

Patents related to glycine transporters

Glycine transporters have a vital role in the regulation of levels of glycine, which acts as an inhibitory neurotransmitter and a modulator of neuronal excitation levels. As Harvey and Yee discuss in their Review on p866, targeting glycine transporters

could rebalance glycine homeostasis in schizophrenia, pain and alcohol dependence. They highlight recent advances in the biology of glycine reuptake and transport as well as the development of compounds that block glycine transporters

Here in TABLE 1 we highlight patent applications published in the past 2 years. Data were researched using the [Espacenet database](#).

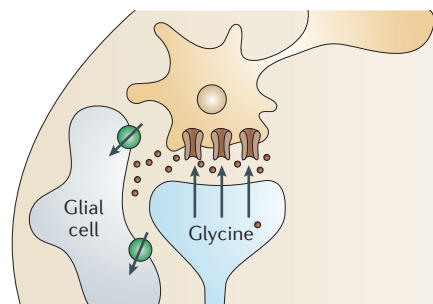


Table 1 | Recent patent applications related to glycine transporters

Publication numbers	Applicants	Subject
NZ 594930 MX 2011008633	Abbott	Heterocyclic sulphonamide compounds that inhibit GlyT1 and are useful for treating neurological disorders, psychiatric disorders and pain
NZ 594928	Abbott	Aminotetraline derivatives that inhibit GlyT1 and are useful for treating disorders associated with dysfunction in glycinergic or glutamatergic neurotransmission, such as dementia, cognitive impairment and attention-deficit disorder
WO 2011153359 KR 20130087002	Albany Molecular Research	GlyT1 inhibitors that are useful for treating neurological or psychiatric disorders that are associated with dysfunctions in glutamatergic neurotransmission
US 2012195985	Amgen	Compounds that inhibit GlyT1 and are therefore useful for the treatment of cognitive disorders associated with schizophrenia, attention-deficit hyperactivity disorder and mild cognitive impairment
US 2012094995	AstraZeneca	2-aza-bicyclo[2.2.1]heptane compounds that modulate GlyT1 and are useful for the treatment of psychosis, cognitive disorders, bipolar disorders, depression disorders, anxiety disorders, post-traumatic stress disorders and pain
US 2013197011 TW 201321364	Boehringer Ingelheim	Phenyl-3-aza-bicyclo[3.1.0]hex-3-yl-methanones that inhibit GlyT1 and are useful for treating the positive and negative symptoms of schizophrenia, as well as cognitive impairments associated with schizophrenia, Alzheimer's disease and other neurological and psychiatric disorders
US 2012004273	M.M. Ahmad <i>et al.</i> (GlaxoSmithKline)	GlyT1 inhibitors that are useful for treating neurological diseases such as schizophrenia, dementia or attention-deficit disorder
MX 2013001166	Hoffmann La Roche	A combination of a GlyT1 inhibitor and an atypical antipsychotic drug, which may be used for the treatment of the positive and negative symptoms of schizophrenia
SI 2342197	Hoffmann La Roche	Novel radiolabelled GlyT1 inhibitors that are useful for diagnostic imaging of GlyT1 functionality using positron emission tomography
NZ 593279	Hoffmann La Roche	Heteroaroylamino-substituted piperidine compounds that inhibit GlyT1 and also have good selectivity for GlyT2; useful for treating psychoses, pain, dysfunction in memory and learning, attention-deficit disorder, schizophrenia, dementia and Alzheimer's disease
WO 2011161006 MX 2012013820	Hoffmann La Roche	Amido-tropane derivatives that are good inhibitors of GlyT1 and have good selectivity for GlyT2; useful for treating neurological and neuropsychiatric disorders
WO 2011161008 MX 2012013580	Hoffmann La Roche	Quinolizidine and indolizidine derivatives that are good inhibitors of GlyT1 and have good selectivity for GlyT2; useful for treating neurological and neuropsychiatric disorders
TW 201134821 MX 2012007841	Hoffmann La Roche	Tetrahydro-pyran derivatives that are good inhibitors of GlyT1 and can be used for treating schizophrenia, psychoses and other neurological conditions including pain
HK 1117507 IL 184353	Hoffmann La Roche	Heterocyclic substituted phenyl methanones that inhibit GlyT1 and can be used for treating schizophrenia
IL 184439	Hoffmann La Roche	2,5-disubstituted phenyl methanone derivatives that are GlyT1 inhibitors and are useful for treating CNS disorders such as schizophrenia, cognitive impairment and Alzheimer's disease
EP 2617715 CA 2827372 TW 201236682	Taisho Pharma Company	GlyT inhibitors that inhibit glycine uptake and are useful for treating schizophrenia, Alzheimer's disease, cognitive dysfunction, dementia, anxiety disorders, depression, drug addiction, spasms, tremors, pain and sleep disorders
TW 201225956 TW 201225955	Taisho Pharma Company	A GlyT inhibitory substance that is useful for treating schizophrenia, Alzheimer's disease, cognitive dysfunction, anxiety disorders, depression, drug dependence, convulsions, pain and sleep disorders
US 2012010414 US 2012116095	Taisho Pharma Company	GlyT inhibitors that are useful for the treatment of schizophrenia, Alzheimer's disease, cognitive dysfunction, dementia, anxiety disorders and depression, and can be used in combination with antipsychotics and antidepressants

CNS, central nervous system; GlyT1, glycine transporter 1.