

Dr Tom Pratt Selected publications:

James M. Clegg, Hannah M. Parkin, John O. Mason and **Thomas Pratt** (2019). Heparan Sulfate Sulfation by Hs2st Restricts Astroglial Precursor Somal Translocation in Developing Mouse Forebrain by a Non-Cell-Autonomous Mechanism. *Journal of Neuroscience* 39 (8) 1386-1404 ; DOI: <https://doi.org/10.1523/JNEUROSCI.1747-17.2018>

Li Z, Pratt T, Price DJ (2018) [Zic4-Lineage Cells Increase Their Contribution to Visual Thalamic Nuclei during Murine Embryogenesis If They Are Homozygous or Heterozygous for Loss of Pax6 Function.](#) *eNeuro*. 23;5(5).

Mi D, Li Z, Lim L, Li M, Moissidis M, Yang Y, Gao T, Hu TX, **Pratt T**, Price DJ, Sestan N, & Marín O. (2018) Early emergence of cortical interneuron diversity in the mouse embryo. *Science*. 360:81-85.

Chan WK, Price DJ, **Pratt T**. (2017) FGF8 morphogen gradients are differentially regulated by heparan sulphotransferases Hs2st and Hs6st1 in the developing brain. *Biol Open*. 6:1933-1942. doi: 10.1242/bio.028605.

Smith R, Huang YT, Tian T, Vojtasova D, Mesalles-Naranjo O, Pollard SM, **Pratt T**, Price DJ, Fotaki V. (2017) [The Transcription Factor Foxg1 Promotes Optic Fissure Closure in the Mouse by Suppressing Wnt8b in the Nasal Optic Stalk.](#) *J Neurosci*. 2017 Aug 16;37(33):7975-7993.

Sharp L, **Pratt T**, MacKay GE, Keighren MA, Flockhart JH, Chandler EJ, Price DJ, Mason JO, West JD.(2017) Comparison of two related lines of tauGFP transgenic mice designed for lineage tracing. *BMC Dev Biol*.

Pratt T, Nowakowski TJ, & Price DJ (2017) 'MicroRNA and neocortical evolution' In 'Essentials of Noncoding RNA in Neuroscience' 1st Edition Eds: Davide De Pietri Tonelli ISBN: 9780128044025).

Pratt T & Price DJ. (2016) Junk DNA Used in Cerebral Cortical Evolution. *Neuron*. 90:1141-3.

2-O Heparan Sulfate Sulfation by Hs2st Is Required for Erk/Mapk Signalling Activation at the Mid-Gestational Mouse Telencephalic Midline. (2015) Wai-Kit Chan, Katherine Howe, James M. Clegg, Scott E. Guimond, David J. Price, Jeremy E. Turnbull, **Thomas Pratt**. *PLoS One*. 10(6):e0130147. doi: 10.1371/journal.pone.0130147.

Clegg JM, Conway CD, Howe KM, Price DJ, Mason JO, Turnbull JE, M. Basson A, **Pratt T** (2014) Heparan Sulfotransferases Hs6st1 and Hs2st Keep Erk in Check for Mouse Corpus Callosum Development. *Jneurosci*, 34(6):2389-2401

Nowakowski TJ, Mysiak KS, O'Leary T, Fotaki V, **Pratt T**, Price DJ. (2013) Loss of functional Dicer in mouse radial glia cell-autonomously prolongs cortical neurogenesis. *Dev Biol*. 382(2):530-7.

Fotaki V, Smith R, **Pratt T**, Price DJ. (2013) Foxg1 is required to limit the formation of ciliary margin tissue and Wnt/ β -catenin signalling in the developing nasal retina of the mouse. *Dev Biol*. 380(2):299-313.

Nowakowski TJ, Fotaki V, Pollock A, Sun T, **Pratt T**, Price DJ. (2013) MicroRNA-92b regulates the development of intermediate cortical progenitors in embryonic mouse brain. *Proc Natl Acad Sci U S A*. 110(17):7056-61.

Down M, Willshaw DA, **Pratt T**, Price DJ. (2013) Steerable-filter based quantification of axonal populations at the developing optic chiasm reveal significant defects in Slit2(-/-) as well as Slit1(-/-)Slit2(-/-) embryos. *BMC Neurosci*. 14:9.

Pratt T, Davey JW, Nowakowski TJ, Raasumaa C, Rawlik K, McBride D, Clinton M, Mason JO and Price DJ (2012) The expression and activity of beta-catenin in the thalamus and its projections to the cerebral cortex in the mouse embryo. *BMC Neuroscience* 13:20/ doi:10.1186/1471-2202-13-20

Price DJ, Clegg J, Duocastella XO, Willshaw D, **Pratt T** (2012)The importance of combinatorial gene expression in early Mammalian thalamic patterning and thalamocortical axonal guidance. *Frontiers in neuroscience*. 6:37.

Christopher D. Conway, Kathy M. Howe, Nicole K. Nettleton, David J. Price, John O. Mason, and **Thomas Pratt** (2011) Heparan sulfate sugar modifications mediate the functions of slits and other factors needed for mouse forebrain commissure development. *J. Neurosci*. 31: 1955-1970

Ivaniutsin U, Chen Y, Mason JO, Price DJ, **Pratt T** (2009) Adenomatous polyposis coli is required for early events in the normal growth and differentiation of the developing cerebral cortex. *Neural Development* 4(1):3.

Tian NM, **Pratt T**, Price DJ (2008) Foxg1 regulates retinal axon pathfinding by repressing an ipsilateral program in nasal retina and by causing optic chiasm cells to exert a net axonal growth-promoting activity. *Development* 135:4081-9.

Pratt T, Conway CD, Tian NM, Price DJ, Mason JO (2006) Heparan sulphation patterns generated by specific heparan sulfotransferase enzymes direct distinct aspects of retinal axon guidance at the optic chiasm. *Journal of Neuroscience* 26:6911-23.

Pratt T, Price DJ (2006) Dual roles of transcription factors in forebrain morphogenesis and development of axonal pathways. In: *Development and Plasticity in Sensory Thalamus and Cortex*, Eds. R. Erzurumlu, W. Guido and Z. Molnar Chapter 2, pp. 19-41, Springer, Singapore.

MacKay GE, Keighren MA, Wilson L, **Pratt T**, Flockhart JH, Mason JO, Price DJ, West JD. (2005). Evaluation of the mouse TgTP6.3 tauGFP transgene as a lineage marker in chimeras. *J Anat.* 206:79-92.

Yap CT, Simpson TI, **Pratt T**, Price DJ, Maciver SK. (2005). The motility of glioblastoma tumour cells is modulated by intracellular cofilin expression in a concentration-dependent manner. *Cell Motil Cytoskeleton.* 60:153-65.

Court FA, Sherman DL, **Pratt T**, Garry EM, Ribchester RR, Cottrell DF, Fleetwood Walker SM, Brophy PJ. (2004). Restricted growth of Schwann cells lacking Cajal bands slows conduction in myelinated nerves. *Nature.* 431:191-5.

Pratt T, Tian NM, Simpson TI, Mason JO, Price DJ. (2004). The winged helix transcription factor Foxg1 facilitates retinal ganglion cell axon crossing of the ventral midline in the mouse. *Development.* 131:3773-84.

McLaughlin D, Karlsson F, Tian N, **Pratt T**, Bullock SL, Wilson VA, Price DJ, Mason JO. (2003). Specific modification of heparan sulphate is required for normal cerebral cortical development. *Mech Dev.* 120:1481-8.

Aubert J, Stavridis MP, Tweedie S, O Reilly M, Vierlinger K, Li M, Ghazal P, **Pratt T**, Mason JO, Roy D, Smith A. (2003). Screening for mammalian neural genes via fluorescence-activated cell sorter purification of neural precursors from Sox1-gfp knock-in mice. *Proc Natl Acad Sci U S A.* 2100 11836-41.

Tyas DA, **Pratt T**, Simpson TI, Mason JO, Price DJ. (2003). Genotyping GFP transgenic animals by flashlight. *Biotechniques.* 34:474-6.

Pratt T, Quinn JC, Simpson TI, West JD, Mason JO, Price DJ. (2002). Disruption of early events in thalamocortical tract formation in mice lacking the transcription factors Pax6 or Foxg1. *J Neurosci.* 22:8523-31.

Pratt T, Sharp L, Nichols J, Price DJ, Mason JO. (2000). Embryonic stem cells and transgenic mice ubiquitously expressing a tau-tagged green fluorescent protein. *Dev Biol.* 228:19-28.

Pratt T, Vitalis T, Warren N, Edgar JM, Mason JO, Price DJ. (2000). A role for Pax6 in the normal development of dorsal thalamus and its cortical connections. *Development.* 127:5167-78

Warren N, Caric D, **Pratt T**, Clausen JA, Asavaritikrai P, Mason JO, Hill RE, Price DJ. (1999). The transcription factor, Pax6, is required for cell proliferation and differentiation in the developing cerebral cortex. *Cereb Cortex.* 9:627-35.

Clegg JM, Conway CD, Howe KM, Price DJ, Mason JO, Turnbull JE, Basson MA, Pratt T. (2014) Heparan Sulfotransferases Hs6st1 and Hs2st Keep Erk in Check for Mouse Corpus Callosum Development. *Jneurosci*, 34(6):2389-2401

Nowakowski TJ, Mysiak KS, O'Leary T, Fotaki V, Pratt T, Price DJ. (2013) Loss of functional Dicer in mouse radial glia cell-autonomously prolongs cortical neurogenesis. *Dev Biol.* 382(2):530-7.

Fotaki V, Smith R, Pratt T, Price DJ. (2013) Foxg1 is required to limit the formation of ciliary margin tissue and Wnt/ β -catenin signalling in the developing nasal retina of the mouse. *Dev Biol.* 380(2):299-313.

Nowakowski TJ, Fotaki V, Pollock A, Sun T, Pratt T, Price DJ. (2013) MicroRNA-92b regulates the development of intermediate cortical progenitors in embryonic mouse brain. *Proc Natl Acad Sci U S A.* 110(17):7056-61.

Down M, Willshaw DA, Pratt T, Price DJ. (2013) Steerable-filter based quantification of axonal populations at the developing optic chiasm reveal significant defects in Slit2(-/-) as well as Slit1(-/-)Slit2(-/-) embryos. *BMC Neurosci.* 14:9.

Pratt T, Davey JW, Nowakowski TJ, Raasumaa C, Rawlik K, McBride D, Clinton M, Mason JO and Price DJ (2012) The expression and activity of beta-catenin in the thalamus and its projections to the cerebral cortex in the mouse embryo. *BMC Neuroscience* 13:20

Price DJ, Clegg J, Duocastella XO, Willshaw D, Pratt T (2012) The importance of combinatorial gene expression in early Mammalian thalamic patterning and thalamocortical axonal guidance. *Frontiers in neuroscience*. 6:37.

Chen Y, Magnani D, Theil T, Pratt T, Price DJ. (2012) Evidence that descending cortical axons are essential for thalamocortical axons to cross the pallial-subpallial boundary in the embryonic forebrain. *PLoS One*.7(3):e33105.

Conway CD, Price DJ, Pratt T, Mason JO. (2011) Analysis of axon guidance defects at the optic chiasm in heparan sulphate sulphotransferase compound mutant mice. *J Anat*. 219(6):734-42.

Nowakowski TJ, Mysiak KS, Pratt T, Price DJ. (2011) Functional *dicer* is necessary for appropriate specification of radial glia during early development of mouse telencephalon. *PLoS One*.6(8):e23013.

Erskine L, Reijntjes S, Pratt T, Denti L, Schwarz Q, Vieira JM, Alakakone B, Shewan D, Ruhrberg C. (2011) VEGF signaling through neuropilin 1 guides commissural axon crossing at the optic chiasm. *Neuron*. 70(5):951-65.

Conway CD, Howe KM, Nettleton NK, Price DJ, Mason JO, Pratt T. (2011) Heparan sulfate sugar modifications mediate the functions of slits and other factors needed for mouse forebrain commissure development. *J. Neurosci*. 31: 1955-1970

Simpson TI, Pratt T, Mason JO, Price DJ. (2009) Normal ventral telencephalic expression of Pax6 is required for normal development of thalamocortical axons in embryonic mice. *Neural Dev*. 4:19.

Ivaniutis U, Chen Y, Mason JO, Price DJ, Pratt T (2009) Adenomatous polyposis coli is required for early events in the normal growth and differentiation of the developing cerebral cortex. *Neural Development* 4(1):3

Tian NM, Pratt T, Price DJ (2008) Foxg1 regulates retinal axon pathfinding by repressing an ipsilateral program in nasal retina and by causing optic chiasm cells to exert a net axonal growth-promoting activity. *Development* 135:4081-9

Manuel M, Pratt T, Liu M, Jeffery G, Price DJ (2008) Overexpression of Pax6 results in microphthalmia, retinal dysplasia and defective retinal ganglion cell axon guidance. *BMC Dev Biol* 8:59

Manuel M, Georgala PA, Carr CB, Chanas S, Kleinjan DJ, Martynoga B, Mason JO, Molinek M, Pinson J, Pratt T, Quinn JC, Simpson TI, Tyas DA, van Heyningen V, West JD, Price DJ (2007) Controlled overexpression of Pax6 in vivo negatively autoregulates the Pax6 locus, causing cell-autonomous defects of late cortical-progenitor proliferation with little effect on cortical arealization. *Development* 134:545-55

Pratt T, Conway CD, Tian NM, Price DJ, Mason JO (2006) Heparan sulphation patterns generated by specific heparan sulfotransferase enzymes direct distinct aspects of retinal axon guidance at the optic chiasm. *J Neurosci* 26:6911-6923

Pratt T, Price DJ (2006) Dual roles of transcription factors in forebrain morphogenesis and development of axonal pathways. In: *Development and Plasticity in Sensory Thalamus and Cortex*, Eds R Erzurumlu, W Guido and Z Molnar Chapter 2, pp 19-41, Springer, Singapore

MacKay GE, Keighren MA, Wilson L, Pratt T, Flockhart JH, Mason JO, Price DJ, West JD (2005) Evaluation of the mouse TgTP6.3 tauGFP transgene as a lineage marker in chimeras. *J Anat* 206:79-92

Yap CT, Simpson TI, Pratt T, Price DJ, Maciver SK (2005) The motility of glioblastoma tumour cells is modulated by intracellular cofilin expression in a concentration-dependent manner. *Cell Motil Cytoskeleton* 60:153-165

Court FA, Sherman DL, Pratt T, Garry EM, Ribchester RR, Cottrell DF, Fleetwood-Walker SM, Brophy PJ (2004) Restricted growth of Schwann cells lacking Cajal bands slows conduction in myelinated nerves. *Nature* 431:191-195

Pratt T, Tian NM, Simpson TI, Mason JO, Price DJ (2004) The winged helix transcription factor Foxg1 facilitates retinal ganglion cell axon crossing of the ventral midline in the mouse. *Development* 131:3773-3784

McLaughlin D, Karlsson F, Tian N, Pratt T, Bullock SL, Wilson VA, Price DJ, Mason JO (2003) Specific modification of heparan sulphate is required for normal cerebral cortical development. *Mech Dev* 120:1481-1488

Aubert J, Stavridis MP, Tweedie S, O Reilly M, Vierlinger K, Li M, Ghazal P, Pratt T, Mason JO, Roy D, Smith A (2003) Screening for mammalian neural genes via fluorescenceactivated cell sorter purification of neural precursors from Sox1-gfp knock-in mice. *Proc Natl Acad Sci USA* 2100:11836-11841

Tyas DA, Pratt T, Simpson TI, Mason JO, Price DJ (2003) Genotyping GFP-transgenic animals by flashlight. *Biotechniques* 34:474-476

