

DJA Wyllie – Publications since 2013

2018

1. Lipscombe D & **Wyllie DJA** (2018). Editorial Overview: Ion Channels. *Current Opinion in Physiology* **2**, i-iv.
2. Selvaraj BT, Livesey MR, Zhao C, Gregory J, James OT, Cleary EM, Chouhan AK, Gane A, Perkins EM, Dando O, Lillico SG, Lee Y-B, Nishimura AL, Poreci U, Thankamony S, Pray M, Vasistha NA, Magnani D, Borooah S, Burr K, Story D, McCampbell A, Shaw CE, Kind PC, Aitman TJ, Whitelaw CBA, Wilmut I, Smith C, Miles GB, Hardingham GE, **Wyllie DJA** & Chandran S (2018). *C9ORF72* repeat expansion causes vulnerability of motor neurons to Ca²⁺-permeable AMPA receptor-mediated excitotoxicity. *Nat Commun* **9**, 347 doi: 10.1038/s41467-017-02729-0 PMID: 29367641
3. Booker SA, Loreth D, Gee AL, Watanabe M, Kind PC, **Wyllie DJA**, Kulik Á, & Vida I (2018). Postsynaptic GABA_BRs inhibit L-type calcium channels and abolish long-term potentiation in hippocampal somatostatin interneurons. *Cell Rep* **22**, 36-43. PMID: 29298431

2017

4. Booker SA & **Wyllie DJA** (2017). Parvalbumin interneurons in the dorsal horn: it's not all about GABA. *J Physiol* **595**, 7019-7020. PMID: 29068060
5. Thomson SR, Seo SS, Barnes SA, Louros SR, Muscas M, Dando O, Kirby C, **Wyllie DJA**, Hardingham GE, Kind PC & Osterweil EK (2017). Cell type-specific translation profiling reveals a novel strategy for treating fragile X syndrome. *Neuron* **95**, 550-563. PMID: 28772121
6. McQueen J, Ryan TJ, McKay S, Marwick K, Carpanini S, Wishart TM, Gillingwater TH, Manson JC, **Wyllie DJA**, Grant SGN, McColl B, Komiyama NH & Hardingham GE (2017). Pro-death NMDA receptor signaling is promoted by the GluN2B C-terminus independently of DAPK1. *eLife* **6**:e17161 PMID: 28731405
7. Hasel P, Dando O, Jiwaji Z, Baxter P, Todd AC, Heron S, Márkus NM, McQueen J, Hampton DW, Torvell M, Tiwari SS, McKay S, Eraso-Pichot A, Zorzano A, Masgrau R, Galea E, Chandran S, **Wyllie DJA**, Simpson TI & Hardingham GE (2017). Neurons and neuronal activity control gene expression in astrocytes to regulate their development and metabolism. *Nat Commun* **8**, 15132 doi: 10.1038/ncomms15132 PMID: 28462931
8. Marwick KFM, Parker P, Skehel P, Hardingham G & **Wyllie DJA** (2017). Functional assessment of the NMDA receptor variant GluN2A^{R586K} *Wellcome Open Res* doi: 10.12688/wellcomeopenres.10985.1 PMID: 28459106
9. Zanato C, Pelagalli A, Marwick KFM, Piras M, Dall'Angelo S, Spinaci A, Pertwee RG, **Wyllie DJA**, Hardingham GE & Zanda M (2017). Synthesis, radio-synthesis and *in vitro*

evaluation of terminally fluorinated derivatives of HU-210 and HU-211 as novel candidate PET tracers. *Org Biomol Chem* **15**, 2086-2096 PMID: 28210722

10. Currie S, Luz L, Booker S, **Wyllie DJA**, Kind PC & Daw M (2017). Reduced local input to fast-spiking interneurons in the somatosensory cortex in the GABA_A γ 2 R43Q mouse model of absence epilepsy. *Epilepsia* **58**, 597-607. PMID: 28195311
11. Booker SA, Campbell GR, Mysiak KS, Brophy PJ, Kind PC, Mahad DJ & **Wyllie DJA** (2017). Loss of protohaem IX farnesyltransferase in mature dentate granule cells impairs short-term facilitation at mossy fibre to CA3 pyramidal cell synapses. *J Physiol* **595**, 2147-2160. PMID: 28083896

2016

12. Qiu J, McQueen J, Bilican B, Dando O, Magnani D, Punovuori K, Selvaraj BT, Livesey M, Haghi G, Heron S, Burr K, Patani R, Rajan R, Sheppard O, Kind PC, Simpson I, Tybulewicz VLJ, **Wyllie DJA**, Fisher EMC, Lowell S, Chandran S & Hardingham GE (2016). Evidence for evolutionary divergence of activity-dependent gene expression in developing neurons. *eLife* 2016; 5:e20337 PMID: 27692071
13. Perkins EM, Suminaite D, Clarkson YL, Lee SK, Lyndon AR, Rothstein JD, **Wyllie DJA**, Tanaka K & Jackson M (2016). Posterior cerebellar Purkinje cells in an SCA5/SPARCA1 mouse model are especially vulnerable to the synergistic effect of loss of β -III spectrin and GLAST. *Hum Mol Genet* **20**, 4448-4461. PMID: 28173092
14. Rzechorzek NM, Connick P, Livesey MR, Borooh S, Patani R, Burr K, Story D, **Wyllie DJA**, Hardingham GE & Chandran S (2016). Hypothermic preconditioning reverses tau ontogenesis in human cortical neurons and is mimicked by protein phosphatase 2A inhibition. *EBioMedicine* **3**, 141-154. PMID: 26870825
15. Livesey MR, Magnani D, Cleary EM, James OT, Selvaraj BT, Burr K, Vasistha NA, Story D, Shaw CE, Kind PC, Hardingham GE, **Wyllie DJA** & Chandran S (2016). Maturation and electrophysiological properties of human pluripotent stem cell-derived oligodendrocytes. *Stem Cells* **34**, 1040-1053. PMID: 26763608
16. Livesey MR, Magnani D, Hardingham GE, Chandran S & **Wyllie DJA** (2016). Functional properties of *in vitro* excitatory cortical neurones derived from human pluripotent stem cells. *J Physiol* **594**, 6573-6582. PMID: 26608229

2015

17. Barnes SA, Wijetunge LS, Jackson AD, Katsanevaki D, Osterweil EK, Komiyama NH, Grant SGN, Bear MF, Nägerl UV, Kind PC & **Wyllie DJA** (2015). Convergence of hippocampal pathophysiology in *Syngap*^{+/-} and *Fmr1*^{-/-} mice. *J Neurosci* **35**, 15073-15081. PMID: 26558778
18. Till SM, Asiminas A, Jackson AD, Katsanevaki D, Barnes SA, Osterweil EK, Bear MF, Chattarji S, Wood ER, **Wyllie DJA** & Kind PC (2015). Conserved hippocampal cellular

pathophysiology but distinct behavioural deficits in a new rat model of FXS. *Hum Mol Genet* **24**, 5977-5984. PMID: 26243794

19. Bell KFS, Al-Mubarak A, Martel M-A, McKay S, Wheelan N, Hasel P, Márkus NM, Baxter P, Deighton RF, Serio A, Bilican B, Chowdhry S, Meakin PJ, Ashford MLJ, **Wyllie DJA**, Scannevin RH, Chandran S, Hayes JD, & Hardingham GE (2015). Neuronal development is promoted by weakened intrinsic antioxidant defences due to epigenetic repression of Nrf2. *Nat Commun* **6:7066** doi: 10.1038/ncomms8066 PMID: 25967870

2014

20. James OT, Livesey MR, Qiu J, Dando O, Bilican B, Haghi G, Rajan R, Burr K, Hardingham GE, Chandran S, Kind PC, & **Wyllie DJA**. (2014). Ionotropic GABA and glycine receptor subunit composition in human pluripotent stem cell-derived excitatory cortical neurones. *J Physiol* **592**, 4353-4363. PMID: 25172951
21. Livesey MR, Bilican B, Qiu J, Rzechorzek NM, Haghi G, Burr K, Hardingham GE, Chandran & **Wyllie DJA** (2014). Maturation of AMPAR composition and the GABA_AR reversal potential in hPSC-derived cortical neurons. *J Neurosci* **34**, 4070-4075. PMID: 24623784
22. Sharma R, Livesey MR, **Wyllie DJA**, Proudfoot C, Whitelaw CBA, Hay DC & Donadeu FX (2014). Generation of functional neurons from feeder-free, keratinocyte-derived equine iPSCs. *Stem Cells Dev* **23**, 1524-1534. PMID: 24548115
23. Bilican B, Livesey MR, Haghi G, Qiu J, Burr K, Siller R, Hardingham GE, **Wyllie DJA** & Chandran S (2014). Physiological normoxia and absence of EGF is required for the long-term propagation of anterior neural precursors from human pluripotent cells. *PLoS ONE* **9**(1): e85932. doi:10.1371/journal.pone.0085932 PMID: 24465796

2013

24. Qiu J, Tan Y-W, Hagenston AM, Martel M-A, Kneisel N, Skehel PA, **Wyllie DJA**, Bading H & Hardingham GE (2013). Mitochondrial calcium uniporter Mcu controls excitotoxicity and is transcriptionally repressed by neuroprotective nuclear calcium signals. *Nat Commun* **4:2034** DOI: 10.1038/ncomms3034 PMID: 23774321
25. Bilican B, Serio A, Barmada SJ, Nishimura AL, Sullivan GJ, Carrasco M, Phatnani HP, Puddifoot CA, Story D, Fletcher J, Park IH, Friedman BA, Daley GQ, **Wyllie DJA**, Hardingham GE, Wilmut I, Finkbeiner S, Maniatis T, Shaw CE & Chandran S (2013). Comment on "Drug Screening for ALS Using Patient-Specific Induced Pluripotent Stem Cells". *Sci Transl Med* **5:188le2**, DOI: 10.1126/scitranslmed.3005065 PMID: 23740897
26. McKay S, Bengston P, Bading H, **Wyllie DJA**, & Hardingham GE (2013). Recovery of NMDA receptor currents from MK-801 blockade is accelerated by Mg²⁺ and memantine under conditions of agonist exposure. *Neuropharmacology* **74**, 119-125. PMID: 23402996

27. **Wyllie DJA**, Livesey MR & Hardingham GE (2013). Influence of GluN2 subunit identity on NMDA receptor function. *Neuropharmacology* **74**, 4-17. PMID: 23376022
28. Wijetunge LS, Chattarji S, **Wyllie DJA** & Kind PC (2013). Fragile X Syndrome: from targets to treatments. *Neuropharmacology* **68**, 83-96. PMID: 23257237