Supplemental Table 1 – Quality assessment

	1	2	3	4	5	6	7	8	9	10	Total
Yang et al, 2022	1	0	1	0	0	0	0	0	1	0	3
Rissanen et al, 2022	1	1	1	0	0	0	0	0	1	0	4
Guo et al, 2022	1	0	1	0	0	0	0	0	1	0	3
Cui et al, 2021	1	0	1	1	0	0	0	1	1	0	5
Nissen et al, 2021	1	1	1	0	1	0	0	0	1	0	5
Zhao et al, 2021	1	1	1	0	0	0	0	0	1	0	4
Bastiaansen et al, 2021	0	0	1	0	0	0	0	0	1	0	2
Chen et al, 2021	1	0	1	0	0	0	0	0	1	0	3
Lin et al, 2021	0	0	1	0	0	0	0	0	1	0	2
Li et al, 2021	1	1	1	0	0	0	0	0	1	0	4
Lardeux et al, 2022	0	0	1	0	0	0	0	0	1	0	2
Muñiz-Castrillo et al, 2021	1	0	1	0	0	0	0	0	1	0	3
Zhao et al, 2021	1	0	1	0	0	0	0	0	1	0	3
Shao et al, 2021	1	0	1	0	0	0	0	0	1	0	3
Liu et al, 2020	1	1	1	0	0	0	0	0	1	0	4
Liu et al, 2020	0	1	1	0	0	0	0	0	1	0	3
Jang et al, 2018	1	0	1	0	0	0	0	0	1	0	3
Feyissa et al, 2018	1	0	1	0	0	0	0	0	1	0	3
Thompson et al, 2018	1	1	1	0	0	1	0	0	1	0	5
Celicanin et al, 2017	0	0	1	0	0	0	0	0	1	0	2
Kim et al, 2016	1	0	1	0	0	0	0	0	1	0	3
Finke et al, 2017	1	0	1	0	0	0	0	0	1	0	3
Sonderen et al, 2016	0	0	1	0	0	0	0	0	1	0	2
Navarro et al, 2016	1	1	1	0	0	0	0	0	1	0	4
Irani et al, 2011	1	1	1	0	0	1	0	0	1	0	5
Flanagan et al, 2015	1	1	1	0	0	1	0	0	1	0	5
Gadoth et al, 2017	1	0	1	0	0	0	0	0	1	0	3
Cousyn et al, 2021	1	1	1	0	0	0	0	0	1	0	4
Huang et al, 2021	0	0	1	0	0	0	0	0	1	0	2
Kambadja et al, 2021	1	1	1	0	0	0	0	0	1	0	3
Sola−Valls et al, 2019	0	0	1	0	0	0	0	0	1	0	2

Supplemental Table 1 – Quality assessment of risk of bias for each research article based on Hoy, et al, 2012.

Supplemental Table 2 – Number of article types by search database

Type of article	PubMed (n = 511)	Web of Science (n = 646)
Case Reports	148	NA
Clinical Conference/Congress/Meeting Abstract	2	52
Letter	34	36
Review article	90	105
Systematic review	9	NA
Meta-analysis	1	NA
Comment	9	NA
Editorial	4	36
Proceeding paper	NA	5
Books	0	3
Corrections	0	1

Supplemental Table 2 – Number of article types by search database counted using database filters.

Supplemental Table 3 – T2/FLAIR medial temporal lobe meta-regression

Modifier	Studies, n	R^2, %	I^2, %	QM(p)
Age	23	0.00%	79%	0.89
Sex	23	0.00%	79%	0.97
Cognitive Impairment	30	0.00%	77%	0.92
FBDS	27	0.00%	70%	0.67
Other Seizures	28	0.00%	78%	0.78
Psychiatric Symptoms	25	1.36%	79%	0.45
Hyponatremia	24	0.00%	72%	0.86
Sleep Disorder	21	0.00%	74%	0.97
CSF antibody positivity	14	6.46%	65%	0.41

Supplemental Table 3 – Univariate meta-regression analysis for modifiers of prevalence of T2/FLAIR hyperintensities in the medial temporal lobe. CSF, cerebrospinal fluid; FBDS, faciobrachial dystonic seizure.

Supplemental Table 4 – BG meta-regression

Modifier	Studies, n	R^2, %	I^2, %	QM(p)
Age	12	0.00%	75%	0.76
Sex	12	0.00%	74%	0.62
Cognitive Impairment	15	0.00%	68%	0.50
FBDS	15	0.00%	68%	0.53
Other Seizures	13	5.59%	53%	0.26
Psychiatric Symptoms	13	0.00%	72%	0.83
Hyponatremia	12	0.00%	71%	0.53
Sleep Disorder	10	30.16%	52%	0.09
CSF antibody positivity	8	30.25%	12%	0.22

Supplemental Table 4 – Univariate meta-regression analysis for modifiers of prevalence of signal abnormalities in the basal ganglia. BG, basal ganglia; CSF, cerebrospinal fluid; FBDS, faciobrachial dystonic seizure.

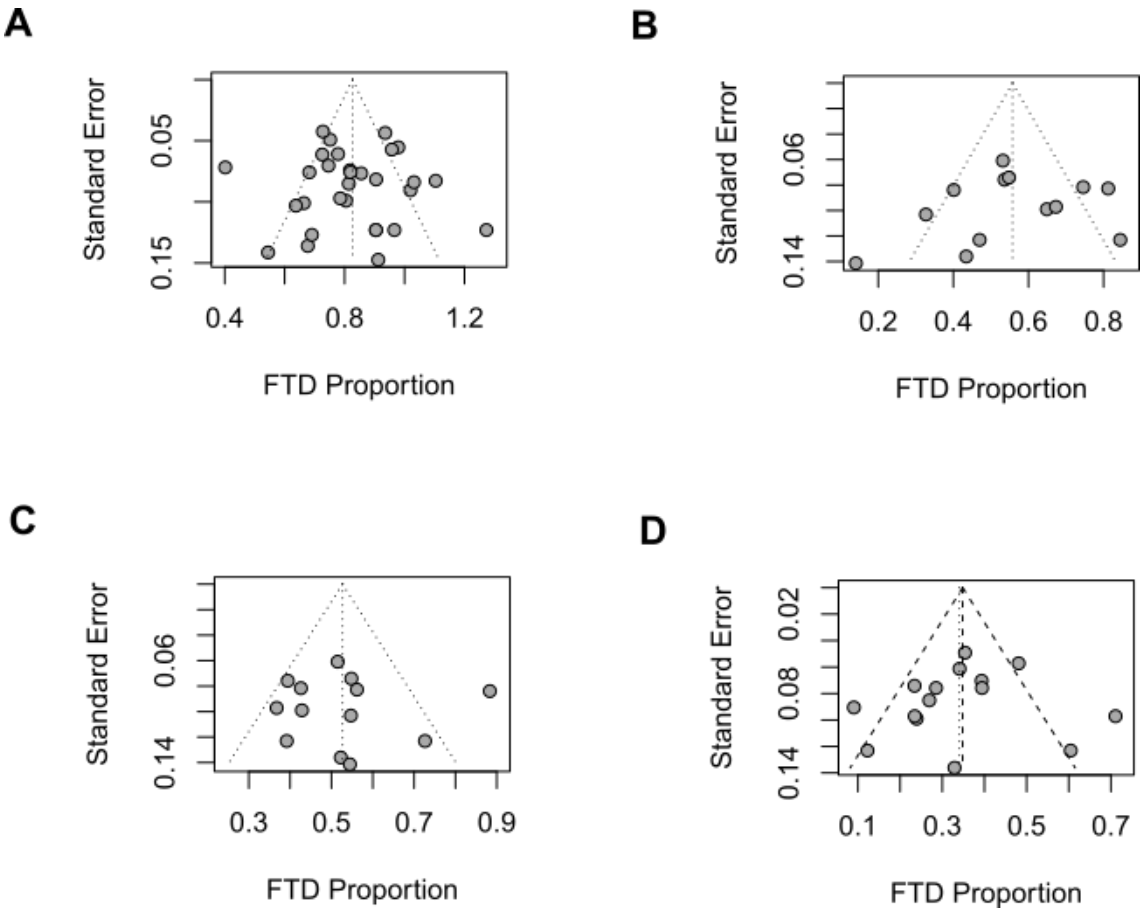
Supplemental Table 5 – *LGI1* gene expression in the human brain

LGI1	label	hemisphere
0,911823	amygdala	R
0,826781	caudate	L
0,818112	hippocampus	L
0,785504	caudate	R
0,780698	accumbens area	R
0,760631	putamen	L
0,760297	hippocampus	R
0,75924	putamen	R
0,756019	amygdala	L
0,667985	accumbens area	L
0,64157	pericalcarine	R
0,63566	transverse temporal	R
0,602839	brainstem	B
0,601585	cuneus	R
0,574301	parsorbitalis	R
0,561767	cuneus	L
0,552617	pericalcarine	L
0,550604	lateral occipital	R
0,543647	inferior parietal	R
0,543537	medial orbitofrontal	R
0,537788	caudal anterior cingulate	L
0,537095	rostral middle frontal	R
0,52981	superior parietal	R
0,5257	superior frontal	R
0,52478	thalamus proper	L
0,521244	precuneus	R
0,520568	middle temporal	R
0,519687	pars triangularis	L
0,515329	insula	L
0,512628	superior frontal	L
0,511461	thalamus proper	R
0,506459	paracentral	R
0,503923	precuneus	L
0,502434	parahippocampal	L
0,494406	lateral occipital	L
0,493593	superior parietal	L
0,492066	medial orbitofrontal	L
0,490961	transverse temporal	L
0,489579	lateral orbitofrontal	L
0,489369	insula	R
0,478539	inferior temporal	R
0,478085	inferior parietal	L

0,476493	posterior cingulate	L
0,474906	lingual	R
0,471117	caudal middle frontal	R
0,470427	lingual	L
0,467258	caudal middle frontal	L
0,466336	caudal anterior cingulate	R
0,463181	pars opercularis	L
0,460744	pars opercularis	R
0,458604	isthmus cingulate	L
0,457887	entorhinal	R
0,455138	paracentral	L
0,454218	rostral middle frontal	L
0,453305	lateral orbitofrontal	R
0,451317	inferior temporal	L
0,448934	precentral	R
0,445977	rostral anterior cingulate	R
0,444929	precentral	L
0,44355	temporal pole	L
0,443439	posterior cingulate	R
0,436375	rostral anterior cingulate	L
0,435081	fusiform	L
0,434062	supramarginal	L
0,432076	parahippocampal	R
0,428294	superior temporal	L
0,42825	pars triangularis	R
0,42764	postcentral	L
0,424329	superior temporal	R
0,421436	pallidum	L
0,419025	postcentral	R
0,418328	middle temporal	L
0,408499	entorhinal	L
0,404612	bankssts	L
0,403024	fusiform	R
0,397693	pars orbitalis	L
0,377301	isthmus cingulate	R
0,372404	frontal pole	L
0,362985	supramarginal	R
0,311976	bankssts	R
0,242777	pallidum	R
	frontalpole	R
	temporalpole	R

Supplemental Table 5 – *LGI1* gene expression across brain regions derived from the Allen Human Brain Atlas. L – left; R – right.

Online Supplemental Figure 1



Online Supplemental Figure 1 - Funnel plots of Freeman-Tukey Double (FTD) Arcsine proportions of (A) medial temporal lobe T2/FLAIR hyperintensities (Egger's test: p-value = 0.873), (B) bilateral medial temporal lobe T2/FLAIR hyperintensities (Egger's test: p-value = 0.513), (C) unilateral medial temporal lobe T2/FLAIR hyperintensities (Egger's test: p-value = 0.932) and (D) basal ganglia signal abnormalities (T2/FLAIR hyperintensities and T1 hypo- and hyperintensities) (Egger's test: p-value = 0.974).