disorder)	9		7
Ash S	2016	22060083	Frontotemporal Dementia	54	27	2
Aubert-Broche B	2011	16010003	Multiple Sclerosis	30	29	4
Audoin B	2006	8050006	Multiple Sclerosis	21	10	1
Audoin B	2010	10060033	Clinical Isolated Syndrome	62	37	26
Audoin B	2004	16020008	Multiple Sclerosis	18	18	10
Audoin B	2007	16030011	Multiple Sclerosis	38	45	6
Aydin K	2009	11040187	Subacute Sclerosing Panencephalitis	17	30	11
Baez S	2016	22060073	Frontotemporal Dementia	26	23	8
Baez S	2016	22070092	Frontotemporal Dementia	21	19	5
Baez S	2019	22050074	Frontotemporal Dementia	16	22	19
Bai F	2008	20100037	Mild Cognitive Impairment	20	20	7
Baldeweg T	2006	11080292	Sickle Cell Disease Patients (With Lesions)	16		1
Baldeweg T	2006	11080292	Sickle Cell Disease Patients (Without Lesions)	20	31	1
Barad M J	2013	16030041	Chronic Pain (Complex Regional Pain Syndrome)	15	15	9
Barbeau E	2008	11040158	Mild Cognitive Impairment (Normal DMS48 Performance)	12		17
Barbeau E	2008	11040158	Mild Cognitive Impairment (Impaired DMS48 Performance)	16	28	13
Baron J C	2001	8050007	Alzheimer's Disease	19	16	14
Baxter L C	2006	8050011	Alzheimer's Disease	15	15	6
Beacher F D	2009	11040065	Neurocardiogenic Syncope	18	19	3
Bell-McGinty S	2005	8060155	Mild Cognitive Impairment (Converters)	9		7
Bell-McGinty S	2005	8060155	Mild Cognitive Impairment (Non-Converters)	28	47	10
Belton E	2003	8060156	Dyspraxia (Verbal & Orofacial)	10	17	9
Berlingeri M	2008	12070013	Alzheimer's Disease	21	22	16
Bernasconi N	2004	8050013	Epilepsy (Temporal Lobe Left-Sided)	45		26
Bernasconi N	2004	8050013	Epilepsy (Temporal Lobe Right-Sided)	40	47	13
Bertsch K	2013	15090036	Antisocial Personality Disorder (With Borderline Personality Disorder)	13		20
Bertsch K	2013	15090036	Antisocial Personality Disorder (Without Borderline Personality Disorder)	12	14	30
Beyer M K	2007	8050016	Parkinson's Disease	16	20	18
Bezdicek O	2017	23090002	Parkinson's Disease	19	27	1
Bitter T	2010	10060034	Anosmia	17	17	35
Bitter T	2010	11040084	Hyposmia (Post-Infectious)	24		15
Bitter T	2010	11040084	Hyposmia (Sinusnasal)	17	43	12
Bitter T	2011	11080271	Parosmia	22	22	1
Biundo R	2011	13100192	Parkinson's Disease	57	22	4
Boccardi M	2005	13100092	Frontotemporal Dementia	9	26	19
Boddaert N	2004	8050020	Smith Magenis Syndrome	5	12	4
Boddaert N	2004	8060159	Autism Spectrum Disorder	21	12	4
Bodini B	2009	11040159	Multiple Sclerosis	35	23	16
Boghi A	2011	13100004	Anorexia Nervosa	21	27	19
Bonath B	2018	19120002	Attention Deficit Hyperactivity Disorder	18	18	12
Bonavita S	2011	16030013	Multiple Sclerosis	36	18	24
Bonekamp D	2010	10030025	Mild Cognitive Impairment	10	20	1
Bonilha L	2004	8050021	Epilepsy (Temporal Lobe Right-Sided)	21		14
Bonilha L	2004	8050021	Epilepsy (Temporal Lobe Left-Sided)	22	49	20
Borroni B	2008	11040066	Corticobasal Degeneration	20	21	14
Bossini L	2017	21120112	Post Traumatic Stress Disorder	19	19	5

Bouilleret V	2008	11040160	Epilepsy (Temporal Lobe)	12	30	12
Boxer A L	2003	8050023	Alzheimer's Disease	11		3
Boxer A L	2003	8050023	Semantic Dementia	11	15	4
Boxer A L	2006	8060161	Corticobasal Degeneration	14		11
Boxer A L	2006	8060161	Progressive Supranuclear Palsy	15		8
Boyen K	2013	22110104	Tinnitus	31	24	7
Bozzali M	2006	10010013	Alzheimer's Disease	22		19
Bozzali M	2006	10010013	Mild Cognitive Impairment (Converter)	14	20	14
Bozzali M	2006	10010013	Mild Cognitive Impairment (Non-converter)	8		2
Brambati S M	2004	8050024	Specific Learning Disorder	10	11	9
Brambati S M	2009	14070012	Semantic Dementia (Left Temporal Lobe Variant)	13	25	15
Brambati S M	2009	14070012	Semantic Dementia (Right Temporal Lobe Variant)	6		15
Brazdil M	2009	10030016	Epilepsy (Temporal Lobe)	20	20	9
Brenneis C	2004	8050025	Progressive Supranuclear Palsy	12	12	12
Brenneis C	2003	8050027	Multiple System Atrophy	12	12	16
Brenneis C	2006	8050028	Multiple-system Atrophy (Cerebellar Variant)	13		16
Brenneis C	2006	8050028	Spinocerebellar Ataxia	22	14	15
Brenneis C	2003	8050029	Spinocerebellar Ataxia	9	23	15
Brenneis C	2004	8050030	Lewy Body Dementia	10		7
Brenneis C	2004	8050030	Alzheimer's Disease	10	10	14
Brenneis C	2005	8050031	Narcolepsy	12	12	3
Brieber S	2007	10010005	Attention Deficit Hyperactivity Disorder	15	15	9
Brieber S	2007	10010005	Autism Spectrum Disorder	15	15	6
Brooks S J	2011	13100007	Anorexia Nervosa	14	21	5
Brooks S J	2013	18100012	Binge Eating Disorder	59	97	1
Brown W E	2001	8050033	Specific Learning Disorder	16	14	8
Brunner R	2010	11040043	Borderline Personality Disorder	20	20	3
Brys M	2009	11040113	Alzheimer's Disease	8	21	9
Budhiraja M	2017	21090085	Conduct Disorder	31	25	4
Burton E J	2002	9010001	Lewy Body Dementia	25	25	29
Burton E J	2004	11040044	Parkinson's Disease (With Dementia)	26		37
Burton E J	2004	11040044	Parkinson's Disease (Without Dementia)	31	36	8
Cai J	2018	19120003	Autism Spectrum Disorder	38	27	3
Camicioli R	2009	13100096	Parkinson's Disease	43	43	3
Canessa N	2011	13100097	Obstructive Sleep Apnea	17	15	6
Canu E	2010	11080297	Alzheimer's Disease (Late Onset)	24	24	22
Canu E	2010	11080297	Alzheimer's Disease (Early Onset)	18	18	15
Cao C	2021	23090004	Mild Cognitive Impairment	20	29	4
Carmona S	2005	8060164	Attention Deficit Hyperactivity Disorder	25	25	17
Caroli A	2007	15010013	Alzheimer's Disease	9		5
Caroli A	2007	15010013	Mild Cognitive Impairment	14	17	2
Castro-Fornieles J	2009	9050023	Anorexia Nervosa	12	9	3
Castro-Mangano P D	2011	13100191	Schizoaffective Disorder	18	20	10
Ceccarelli A	2009	13100099	Multiple Sclerosis	18	17	3
Ceccarelli A	2008	16030058	Multiple Sclerosis (Benign)	19	20	2
Ceccarelli A	2008	16030058	Multiple Sclerosis (Relapsing Remitting)	15		2
Ceko M	2013	16030043	Chronic Pain (Fibromyalgia) (Old)	14	14	14
Ceko M	2013	16030043	Chronic Pain (Fibromyalgia) (Young)	14	15	9
Celle S	2010	11040114	Restless Legs Syndrome	17	54	3
Cerasa A	2013	16030014	Multiple Sclerosis (Without Cerebellar Signs)	14		2
Cerasa A	2013	16030014	Multiple Sclerosis (With Cerebellar Signs)	12	20	6
Chan C H	2006	8050038	Epilepsy (Childhood Absence)	13	109	4
Chang C C	2009	11040116	Multiple System Atrophy (Cerebellar Variant)	10		11
Chang C C	2009	11040116	Multiple System Atrophy (Parkinsonian Variant)	13	37	6
Chang J L	2005	8060166	Amyotrophic Lateral Sclerosis	20	22	14
Chang S E	2008	11040013	Developmental Stuttering	7	7	14
Chanraud S	2007	8050039	Substance Use Disorder	31	28	10
Chanraud S	2009	11040189	Substance Use Disorder	24	24	14
Chao L L	2012	14110028	Post Traumatic Stress Disorder (Medicated)	17		3
Chao L L	2012	14110028	Post Traumatic Stress Disorder (Unmedicated)	15	20	2
Chen B	2017	23090005	Parkinson's Disease (With Mild Cognitive Impairment)	21		10
Chen B	2017	23090005	Parkinson's Disease (Without Mild Cognitive Impairment)	11	21	10
Chen F	2016	23090008	Parkinson's Disease	37	21	9
Chen M	2016	23090007	Parkinson's Disease	23	15	10
Chen S	2006	8050042	Post Traumatic Stress Disorder	12	12	4
Chen S	2009	11040190	Post Traumatic Stress Disorder	12	12	3
Chen W T	2018	22010002	Chronic Pain (Migraine)	56	36	1
Chen Y	2012	14110029	Post Traumatic Stress Disorder	10	10	1
Chen Y	2018	22070093	Frontotemporal Dementia	45		1
Chen Y	2018	22070093	Semantic Dementia	28	35	2
Chen Y	2018	22070093	Progressive Non Fluent Aphasia	23		2
Chen Y	2019	23090006	Parkinson's Disease	61	59	27
Cheng B	2015	16010005	Post Traumatic Stress Disorder	30	30	3
Cheng K	2020	23090009	Parkinson's Disease (With Fall)	17		10
Cheng K	2020	23090009	Parkinson's Disease (Without Fall)	18	37	2
Cheng Y	2011	12060004	Autism Spectrum Disorder (Asperger's Syndrome)	11	25	13
Cheng Y	2011	12060004	Autism Spectrum Disorder (Primary Autism)	12		3

Chenji S	2020	21060013	Amyotrophic Lateral Sclerosis	22	43	1
Chetelat G	2002	8050043	Mild Cognitive Impairment	22	22	10
Chetelat G	2002	8050043	Alzheimer's Disease	16		15
Clausi S	2009	11040191	Right Cerebellar Damage	8	15	9
Colloby S J	2014	20100039	Alzheimer's Disease	47	39	4
Colloby S J	2014	20100039	Lewy Body Dementia	41		5
Compta Y	2012	13100193	Parkinson's Disease (With Dementia)	15	12	12
Compta Y	2012	13100193	Parkinson's Disease (Without Dementia)	18		5
Corbo V	2005	8050044	Post Traumatic Stress Disorder	14	14	5
Cordato N J	2005	8050045	Progressive Supranuclear Palsy	21	23	9
Cordato N J	2005	8050045	Parkinson's Disease	17		1
Cormack F	2005	8090163	Mesial Temporal Sclerosis (Left)	20	22	9
Cormack F	2005	8090163	Mesial Temporal Sclerosis (Right)	10		4
Cosottini M	2012	13100102	Amyotrophic Lateral Sclerosis	20	16	21
Cousins K A Q	2016	22060075	Frontotemporal Dementia	12	18	4
Craig M C	2007	11080274	Autism Spectrum Disorder	14	19	5
Critchley H D	2003	8050046	Pure Autnomic Failure	15	15	10
D'Agata F	2011	13100103	Spinocerebellar Ataxia	12	31	19
D'Agata F	2015	21080069	Anorexia Nervosa	21	17	7
D'Agata F	2015	21080069	Bulimia Nervosa	18		2
Dalwani M	2011	15090038	Conduct Disorder	25	19	4
Dash S K	2018	18100010	Multiple System Atrophy (With Cerebellar Atrophy)	30	25	4
Dash S K	2018	18100010	Multiple System Atrophy (Without Cerebellar Atrophy)	20		4
Dasjams T	2011	20100040	Alzheimer's Disease	23	23	20
Davis K D	2007	16030044	Chronic Pain	9	11	2
de Araujo-Filho G M	2009	13100190	Epilepsy	54	30	6
de Oliveira-Souza R	2008	11040185	Antisocial Personality Disorder	15	15	22
Della Nave R	2008	9050027	Friedreich's Ataxia	22	25	2
Della Nave R	2008	11040117	Spinocerebellar Ataxia (Type 1)	10		7
Della Nave R	2008	11040117	Spinocerebellar Ataxia (Type 2)	10	10	5
Delmaire C	2007	11080275	Dystonia	30	30	6
Dermody N	2016	20070016	Alzheimer's Disease	25	22	4
Dermody N	2016	20070016	Frontotemporal Dementia	24		1
Dermody N	2016	22060076	Alzheimer's Disease	12	12	5
Dermody N	2016	22060076	Frontotemporal Dementia	12		5
Desgranges B	2007	12070014	Semantic Dementia (Without Hypometabolism)	10	17	6
Desgranges B	2007	12070014	Semantic Dementia (With Hypometabolism)	10		2
Devenney E	2015	22050054	Frontotemporal Dementia	58	25	7
Di Paola M	2007	8090166	Alzheimer's Disease	18	18	18
Diez-Cirarda M	2015	23090010	Parkinson's Disease	37	15	3
Donnelly-Kehoe P A	2019	22050055	Frontotemporal Dementia (Country 1)	44	60	13
Donnelly-Kehoe P A	2019	22050055	Frontotemporal Dementia (Country 2)	44	60	11
Donnelly-Kehoe P A	2019	22050055	Frontotemporal Dementia (Country 3)	44	60	6
Draganski B	2006	8050051	Limb Amputation	28	28	2
Draganski B	2003	8050052	Dystonia (Idiopathic Cervical)	10	10	3
Droby A	2021	23090011	Parkinson's Disease	16	20	2
Eckart C	2011	13100106	Post Traumatic Stress Disorder	20	13	5
Ecker C	2010	13100108	Autism Spectrum Disorder	22	22	14
Ecker C	2012	13100107	Autism Spectrum Disorder	89	89	11
Eckert M A	2005	8060170	Specific Learning Disorder	13	13	5
Eckert M A	2006	8060171	Williams Syndrome	8	9	20
Ellis C M	2001	13100109	Amyotrophic Lateral Sclerosis	16	8	3
Eshaghi A	2014	16030018	Multiple Sclerosis	36	19	6
Etgen T	2005	8060172	Restless Legs Syndrome	28	28	2
Etgen T	2006	10060056	Dystonia (Primary Blepharospasm)	16	16	1
Fahim C	2012	20060011	Oppositional Defiant Disorder	18	20	1
Fairchild G	2011	15090039	Conduct Disorder (Early-Onset)	36	27	6
Fairchild G	2011	15090039	Conduct Disorder (Adolescent-Onset)	27		4
Fallon N	2013	16030045	Chronic Pain (Fibromyalgia)	16	15	2
Farb N A S	2013	22040031	Frontotemporal Dementia	8	16	13
Farrow T F D	2007	13100110	Alzheimer's Disease (Early-Onset)	7	11	10
Farrow T F D	2007	13100110	Alzheimer's Disease (non Early-Onset)	7	11	10
Feldmann A	2008	11040163	Posterior Cortical Atrophy	1		7
Feldmann A	2008	11040163	Alzheimer's Disease	6	20	11
Fernandez-Matarrubia M	2017	22050036	Frontotemporal Dementia	26	24	9
Fioravanti V	2015	23090012	Parkinson's Disease	20	15	2
Fiorenzato E	2017	23090013	Multiple System Atrophy	72	36	31
Focke N K	2011	13060001	Parkinson's Disease	21	22	2
Foster N E	2015	19120005	Autism Spectrum Disorder	38	46	1
Freitag C M	2008	19120006	Autism Spectrum Disorder	15	15	1
Friedrich H C	2012	13100020	Anorexia Nervosa (Without Weight-Restored)	12		8
Friedrich H C	2012	13100020	Anorexia Nervosa Patients (With Weight-Restored)	13	14	2
Frisoni G B	2002	8090170	Alzheimer's Disease	29	26	34
Galandra C	2018	21090079	Substance Use Disorder	23	18	16
Gale S D	2005	8050053	Traumatic Brain Injury	9	9	16
Gao Y	2021	21090080	Conduct Disorder	34	34	3
Gao Y	2017	23090014	Parkinson's Disease (With Mild Cognitive Impairment)	23	21	6

Gao Y	2017	23090014	Parkinson's Disease (Without Mild Cognitive Impairment)	23		6
Garrido L	2009	11040091	Developmental Prosopagnosia	17	18	6
Gaudio S	2011	13100024	Anorexia Nervosa	15	16	3
Gavazzi C	2007	8050055	Huntington's Disease	9	11	4
Gee J	2003	8050056	Alzheimer's Disease	12		7
Gee J	2003	8050056	Frontotemporal Dementia	29	12	11
Geha P Y	2008	13100112	Chronic Pain (Old)	26	11	1
Geha P Y	2008	13100112	Chronic Pain (Young)	11	11	1
Gerrits N J H M	2014	23090015	Parkinson's Disease	93	46	8
Ghosh B C	2012	14050007	Progressive Supranuclear Palsy	23	22	2
Gilbert A R	2008	9050032	Obsessive Compulsive Disorder	25	20	7
Gili T	2011	20110041	Alzheimer's Disease	11	10	11
Ginestroni A	2008	9050034	Spinocerebellar Ataxia	15	15	4
Giordano A	2013	14050008	Progressive Supranuclear Palsy	15	15	6
Gobbi C	2014	16030020	Multiple Sclerosis (Non-Depressed)	54		56
Gobbi C	2014	16030020	Multiple Sclerosis (Depressed)	69	90	56
Gobbi C	2014	16030020	Multiple Sclerosis (Non-Fatigued)	59		56
Gobbi C	2014	16030020	Multiple Sclerosis (Fatigued)	64		56
Gold B T	2010	11040071	Mild Cognitive Impairment	12	14	4
Granert O	2011	13100117	Dystonia	11	12	4
Gregory S	2012	15090040	Psychopathy	17	22	18
Greimel E	2013	19120006	Autism Spectrum Disorder	47	51	4
Grieder M	2013	20110042	Alzheimer's Disease	14	19	1
Gross R G	2010	10060039	Corticobasal Degeneration	20	8	6
Grosskreutz J	2006	8050063	Amyotrophic Lateral Sclerosis	17	17	16
Grossman M	2004	9050035	Corticobasal Degeneration	9		9
Grossman M	2004	9050035	Semantic Dementia	8		4
Grossman M	2004	9050035	Progressive Non-Fluent Aphasia	7	12	6
Grossman M	2004	9050035	Frontotemporal Dementia (Non-Aphasic)	14		5
Guedj E	2009	14080019	Mild Cognitive Impairment	19	28	7
Guggenmos M	2017	21020006	Substance Use Disorder	119	97	22
Guimaraes R P	2017	23090016	Parkinson's Disease (Moderate)	66		2
Guimaraes R P	2017	23090016	Parkinson's Disease (Severe)	66	40	6
Guo X	2010	11040119	Alzheimer's Disease	13	14	16
Gustin S M	2011	11080299	Chronic Pain (Trigeminal Neuropathic Pain)	21	30	7
Gwilym S E	2010	11020004	Chronic Pain	16	16	2
Hafkemeijer A	2017	22070096	Frontotemporal Dementia	12	22	1
Hakamata Y	2007	11040195	Post Traumatic Stress Disorder	14	70	1
Hall A M	2008	11040017	Alzheimer's Disease (Converted)	21		2
Hall A M	2008	11040017	Alzheimer's Disease (Non-Converted)	26	127	2
Halpern C H	2004	8060190	Corticobasal Degeneration	5		4
Halpern C H	2004	8060190	Semantic Dementia	3	12	1
Hamalainen A	2007	9010002	Alzheimer's Disease	15	21	19
Hamalainen A	2007	9010002	Mild Cognitive Impairment	14		6
Hamalainen A	2007	14080024	Mild Cognitive Impairment (Progressive)	13	22	29
Hamalainen A	2007	14080024	Mild Cognitive Impairment (Stable)	43		35
Han X	2017	17070010	Multiple Sclerosis	20	20	11
He N	2015	19120007	Attention Deficit Hyperactivity Disorder	37	35	4
Healey M L	2015	22060084	Frontotemporal Dementia	12	14	5
Henley S M	2009	11040122	Huntington's Disease	40	20	27
Henry R G	2008	9080093	Clinically Isolated Syndrome	41	49	15
Herringa R	2012	14110033	Post Traumatic Stress Disorder	13	28	4
Hirao K	2006	8050067	Alzheimer's Disease	61	61	2
Hoeft F	2007	13100121	Specific Learning Disorder	19	19	6
Holzapfel M	2006	8060194	Turner Syndrome	10	10	4
Honea R A	2009	11040123	Alzheimer's Disease	60	56	13
Hong J Y	2012	23090017	Parkinson's Disease (Without Subjective Memory Complaints)	15	25	6
Hong J Y	2012	23090017	Parkinson's Disease (With Subjective Memory Complaints)	20		5
Huang C W	2018	20110045	Alzheimer's Disease	50	30	5
Huang L	2019	23090019	Parkinson's Disease	9	7	9
Huang W	2011	15070020	Epilepsy (Generalized Seizure Disorder)	31	37	12
Huebner T	2008	11040094	Conduct Disorder	23	23	3
Huey E D	2009	11040125	Corticobasal Degeneration	48	14	19
Hüfner K	2009	11040020	Unilateral Vestibular Deafferentation Syndrome	16	16	12
Hüfner K	2007	11040021	Downbeat Nystagmus	11	15	7
Huynh N T	2014	21110101	Obstructive Sleep Apnea	13	7	1
Hyde K L	2010	11040196	Autism Spectrum Disorder	15	13	3
Iannaccone R	2015	19120008	Attention Deficit Hyperactivity Disorder	18	18	3
Ille R	2011	13100030	Huntington's Disease	18	18	10
Irish M	2013	2260079	Alzheimer's Disease	10		5
Irish M	2013	2260079	Frontotemporal Dementia	10	10	10
Ishii K	2005	10060059	Alzheimer's Disease	30	30	3
Ivo R	2013	16030046	Chronic Pain (Chronic Lower Back Pain)	14	14	16
Jagger-Rickels A C	2018	19120001	Attention Deficit Hyperactivity Disorder	41	32	15
Jagger-Rickels A C	2018	19120001	Specific Learning Disorder	17		12
Jang D P	2007	11080278	Substance Use Disorder	20	20	12
Jauhainen A M	2008	14080025	Mild Cognitive Impairment	7	13	4

Johnston B A	2014	19120009	Attention Deficit Hyperactivity Disorder	34	34	12
Joo E Y	2010	11040127	Obstructive Sleep Apnea	36	31	27
Joos A	2010	10060042	Anorexia Nervosa	12	18	7
Joubert S	2006	8050072	Frontotemporal Dementia	3	20	7
Jurkiewicz M T	2006	8050073	Traumatic Brain Injury	17	17	2
Kanda T	2008	9050040	Alzheimer's Disease	20		7
Kanda T	2008	9050040	Frontotemporal Dementia	13	20	9
Kappel V	2014	19120010	Attention Deficit Hyperactivity Disorder (Adults)	16		5
Kappel V	2014	19120010	Attention Deficit Hyperactivity Disorder (Children)	14	20	3
Karlsson H	2014	18090003	Binge Eating Disorder	23	22	7
Kasai K	2008	12070015	Post Traumatic Stress Disorder	18	23	7
Kassubek J	2005	11040221	Huntington's Disease	44	22	2
Kassubek J	2007	11080280	Kennedy Disease	18	20	10
Kassubek J	2002	8090174	Epilepsy	7	30	8
Kassubek J	2004	8050075	Huntington's Disease	44	22	17
Kassubek J	2007	12070016	Spastic Paraparesis (Complicated Hereditary)	12	15	7
Kassubek J	2007	12070016	Spastic Paraparesis (Pure Hereditary)	21	17	5
Kato S	2012	13110214	Parkinson's Disease	9	22	11
Kaufman	2013	21070046	Autism Spectrum Disorder	10	10	1
Kaufmann C	2002	8050076	Narcolepsy	12	32	19
Kawachi T	2006	8050077	Alzheimer's Disease	32	30	14
Kawasaki Y	2004	11080309	Schizotypal Disorder	25	50	4
Ke X	2008	11040048	Autism Spectrum Disorder	17	15	1
Keller S S	2002	8060206	Epilepsy (Temporal Lobe Left)	58		14
Keller S S	2002	8060206	Epilepsy (Temporal Lobe Right)	58	58	13
Keller S S	2007	8090175	Epilepsy (Rendered Free of Seizures Post Surgery)	10		4
Keller S S	2007	8090175	Epilepsy (Persistent Post Surgical Seizures)	12	77	3
Khaleeli Z	2007	16030022	Multiple Sclerosis	46	23	7
Kim E J	2007	13100035	Frontotemporal Lobar Degeneration (Tau Positive)	6		7
Kim E J	2007	13100035	Frontotemporal Lobar Degeneration (Tau Negative)	8	61	8
Kim J H	2008	9050043	Chronic Pain (Migraine)	20	33	20
Kim J H	2007	11080281	Epilepsy (Juvenile Myoclonic)	25	44	2
Kim S	2011	13100127	Alzheimer's Disease	61	33	10
Kim S J	2009	11040050	Narcolepsy	17	17	29
Kirchner H	2011	13100129	Ataxia	31	19	21
Kobayakawa M	2017	23090020	Parkinson's Disease	20	37	6
Kobel M	2010	13100130	Attention Deficit Hyperactivity Disorder	14	12	1
Koenig P	2008	11050243	Alzheimer's Disease	6	11	8
Koenigkam-Santos M	2008	9050084	Kallman Syndrome	21	16	2
Koprivova J	2009	11040051	Obsessive Compulsive Disorder	14	15	30
Koskenkorva P	2009	11040052	Unverricht-Lundborg Disease	34	30	10
Kostic V S	2010	13100197	Parkinson's Disease (Depressed)	16		15
Kostic V S	2010	13100197	Parkinson's Disease (Non-Depressed)	24	26	15
Kronbichler M	2008	11080295	Specific Learning Disorder	13	15	9
Kuchinad A	2007	13110205	Chronic Pain (Fibromyalgia)	10	10	5
Kumar U	2017	19120011	Attention Deficit Hyperactivity Disorder	18	18	4
Kumfor F	2014	22050061	Alzheimer's Disease	14		1
Kumfor F	2014	22050061	Frontotemporal Dementia	13	12	1
Kumfor F	2019	22050058	Frontotemporal Dementia	15		4
Kumfor F	2019	22050058	Semantic Dementia	24	24	4
Kunst J	2019	23090021	Alzheimer's Disease	12		3
Kunst J	2019	23090021	Mild Cognitive Impairment	27	58	5
Kunst J	2019	23090021	Parkinson's Disease	23		3
Kurth F	2011	12060005	Autism Spectrum Disorder	52	52	1
Kwon H	2004	8050081	Autism Spectrum Disorder (Asperger's Syndrome)	11	13	3
Labate A	2010	11040074	Epilepsy (Temporal Lobe Mild)	19		3
Labate A	2010	11040074	Epilepsy (Temporal Lobe Refractory)	19	37	1
Lagarde J	2013	14050009	Progressive Supranuclear Palsy	19		5
Lagarde J	2013	14050009	Frontotemporal Dementia	16	18	8
Lagarde J	2015	20110046	Alzheimer's Disease	14		3
Lagarde J	2015	20110046	Frontotemporal Dementia	18	18	10
Lagarde J	2015	20110046	Progressive Supranuclear Palsy	21		10
Lai C H	2012	16080066	Panic Disorder	30	21	4
Lai C H	2015	17050006	Panic Disorder	53	54	2
Lee E	2013	23090025	Parkinson's Disease	40	40	11
Lee J E	2013	13110212	Parkinson's Disease (Mild Cognitive Impairment Converters)	15		8
Lee J E	2013	13110212	Parkinson's Disease (Mild Cognitive Impairment Non-Converters)	36	21	3
Lee J E	2010	23090024	Parkinson's Disease	41	21	3
Lee J E	2014	23100026	Parkinson's Disease	38	50	7
Lee W	2017	23090023	Parkinson's Disease (With Visual Hallucinations)	10		2
Lee W	2017	23090023	Parkinson's Disease (Without Visual Hallucinations)	21	30	2
Lehmann M	2011	20110047	Alzheimer's Disease	30		1
Lehmann M	2011	20110047	Posterior Cortical Atrophy	48	50	1
Lentini E	2020	20070025	Klinefelter's Syndrome (XXY) (Male)	33	41	11
Lentini E	2020	20070025	Klinefelter's Syndrome (XXY) (Female)	33	45	7
Leutgeb V	2016	22030018	Borderline Personality Disorder	20	19	3
Li L	2006	8050084	Post Traumatic Stress Disorder	12	12	4

Li L	2022	23100030	Parkinson's Disease (With Mild Cognitive Impairment)	23	23	2
Li L	2022	23100031	Parkinson's Disease (Without Mild Cognitive Impairment)	22		2
Li X	2015	19120024	Attention Deficit Hyperactivity Disorder	30	30	2
Li Y	2023	23100029	Mild Cognitive Impairment	44	40	3
Li Y	2016	23100028	Parkinson's Disease	23	20	3
Li Y	2020	23100031	Parkinson's Disease	98	66	2
Li Z	2020	22010005	Chronic Pain (Migraine)	72	46	2
Liang P	2016	23100032	Parkinson's Disease	16	21	3
Liao M	2013	20070026	Anxiety Disorder	26	25	1
Libon D J	2009	13100040	Progressive Non-Fluent Aphasia	11		13
Libon D J	2009	13100040	Semantic Dementia	10	43	7
Libon D J	2009	13100040	Frontotemporal Lobar Degeneration	51		13
Lim L	2013	19120012	Attention Deficit Hyperactivity Disorder	29	29	3
Lin A	2013	16030024	Multiple Sclerosis	11	11	5
Lin C H	2013	13100196	Essential Tremor	10		19
Lin C H	2013	13100196	Parkinson's Disease	10	13	15
Lin K	2009	11040169	Epilepsy (Juvenile Myoclonic Photosensitivity)	19		4
Lin K	2009	11040169	Epilepsy (Juvenile Myoclonic Without Photosensitivity)	41	30	8
Liu H	2020	22010006	Chronic Pain (Migraine)	37	37	1
Liu M	2011	15070021	Epilepsy (Generalized Seizure Disorder)	10	10	6
Liu M	2011	15070021	Epilepsy (Juvenile Myoclonic)	15	15	5
Liu Y	2018	22110106	Tinnitus	24	24	5
Long Z	2016	20110048	Mild Cognitive Impairment	29	33	3
Lu C	2010	11040053	Developmental Stuttering	12	12	9
Ludolph A G	2006	8060209	Tourette Syndrome	14	15	2
Ma Z	2019	21110103	Generalized Anxiety Disorder	15	28	2
Maeda Y	2013	16030047	Chronic Pain (Carpal Tunnel Syndrome)	28	28	1
Maier S	2016	19120015	Attention Deficit Hyperactivity Disorder	131	95	1
Mallik S	2015	16060063	Multiple Sclerosis (Relapsing-Remitting)	51		7
Mallik S	2015	16060063	Multiple Sclerosis (Secondary Progressive)	28	29	4
Maneru C	2003	10060046	Hypoxic-Ischemic Encephalopathy	13	13	9
Mannerkoski M K	2009	11040199	Intellectual Disability	26	39	2
Martikainen I K	2013	16030048	Chronic Pain (Chronic Nonspecific Back Pain)	16	16	3
Martinez-Horta S	2020	21060027	Huntington's Disease (Non-Demented)	20	15	8
Martinez-Horta S	2020	21060027	Huntington's Disease (Demented)	15	0	8
Martino D	2011	13100138	Dystonia (Primary Blepharospasm)	25	24	6
Massana G	2003	8050087	Panic Disorder	18	18	1
Massimo L	2009	11040200	Persistent Depressive Disorder	9		22
Massimo L	2009	11040200	Histrionic Personality Disorder	5	27	24
Massimo L	2013	22060086	Alzheimer's Disease	17		13
Massimo L	2013	22060086	Frontotemporal Dementia	37	30	14
Matsuda H	2002	8090180	Alzheimer's Disease	15	25	13
Matsumoto R	2010	13100139	Obsessive Compulsive Disorder	16	32	4
Matsunari I	2007	9050048	Alzheimer's Disease	27	40	9
Mazere J	2008	13100140	Alzheimer's Disease	8	8	6
McAlonan G M	2007	13100043	Attention Deficit Hyperactivity Disorder	28	31	8
McAlonan G M	2005	12060007	Autism Spectrum Disorder	17	17	13
McAlonan G M	2008	11040026	Autism Spectrum Disorder (High Functioning Autism)	17		8
McAlonan G M	2008	11040026	Autism Spectrum Disorder (Asperger's Syndrome)	16	55	4
McAlonan G M	2002	12060006	Autism Spectrum Disorder	17	24	9
McMillan A B	2004	8050091	Epilepsy (Left Temporal Lobe)	13		7
McMillan A B	2004	8050091	Lobe Epilepsy (Right Temporal Lobe)	12	62	15
Melloni M	2016	22040033	Alzheimer's Disease	21		23
Melloni M	2016	22040033	Frontotemporal Dementia	26	22	6
Melloni M	2015	23100035	Parkinson's Disease	14	13	3
Mengotti P	2011	12060001	Autism Spectrum Disorder (Children)	7	7	2
Mengotti P	2011	12060001	Autism Spectrum Disorder	20	22	2
Meppelink A M	2011	13100199	Parkinson's Disease (Without Visual Hallucinations)	13		13
Meppelink A M	2011	13100199	Parkinson's disease (With Visual Hallucinations)	11	14	17
Mesaros S	2008	13100143	Multiple Sclerosis (Secondary Progressive)	35		64
Mesaros S	2008	13100143	Multiple Sclerosis (Benign)	60	21	31
Mesaros S	2008	9050051	Multiple Sclerosis	28	21	2
Meyer S	2017	22050046	Frontotemporal Dementia	52	52	2
Mezzapesa D M	2007	9050052	Amyotrophic Lateral Sclerosis	16	9	13
Miettinen P S	2011	13100144	Alzheimer's Disease	16		5
Miettinen P S	2011	13100144	Mild Cognitive Impairment	18	21	5
Migliaccio R	2009	11050261	Alzheimer's Disease	16		18
Migliaccio R	2009	11050261	Progressive Non-Fluent Aphasia	10	65	18
Migliaccio R	2009	11050261	Posterior Cortical Atrophy	14		18
Milham M P	2005	8050094	Anxiety Disorder	17	34	6
Minnerop M	2007	10010002	Multiple System Atrophy (Cerebellar)	16		18
Minnerop M	2007	10010002	Multiple System Atrophy (Parkinsonian)	16	16	22
Minnerop M	2008	11040057	Dystonia	13	13	5
Molko N	2003	8090182	Turner Syndrome	14	14	2
Molko N	2004	8060217	Turner Syndrome	14	14	12
Moon C	2014	21110106	Generalized Anxiety Disorder	13	9	5
Moon C	2015	21110105	Generalized Anxiety Disorder	17	17	5

Moon C	2018	21060016	Obsessive Compulsive Disorder	18	18	3
Moorhead T W	2005	8090183	Specific Learning Disorder	18	29	9
Morbelli S	2016	22050047	Frontotemporal Dementia (Positive Symptoms)	12		5
Morbelli S	2016	22050047	Frontotemporal Dementia (Negative Symptoms)	13	20	4
Mordasini L	2012	16030049	Chronic Pain	20	20	3
Morgan B	2011	22060088	Frontotemporal Dementia	14	12	2
Morgen K	2006	8060218	Multiple Sclerosis	19	19	2
Morrell M J	2010	13100146	Obstructive Sleep Apnea	60	60	2
Mueller S G	2006	8050095	Epilepsy (With Mesial Temporal Sclerosis)	26	30	28
Muhlau M	2013	16030026	Clinically Isolated Syndrome	249	49	12
Muhlau M	2007	8050096	Huntington's Disease	46	46	32
Muhlau M	2006	8060219	Tinnitus	28	28	1
Muller S	2013	19120018	Autism Spectrum Disorder	12	12	10
Muller-Vahl K R	2009	11040201	Tourette Syndrome	19	20	14
Mummery C J	2000	8060220	Semantic Dementia	6	14	17
Na K S	2013	17050007	Panic Disorder (Without Agoraphobia)	22		2
Na K S	2013	17050007	Panic Disorder (With Agoraphobia)	12	22	7
Naduthota R	2017	23100037	Parkinson's Disease	72	72	18
Nagano-Saito A	2005	8050097	Parkinson's Disease	19	31	3
Nardo D	2010	11050255	Post Traumatic Stress Disorder	21	22	5
Nestor P J	2003	8090184	Progressive Non Fluent Aphasia	10	10	1
Nevler N	2017	22060089	Frontotemporal Dementia	32	17	8
Niedtfeld I	2013	14110036	Borderline Personality Disorder	60	60	2
Nishio Y	2010	10060054	Parkinson's Disease	40	13	36
Nyatega C O	2022	23100038	Parkinson's Disease	20	18	4
O'Callaghan C	2019	22070094	Alzheimer's Disease	24		2
O'Callaghan C	2019	22070094	Frontotemporal Dementia	31	37	3
O'Doherty D C M	2017	21120115	Post Traumatic Stress Disorder	25	25	26
O'Muircheartaigh J	2011	13100150	Epilepsy (Juvenile Myoclonic)	28	55	2
Obermann M	2007	8060221	Blepharospasm	11	11	4
Obermann M	2007	8060221	Dystonia	9	9	3
Obermann M	2013	16030050	Chronic Pain (Trigeminal Neuralgia)	60	49	14
Ohnishi T	2001	8050099	Alzheimer's Disease	26	23	2
Okada T	2004	8050100	Chronic Pain	16	49	2
Overmeyer S	2001	13100054	Attention Deficit Hyperactivity Disorder	18	16	9
Padovani A	2006	8050102	Progress Supranuclear Palsy	14	14	22
Pagonabarraga J	2014	23100039	Parkinson's Disease	15	15	1
Pail M	2010	11080301	Epilepsy (Left Mesial Temporal Lobe)	20		1
Pail M	2010	11080301	Epilepsy (Right Mesial Temporal Lobe)	20	40	1
Pan W J	2007	11040203	Blindness	14	16	3
Pannacciulli N	2006	8050103	Binge Eating Disorder	24	36	7
Pantano P	2011	13100055	Dystonia	19	28	8
Pardini M	2009	11040175	Corticobasal Degeneration	25		4
Pardini M	2009	11040175	Frontotemporal Dementia	22	12	5
Parisi L	2014	16030028	Multiple Sclerosis (Classic)	9		3
Parisi L	2014	16030028	Multiple Sclerosis (Cortical)	9	9	5
Park K M	2015	22060070	Transient Global Amnesia	80	29	4
Peinemann A	2005	9010007	Huntington's Disease	25	25	7
Pell G S	2008	9050055	Epilepsy	19	115	18
Pennanen C	2005	8050105	Mild Cognitive Impairment	51	32	10
Pereira J B	2009	11040060	Parkinson's Disease	36	20	30
Pereira J M	2009	11050263	Alzheimer's Disease	3		1
Pereira J M	2009	11050263	Frontotemporal Dementia (With Tau Inclusions)	6		4
Pereira J M	2009	11050263	Frontotemporal Dementia (With Ubiquitin Inclusions)	9		3
Pereira J M	2009	11050263	Progressive Non Fluent Aphasia	3	25	2
Pereira J M	2009	11050263	Semantic Dementia (With Tau Inclusions)	3		4
Pereira J M	2009	11050263	Semantic Dementia (With Ubiquitin Inclusions)	5		2
Pereira J M	2009	11050263	Frontotemporal Dementia	4		5
Planetta P J	2015	23100040	Multiple System Atrophy	14		5
Planetta P J	2015	23100040	Parkinson's Disease	14	14	6
Potgeiser A R E	2014	23100041	Parkinson's Disease	77	87	6
Prakash R S	2010	16030029	Multiple Sclerosis	21	15	12
Preziosa P	2016	17070011	Multiple Sclerosis (Cognitively Impaired)	23		10
Preziosa P	2016	17070011	Multiple Sclerosis (Cognitively Preserved)	38	61	4
Prinster A	2006	8050107	Multiple Sclerosis	51	34	8
Prinster A	2010	11040140	Multiple Sclerosis	128	35	20
Ptito M	2008	9050058	Blindness	11	21	10
Pujol J	2004	13100059	Obsessive Compulsive Disorder	72	72	3
Quarantelli M	2006	8050108	Dystrophy (Facioscapulohumeral)	30	39	9
Quattrone A	2008	9080100	Essential Tremor (Arm)	43		1
Quattrone A	2008	9080100	Essential Tremor (Head)	50	32	3
Rabinovici G D	2007	11040099	Alzheimer's Disease	11		19
Rabinovici G D	2007	11040099	Frontotemporal Lobar Degeneration	18	40	38
Raji C A	2009	11040030	Alzheimer's Disease	33	169	41
Rami L	2009	11040232	Alzheimer's Disease	31		6
Rami L	2009	11040232	Mild Cognitive Impairment	14	27	5
Ramirez-Ruiz B	2007	13100195	Parkinson's Disease (Without Visual Hallucinations)	20	21	2

Ramirez-Ruiz B	2007	13100195	Parkinson's Disease (With Visual Hallucinations)	18		10
Ramos-Quiroga J A	2016	19120017	Attention Deficit Hyperactivity Disorder	44	44	3
Ranjeva J P	2005	16030031	Clinically Isolated Syndrome	18	18	8
Rankin K P	2011	21050002	Frontotemporal Dementia (Behavioral Variant)	3		23
Rankin K P	2011	21050002	Frontotemporal Dementia (Pick Disease)	5	53	22
Reetz K	2011	13100157	Spinocerebellar Ataxia	16	16	12
Reiss A L	2004	8060222	Williams Syndrome	43	40	13
Remy F	2005	8090188	Alzheimer's Disease	8	11	21
Riccitelli G	2011	16030059	Multiple Sclerosis (Fatigued)	10		7
Riccitelli G	2011	16030059	Multiple Sclerosis (Non-Fatigued)	14	14	5
Riccitelli G	2012	13100158	Multiple Sclerosis	78	88	42
Ridler K	2001	8090189	Tuberous Sclerosis	10	8	2
Riederer F	2012	16030053	Chronic Pain	29	29	8
Riederer F	2008	9050060	Epilepsy (Left Mesial Temporal Lobe)	9		10
Riederer F	2008	9050060	Epilepsy (Right Mesial Temporal Lobe)	13	12	3
Riva D	2011	12060008	Autism Spectrum Disorder	21	21	13
Rocca M A	2014	16030033	Multiple Sclerosis (Non-Fatigued)	32		4
Rocca M A	2014	16030033	Multiple Sclerosis (Fatigued)	31	35	12
Rocca M A	2006	8060223	Chronic Pain (Migraine With Aura)	7		9
Rocca M A	2006	8060223	Chronic Pain (Migraine Without Aura)	9	15	14
Rocha-Rego V	2012	14110031	Post Traumatic Stress Disorder	16	16	2
Rodriguez-Raecke R	2009	13110208	Chronic Pain	32	32	16
Rodriguez-Raecke R	2013	16030054	Chronic Pain (Osteoarthritis) (Left Primary)	7		1
Rodriguez-Raecke R	2013	16030054	Osteoarthritis (Osteoarthritis) (Right Primary)	20	20	10
Roman-Urrestarazu A	2016	19120019	Attention Deficit Hyperactivity Disorder	49	34	1
Rosen H J	2002	8060224	Frontotemporal Lobar Degeneration	20	20	8
Rossi R	2012	17050008	Borderline Personality Disorder	26	26	39
Rowe J B	2010	21020011	Parkinson's Disease	82	82	1
Ruscheweyh R	2011	11080302	Chronic Pain	45	31	26
Salmond C H	2000	8050118	Amnesia	5	8	8
Salmond C H	2005	8050117	Autism Spectrum Disorder	14	13	2
Salmond C H	2007	12060009	Autism Spectrum Disorder (Low Functioning)	9	9	6
Sanchis-Segura C	2016	17070012	Multiple Sclerosis (Female)	34	18	4
Sanchis-Segura C	2016	17070012	Multiple Sclerosis (Male)	22	35	6
Santana M	2010	10060066	Epilepsy (Left Mesial Temporal Lobe)	59		16
Santana M	2010	10060066	Epilepsy (Right Mesial Temporal Lobe)	41	30	10
Santos M C A	2016	23100043	Parkinson's Disease (Right Onset)	24		7
Santos M C A	2016	23100043	Parkinson's Disease (Left Onset)	36	80	4
Sasayama D	2010	13100160	Attention Deficit Hyperactivity Disorder	10	17	9
Saykin A J	2006	8050119	Mild Cognitive Impairment (Cognitive Complaints)	40		12
Saykin A J	2006	8050119	Mild Cognitive Impairment (Non-Cognitive Complaints)	40	40	15
Schiffer B	2007	8050120	Pedophilic Disorder	18	24	2
Schmidt-Wilcke T	2006	8050122	Chronic Pain (Migraine)	18	18	5
Schmidt-Wilcke T	2007	9050062	Chronic Pain (Fibromyalgia)	20	22	2
Schmidt-Wilcke T	2005	11030006	Chronic Pain (Chronic Tension Headache)	20	40	16
Schmidt-Wilcke T	2008	11030005	Chronic Pain (Migraine)	35	31	4
Schmidt-Wilcke T	2009	11040205	Mild Cognitive Impairment	18	18	4
Schmidt-Wilcke T	2010	10060067	Chronic Pain (Idiopathic Facial Pain)	11	11	9
Schumacher J	2019	23100044	Alzheimer's Disease	28		21
Schumacher J	2019	23100044	Lewy Body Dementia	39	22	21
Schwartz D L	2010	10030032	Substance Use Disorder	61	44	4
Seeley W W	2008	13100065	Frontotemporal Lobar Degeneration (CDR score of 0.5)	15		29
Seeley W W	2008	13100065	Frontotemporal Lobar Degeneration (CDR score of 1)	15	45	33
Seeley W W	2008	13100065	Frontotemporal Lobar Degeneration (CDR score of 2-3)	15		43
Seidman L J	2019	19120020	Attention Deficit Hyperactivity Disorder	74	54	3
Seminowicz D A	2010	13100161	Chronic Pain	56	49	18
Senda J	2011	14030006	Amyotrophic Lateral Sclerosis	17	17	6
Sepulcre J	2006	8050123	Multiple Sclerosis	31	15	9
Sethi A	2017	19120021	Attention Deficit Hyperactivity Disorder	30	30	2
Sheelakumari R	2020	22050048	Frontotemporal Dementia	25	20	34
Shen D	2018	21060019	Amyotrophic Lateral Sclerosis	11	20	6
Shigomoto Y	2013	21100045	Multiple System Atrophy	20	30	9
Shiino A	2006	9050064	Alzheimer's Disease	40		16
Shiino A	2006	9050064	Mild Cognitive Impairment	20	88	10
Shin S	2012	13110215	Parkinson's Disease (With Visual Hallucinations)	46		20
Shin S	2012	13110215	Parkinson's Disease (Without Visual Hallucinations)	64	25	1
Shott M E	2015	18100011	Binge Eating Disorder	18	24	8
Silani G	2005	8060227	Specific Learning Disorder	32	32	1
Simon T J	2005	8090193	22q11.2 Deletion Syndrome	18	18	8
Sobanski T	2010	11040145	Panic Disorder	17	17	2
Sowell E R	2001	8050125	Fetal Alcohol Syndrome	21	21	17
Spano B	2010	11040207	Multiple Sclerosis	10	20	12
Specht K	2003	8050127	Multiple-System Atrophy	14	13	1
Spencer M D	2006	8050129	Intellectual Disability	63	72	2
Steinbach R	2021	21060020	Amyotrophic Lateral Sclerosis (Bulb-Onset)	26		3
Steinbach R	2021	21060020	Amyotrophic Lateral Sclerosis (Limb-Onset)	52	69	1
Steinbrink C	2008	9050065	Specific Learning Disorder	7	7	2

Stevens M C	2019	19120016	Attention Deficit Hyperactivity Disorder	24	24	1
Strawn J R	2013	21110107	Generalized Anxiety Disorder	15	28	2
Suchan B	2010	11040077	Anorexia Nervosa	15	15	2
Sui S G	2010	13100070	Post Traumatic Stress Disorder	11	12	11
Summerfield C	2005	8050131	Parkinson's Disease (Without Dementia)	13		3
Summerfield C	2005	8050131	Parkinson's Disease (With Dementia)	16	13	10
Sunol M	2022	22030022	Chronic Pain (Fibromyalgia)	34	38	1
Swartz B E	2016	21070049	Epilepsy (Juvenile Myoclonic)	14	14	4
Szesko P R	2008	11040103	Obsessive Compulsive Disorder	37	26	3
Tae W S	2006	8050133	Epilepsy (Juvenile Myoclonic)	19	19	6
Tae W S	2010	10060071	Epilepsy (Mesial Temporal Lobe Left)	16	23	28
Tae W S	2010	10060071	Epilepsy (Mesial Temporal Lobe Right)	15		31
Takahashi R	2010	13100171	Alzheimer's Disease	51	40	6
Takahashi R	2010	13100171	Levy Body Dementia	43		6
Takahashi R	2011	13100172	Progressive Supranuclear Palsy	16	20	7
Tanabe J	2009	9050067	Substance Use Disorder	19	20	1
Tavanti M	2012	13100174	Post Traumatic Stress Disorder	25	25	26
Tavazzi E	2012	16020009	Amyotrophic Lateral Sclerosis	20		7
Tavazzi E	2012	16020009	Multiple Sclerosis	18	31	17
Terada T	2018	23100047	Parkinson's Disease	40	10	9
Tessitore A	2012	13100200	Parkinson's Disease	12	12	2
Thivard L	2007	13100175	Amyotrophic Lateral Sclerosis	15	25	19
Thomaes K	2010	13100176	Post Traumatic Stress Disorder	31	28	5
Tiihonen J	2008	9050069	Psychopathy	12		2
Tiihonen J	2008	9050069	Antisocial Personality Disorder	26	25	31
Tir M	2009	11040150	Multiple System Atrophy	14		1
Tir M	2009	11040150	Parkinson's Disease	19	14	2
Toal F	2010	12060010	Autism Spectrum Disorder	65	33	3
Togao O	2010	13100178	Obsessive Compulsive Disorder	23	26	6
Tomoda A	2009	11050264	Dissociative Identity Disorder	23	14	1
Torelli F	2011	13100179	Obstructive Sleep Apnea	16	14	1
Touvinen T	2017	22060091	Alzheimer's Disease	23		1
Touvinen T	2017	22060091	Frontotemporal Dementia	21	25	1
Tse N Y	2020	21050003	Corticobasal Degeneration	16		14
Tse N Y	2020	21050003	Progressive Supranuclear Palsy	16	33	10
Tu C H	2010	11030008	Chronic Pain (Primary Dysmenorrhea)	32	32	9
Tu S	2015	22060090	Alzheimer's Disease	20		2
Tu S	2015	22060090	Frontotemporal Dementia	24	23	1
Tu S	2015	22060090	Semantic Dementia	14		1
Tzarouchi L C	2010	11040064	Multiple System Atrophy	11	11	31
Uchida R R	2008	9050085	Panic Disorder	19	20	1
Ung H	2012	16030055	Chronic Pain	47	47	3
Valente A A Jr	2005	8060229	Obsessive Compulsive Disorder	19	15	2
Valet M	2009	11020003	Chronic Pain	14	25	13
Valfre W	2008	9050072	Chronic Pain (Migraine)	27	27	11
van de Pavert S H	2015	16030039	Multiple Sclerosis (Primary Progressive)	25		7
van de Pavert S H	2015	16030039	Multiple Sclerosis (Relapsing Remitting)	30	30	3
van de Pavert S H	2015	16030039	Multiple Sclerosis (Secondary Progressive)	25		10
Van den Heuvel O A	2009	11040186	Obsessive Compulsive Disorder	55	50	5
van Tol M J	2010	13100073	Anxiety Disorder	68	65	1
van Wingen G	2013	19120027	Attention Deficit Hyperactivity Disorder (Without Cocaine Dependence)	14	15	2
van Wingen G	2013	19120027	Attention Deficit Hyperactivity Disorder (With Cocaine Dependence)	10		2
Vannorsdall T D	2010	11040211	Traumatic Brain Injury	14	28	6
Vargha-Khadem F	2003	8090199	Hypoxic-ischemic Damage	11	16	9
Vartiainen N	2009	11040151	Herpes Simplex Virus	8	28	7
Villemointeix T	2015	19120022	Attention Deficit Hyperactivity Disorder (Met158-Carriers)	28	15	1
Villemointeix T	2015	19120022	Attention Deficit Hyperactivity Disorder (Val158 homozygotes)	10	25	1
Wang G	2015	23100048	Progressive Supranuclear Palsy	24	23	50
Wang H	2022	22020014	Autism Spectrum Disorder (Pediatric)	24	19	2
Wang H	2022	22020014	Autism Spectrum Disorder (Adult)	10	13	1
Wang J	2007	13100076	Attention Deficit Hyperactivity Disorder	12	12	4
Wang L	2019	19120013	Attention Deficit Hyperactivity Disorder	30	25	3
Waragai M	2009	10030024	Alzheimer's Disease	15	12	2
Watkins K E	2002	8060231	Language Disorder	10	17	10
Weber Y G	2010	10060073	Myotonic Dystrophy (Type 1)	14	20	17
Weber Y G	2010	10060073	Myotonic Dystrophy (Type 2)	9	18	15
Wei G	2020	22050066	Alzheimer's Disease	20		5
Wei G	2020	22050066	Frontotemporal Dementia (Early)	22	28	5
Wei G	2020	22050066	Frontotemporal Dementia (Late)	22		1
Wei W	2016	16070065	Epilepsy (Medial Temporal With Hippocampal Sclerosis)	30		11
Wei W	2016	16070065	Epilepsy (Medial Temporal With Other Lesions)	30	30	4
White N S	2003	8050143	Down Syndrome	19	11	28
Whitwell J L	2005	8090202	Frontotemporal Dementia (Ubiquitin-Positive)	9		3
Whitwell J L	2005	8090202	Frontotemporal Dementia (Pick Disease)	7	20	6
Whitwell J L	2005	8090202	Frontotemporal Dementia (Ubiquitin-Negative)	5		2
Whitwell J L	2007	11080304	Frontotemporal Lobar Degeneration (With Hyperphagia)	7		2
Whitwell J L	2007	11080304	Frontotemporal Lobar Degeneration (With a Pathological Sweet Tooth)	9	9	13

Whitwell J L	2007	8050145	Alzheimer's Disease	38		1
Whitwell J L	2007	8050145	Posterior Cortical Atrophy	38	38	1
Whitwell J L	2013	14050010	Primary Progressive Apraxia	16		4
Whitwell J L	2013	14050010	Progressive Supranuclear Palsy	16	20	8
Whitwell J L	2009	11040214	Frontotemporal Dementia (IVS10+16 MAPT Mutation)	4		1
Whitwell J L	2009	11040214	Various Neurodegenerative Diseases (IVS10+3 MAPT Mutation)	3		1
Whitwell J L	2009	11040214	Frontotemporal Dementia (N279K MAPT Mutation)	3	19	1
Whitwell J L	2009	11040214	Frontotemporal Dementia (P301L MAPT Mutation)	4		1
Whitwell J L	2009	11040214	Frontotemporal Dementia (S305N MAPT Mutation)	2		1
Whitwell J L	2009	11040214	Frontotemporal Dementia (V337M MAPT Mutation)	3		1
Whitwell J L	2004	13100185	Frontotemporal Lobar Degeneration (Tau-Negative)	8		3
Whitwell J L	2004	13100185	Frontotemporal Lobar Degeneration (Tau-Positive)	9	20	10
Wiest R	2005	8090203	Epilepsy (Mesial Temporal Lobe)	7	30	7
Wilson N	2020	22050067	Alzheimer's Disease	18		5
Wilson N	2020	22050067	Frontotemporal Dementia	19	25	1
Wilson S M	2009	13100186	Semantic Dementia	5	48	15
Woermann F G	2000	9080103	Epilepsy (Temporal Lobe With Intermittent Explosive Disorder)	25		2
Woermann F G	2000	9080103	Epilepsy (Temporal Lobe Without Intermittent Explosive Disorder)	25	35	1
Wolf R C	2009	9050080	Huntington's Disease	12	16	14
Wood P B	2009	11040235	Chronic Pain (Fibromyalgia)	30	20	4
Wu Y	2020	23100049	Parkinson's Disease	30	15	3
Xia J	2013	23100050	Parkinson's Disease	32	25	18
Xiao J X	2007	11080287	Amblyopia	13	14	4
Xie S	2006	8090204	Alzheimer's Disease	13	16	9
Xuan M	2019	23100051	Parkinson's Disease (Early Onset)	28	23	5
Xuan M	2019	23100051	Parkinson's Disease (Middle-Late Onset)	37	23	5
Yang F C	2013	16030056	Chronic Pain (Migraine) (Left-Sided Attack)	26		13
Yang F C	2013	16030056	Chronic Pain (Migraine) (Right-Sided Attack)	23	49	33
Yang Q	2018	19120025	Autism Spectrum Disorder	16	16	3
Yaouhi K	2009	11040106	Obstructive Sleep Apnea	16	14	7
Yasuda C L	2010	11040153	Epilepsy (With Negative Family History of Epilepsy)	29		13
Yasuda C L	2010	11040153	Epilepsy (With Positive Family History of Epilepsy)	40	69	13
Yasuda C L	2010	11040039	Epilepsy (Seizure Free)	34		23
Yasuda C L	2010	11040039	Epilepsy (With Worthwhile Improvement)	23	69	12
Yasuda C L	2010	11040039	Epilepsy (Whitout Improvement)	10		30
Yin C	2014	21010001	Mild Cognitive Impairment	11	22	5
Yoneyama E	2003	8090206	Schizotypal Personality Disorder	14	28	3
Yoo H K	2005	8050150	Panic Disorder	18	18	7
Yoo S Y	2008	11040184	Obsessive Compulsive Disorder (Female)	24	24	4
Yoo S Y	2009	11040185	Obsessive Compulsive Disorder (Male)	47	47	5
Yoon E J	2013	16030057	Chronic Pain (Spinal Cord Injury)	10	10	4
Younger J W	2010	10060053	Chronic Pain (Chronic Myofascial Temporomandibular Pain)	14	15	1
Zahn R	2005	13100189	Alzheimer's Disease	10		4
Zahn R	2005	13100189	Progressive Non Fluent Aphasia	5	10	4
Zamboni G	2008	11040079	Frontotemporal Dementia	62	14	11
Zhang J	2011	13100080	Post Traumatic Stress Disorder	10	10	3
Zhang J	2018	21080075	Conduct Disorder	60	60	3
Zhang J	2015	23100052	Parkinson's Disease (With Mild Cognitive Impairment)	21		5
Zhang J	2015	23100052	Parkinson's Disease (Without Mild Cognitive Impairment)	14	20	7
Zhang X	2016	17070013	Multiple Sclerosis	39	29	4
Zhang X	2018	21120121	Post Traumatic Stress Disorder	35	36	1
Zhang Y	2014	21100099	With Mild Cognitive Impairment	28	29	19
Zhao Y	2019	19120026	Attention Deficit Hyperactivity Disorder	36	36	6
Zhao Z	2014	21010002	Mild Cognitive Impairment	20	18	7
Zhong M	2022	23100054	Parkinson's Disease (With Hallucinations)	23		4
Zhong M	2022	23100054	Parkinson's Disease (Without Hallucinations)	35	31	4
TOTAL				17450	15346	6564

eTable 6. Distribution of the VBM data included (main analysis)

BACON data sets	Experiments		Patients		Controls	Foci of variation	
	N	%	N	%	N	N	%
BD	73	16.1	2959	18	17139*	420	13
MDD	82	18.1	4116	25		461	14
SZ	123	27.1	5015	31		1295	39
BrainMap	175	38.7	4246	26		1137	34
Total	453	100	16336	100	17139	3313	100

*Multiple experimental groups share certain control groups. Details can be seen in the eTables 1-5. N = number; % = percentage.

eTable 7. Distribution of the VBM data included (additional analysis)

BACON data sets	Experiments		Patients		Controls	Foci of variation	
	N	%	N	%	N	N	%
BD	73	7.1	2959	10	28177*	420	4.8
MDD	82	8	4116	13.9		461	5.3
SZ	123	12	5015	16.9		1295	14.8
BrainMap	743	72.9	17450	59.2		6564	75.1
Total	1021	100	29540	100	28177	8740	100

*Multiple experimental groups share certain control groups. Details can be seen in the eTables 1-5. N = number; % = percentage.

eTable 8. Meta-analytic connectivity modeling (MACM) of the right middle temporal gyrus in bipolar disorder

Cluster ID	Talairach			ALE value	P value	Local maximum (brain area)
	x	y	z			
1	52	-62	22	0.080103904	1,05E-24	Right Superior Temporal Gyrus (BA 39)
	46	-68	34	0.016626408	5,77E+01	Right Middle Temporal Gyrus (BA 39)
2	-46	-68	22	0.029632468	3,14E-02	Left Middle Temporal Gyrus (BA 39)
3	2	-56	24	0.029390708	3,82E-02	Left Posterior Cingulate Cortex (BA 31)
4	62	-10	-18	0.027509483	1,76E-01	Right Inferior Temporal Gyrus (BA 21)
5	-54	-10	-18	0.02279647	6,77E-02	Left Inferior Temporal Gyrus (BA 21)

ALE = activation likelihood estimation; BA = Brodmann area. Results are family-wise error-corrected (FWE-c) for multiple comparisons, with a cluster-level inference of $p < .05$ and a cluster-forming threshold of $p < .001$ on the voxel level (1,000 permutation runs).

eTable 9. Behavioral results of the right middle temporal gyrus MACM

Category (sub-category)	Domain	Z score
Social cognition	Cognition	6.528
Memory (Explicit)	Cognition	4.439
Language (Semantics)	Cognition	4.214
Reasoning	Cognition	3.71
Language (Syntax)	Cognition	3.586

The green color represents the cognition behavioral domain. A threshold of $p < .05$ with Bonferroni correction for multiple comparisons was applied, corresponding to a subdomain z-score ≥ 3 .

eTable 10. Meta-analytic connectivity modeling (MACM) of the right anterior cingulate cortex in schizophrenia

Cluster ID	Talairach			ALE value	P value	Local maximum (brain area)
	x	y	z			
1	10	22	30	0.19263557	0.0	Right Anterior Cingulate cortex (BA 32)
	2	10	46	0.045234267	8,89E-04	Right Medial Frontal Gyrus (BA 32)
	-10	12	40	0.04467176	1,28E-02	Left Anterior Cingulate cortex (BA 32)
	20	10	40	0.044180356	1,76E-02	Right Medial Frontal Gyrus (BA 32)
	28	0	44	0.027906436	2,84E+02	Right Middle Frontal Gyrus (BA 6)
	-6	0	60	0.026236162	6,92E+01	Left Middle Frontal Gyrus (BA 6)
2	-32	16	6	0.061628003	9,67E-08	Left Insula (BA 13)
	-50	12	16	0.041779596	8,17E-02	Left Inferior Frontal Gyrus (BA 44)
	-42	4	32	0.040963173	1,37E-01	Left Precentral Gyrus (BA 9)
	-40	8	28	0.039663125	3,09E-01	Left Inferior Frontal Gyrus (BA 9)
3	32	20	2	0.06779873	9,29E-11	Right Insula (BA 13)
4	-28	-52	40	0.043961607	2,03E-02	Left Superior Parietal Lobule (BA 7)
	-44	-46	42	0.030400276	7,26E+01	Left Inferior Parietal Lobule (BA 40)
	-26	-72	32	0.029695272	1,07E+02	Left Precuneus (BA 19)
5	22	6	2	0.03569689	3,42E+00	Right Lentiform Nucleus (Putamen)
	8	-6	12	0.03114084	4,80E+00	Right Thalamus (Anterior Nucleus)
6	44	10	26	0.03754674	1,13E+01	Right Inferior Frontal Gyrus (BA 9)
	42	22	30	0.029058801	1,52E+02	Right Middle Frontal Gyrus (BA 9)
	40	6	38	0.027143944	4,30E+00	Right Precentral Gyrus (BA 9)
7	26	-60	38	0.039743364	2,94E-01	Right Precuneus (BA 7)
	30	-52	44	0.028613428	1,95E+02	Right Superior Parietal Lobule (BA 7)
	36	-58	50	0.026098123	7,44E+01	Right Superior Parietal Lobule (BA 7)
8	-14	-10	4	0.027068632	4,46E+01	Left Thalamus (Anterior Nucleus)
	-14	-4	4	0.024338601	1,85E+03	Left Lentiform Nucleus (Lateral Globus Pallidus)
9	24	-86	-4	0.026902352	4,88E+02	Right Middle Occipital Gyrus (BA 18)
	24	-78	-12	0.025086954	1,26E+02	Right Fusiform Gyrus (BA 19)
10	-42	-54	-14	0.031899877	3,12E+01	Left Fusiform Gyrus (BA 37)

ALE = activation likelihood estimation; BA = Brodmann area. Results are family-wise error-corrected (FWE-c) for multiple comparisons, with a cluster-level inference of $p < .05$ and a cluster-forming threshold of $p < .001$ on the voxel level (1,000 permutation runs).

eTable 11. Behavioral results of the right anterior cingulate cortex MACM

Category (sub-category)	Domain	Z score
Attention	Cognition	34.29
Working Memory	Cognition	26.26
Reasoning	Cognition	25.495
Semantics (Language)	Cognition	24.778
Speech (Language)	Cognition	23.72
Reward/Gain	Emotion	18.19
Pain	Perception	17.99
Inhibition	Action	17.441
Memory (Explicit)	Cognition	17.321
Phonology (Language)	Cognition	17.017
Execution	Action	14.419
Vision	Perception	13.934
Music	Cognition	13.277
Audition	Perception	13.073
Speech (Execution)	Cognition	12.368
Shape (Vision)	Perception	12.362
Orthography (Language)	Cognition	12.065
Negative (Emotion)	Emotion	11.081
Motion (Vision)	Perception	10.466
Space	Cognition	10.142
Social Cognition	Cognition	9.804
Syntax (Language)	Cognition	9.594
Color (Vision)	Perception	9.377
Somesthesis	Perception	9.204
Observation	Action	8.62
Sexuality	Interoception	8.26
Imagination	Action	7.896
Positive (Emotion)	Emotion	7.893
Thermoregulation	Interoception	7.564
Preparation	Action	7.429
Gustation	Perception	6.419
Disgust	Emotion	5.921
Fear	Emotion	5.879
Valence (Emotion)	Emotion	5.837
Language	Cognition	5.686
Anxiety	Emotion	5.699
Time	Cognition	4.894
Sadness (Emotion)	Emotion	4.547
Gastrointestinal	Interoception	4.048
Soma	Cognition	3.749
Punishment/Loss	Emotion	3.74
Intensity (Emotion)	Emotion	3.598
Sleep	Interoception	3.574
Anger	Emotion	3.401
Motor Learning	Action	3.278
Memory	Cognition	3.248
Embarrassment	Emotion	3.247
Happiness	Emotion	3.247
Olfaction	Perception	3.233

Colors from red to orange represent different behavioral domains. A threshold of $p < .05$ with Bonferroni correction for multiple comparisons was applied, corresponding to a subdomain z-score ≥ 3 .

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