

Patents related to EPH receptors and ligands

EPH receptors are a family of receptor tyrosine kinases that, together with their ligands, are involved in cell positioning, tissue and organ patterning as well as the control of cell survival. In their Review on page 39, Lackman and colleagues

discuss EPH receptor–ephrin signalling and its role in disorders such as tumour growth and progression, nerve injury and inflammation, and highlight therapeutic approaches that are currently under investigation. Here in TABLE 1 we highlight patent applications published in the past 3 years related to EPH receptors and ligands. Data were researched using the [Espacenet database](#).

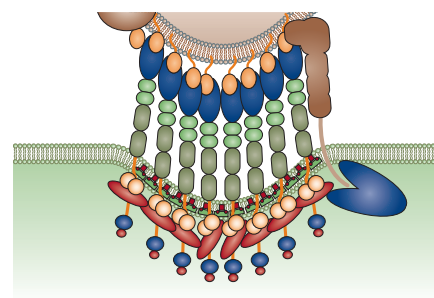


Table 1 | Recent patent applications related to EPH receptors and ligands

Publication numbers	Applicants	Subject
NZ 581397	AstraZeneca	Pyrimidine compounds that inhibit EPH receptors and are useful for treating cancer
HK 1108702	Sanford-Burnham Institute	Peptides that selectively bind to EPH type-B receptors (EPHBs); useful for tumour imaging and the treatment of neoplastic disease, neurological disease and vascular disease
US 2013091591	California Institute of Technology	During angiogenesis, arterial cells express ephrin B2, and its receptor EPHB4 is expressed on venous cells; this distinction can be used in methods to alter angiogenesis and to assess the effect of drugs
WO 2013052710	Expression Pathology	Selected reaction monitoring mass spectrometry-based and multiple reaction monitoring mass spectrometry-based assays for quantifying the EPHA2 protein in biological samples
WO 2012156351	Life Sciences Research Partners	Strategies to improve symptoms and increase survival in patients with amyotrophic lateral sclerosis and spinomuscular atrophy by inhibiting EPHA4-mediated signalling
EP 2422811	MedImmune	An agonistic antibody that binds the EPH receptor epitope to which the antibody GEA44 binds
US 2011280892	MedImmune and Seattle Genetics	EPHA2- or EPHA4-targeted antibodies conjugated to toxins that induce cell death or stasis in cancer cells or other hyperproliferative cells
US 2013253041	L. Mucke & M. Cisse	A method of treating neurodegenerative disease by increasing EPHB2 activity in neuronal cells
WO 2011047083 US 2011027173	Oxford BioTherapeutics	Antibodies that specifically bind to EPHA10 with high affinity; useful for treating several cancers such as bladder, breast, colorectal, kidney and lung cancers
US 2011195074	Oxford BioTherapeutics	Antibodies against EPHA7 and methods of using them to treat and diagnose cancer
US 2011150877	Oxford Glycosciences	A method of screening or diagnosing carcinoma or monitoring the effectiveness of carcinoma therapy based on detecting or quantifying EPHB3 in a biological sample
US 2013302316	Sanofi	An antibody that specifically binds to EPH type-A receptors (EPHAs) to antagonize the growth and survival of tumour cells in breast cancer, colon cancer, lung cancer and ovarian carcinoma
MX 2012003996	Sanofi	An antibody that binds to EPHA2 and is covalently conjugated to a cytotoxic agent
US 2011281279	Siemens Healthcare Diagnostics	Agents and methods for the detection of a circulating or soluble form of EPHA2
US 2013108628	X.-J. Song	A method of treating cancer pain and rescuing the analgesic effect of morphine using an agent that blocks ephrin B–EPHB signalling, such as EPHB1-Fc and EPHB2-Fc
KR 20130095286	StemGen	EPH receptor expression in tumour stem cells; inhibitors are useful for the treatment of brain tumours
WO 2012094297	University of California	So called 'azuvirin peptides' that are useful for delivering sensitizers and chemotherapeutics to cancer cells that express EPH receptors, and are also useful for treating HIV-1 retrovirus infection
WO 2013106824	University of Texas	Non-invasive imaging and anticancer therapy agents that can be used for targeting cells expressing EPHB4 and/or EPHA2
WO 2013040472	University of Texas	Compounds and methods for treating cancers that are associated with elevated activity of EPHA5
JP 2012136529	University of Queensland and University of Melbourne	Methods for treating gliosis, glial scarring, inflammation or inhibition of axonal growth in the nervous system by modulating EPH receptors
EP 2338898	University of Texas	A peptide that targets EPHA5 and has the amino acid sequence SGIGSGG or RFESSGG
US 2011077401	University of Zurich	Anti-angiogenic compounds that inhibit EPHB4; useful for treating angiogenesis-dependent cancers and intraocular neovascular syndromes
US 2013072564	B. Wang <i>et al.</i>	Peptide and small-molecule agonists of EPHAs and their uses as therapeutic agents for cancer
US 2013137660	YM BioSciences (Gilead)	Pyridines or pyrazines that inhibit tyrosine kinases, including EPHA2, EPHA3 and EPHA8; useful for treating immunological disorders, inflammatory diseases and hyperproliferative diseases