

Anna Hoerder-Suabedissen

Webpage: <http://www.dpag.ox.ac.uk/team/research-scientists/anna-hoerder-suabedissen>

Employment History

October 2016 – present	Stipendiary Lecturer in Neuroscience, Trinity College, Oxford
May 2016 – present	Dept. of Physiology, Anatomy & Genetics, University of Oxford Senior postdoctoral research associate and co-principal investigator
Oct 2015 – Mar 2016	Stipendiary Lecturer in Biomedical Sciences, Keble College, Oxford
Oct 2007 – April 2016	Dept. of Physiology, Anatomy & Genetics, University of Oxford Postdoctoral research associate

Educational Qualifications

DPhil	University of Oxford (UK) on “Mouse cortical subplate neurons: molecular markers, connectivity and development” in the laboratories of Prof Ole Paulsen and Prof Zoltán Molnár (awarded 2007)
MSc	University of Oxford (UK) Neuroscience
BSc	Lancaster University (UK) Natural Sciences

Fellowships, Scholarships, Awards and Prizes

2016	Best presentation, DPAG Post-doc day
2002-2007	Wellcome Trust Graduate studentship
2004-2006	St Hugh’s College (Oxford): Biological Sciences graduate scholarship
2002	Natural Sciences Award for best 3 rd year student, Lancaster University
2001	Howard Hughes undergraduate research fellowship (University of Pittsburgh, US) and Provost’s Honors (University of California, San Diego, US)
2000	Physic’s Prize for best 1 st year student, Lancaster University (UK)
1999	Nix Stiftung Award (second best female Abitur student in state of Bremen)

Key invited seminars

Nov 21, 2017	Thalamocortical Interactions, Symposium in honour of Ray Guillery, DPAG, Oxford.
Mar 22, 2017	Oxford Neuroscience Symposium ‘what can the subplate do for you?’
Feb 6, 2015	Head of Department Seminar Series, DPAG, Oxford ‘Development and evolution of neocortical subplate neurons’.
Jan 30, 2015	Winter Conference Brain Research, Montana, USA ‘Development of neocortical subplate neurons’
Aug 20, 2013	Institut für Physiologie, Mainz, Germany ‘Subplate, the constantly changing landscape’.
Feb 2007	NOVARTIS symposium on ‘Cortical Development: Genes and genetic abnormalities’, St John’s College, Oxford: ‘New knowledge about members of the earliest cortical networks’.
2005	CONCORDE meeting, Freiburg, Germany: ‘Neurotransmitter Phenotype of Postnatal Subplate Neurons’.

Key Research Publications

1. **Hoerder-Suabedissen A**, Shuichi Hayashi, Louise Upton, Zachary Nolan, Diana Casas, Eleanor Grant, Kim V Korrell, Francisco Clasca, Patrick Kanold, Zoltan Molnar (2018) Cortical Layer 6b neurons selectively innervate higher order nuclei in the thalamus. *Cerebral Cortex (e-pub ahead of print)*
2. Banks G, Lassi G, **Hoerder-Suabedissen A**, Tinarelli F, Simon MM, Wilcox A, Lau P, Lawson TN, Johnson S, Rutman A, Sweeting M, Chesham JE, Barnard AR, Horner N, Westerberg H, Smith LB, Molnar Z, Hastings MH, Hirst RA, Tucci V, Nolan PM (2018) A missense mutation in *Katnal1* underlies behavioural, neurological and ciliary anomalies. *Mol Psychiatry Mol Psychiatry*. 23(3):713-722.
3. Evelyn McClendon, Daniel Shaver, Kiera Degener-O'Brien, Xi Gong, Thuan Nguyen, **Anna Hoerder-Suabedissen**, Zoltan Molnar, Claudia Mohr, Ben Richardson, David Rossi, and Stephen A. Back (2017) Transient Hypoxemia Chronically Disrupts Maturation of Preterm Fetal Ovine Subplate Neuron Arborization and Activity. *J Neurosci*. 37(49):11912-11929
4. Lancelot Jamie Millar, Lei Shi, **Anna Hoerder-Suabedissen**, Zoltan Molnar (2017) Neonatal Hypoxic-Ischaemic Brain Injury: Mechanisms, Models, and Therapeutic Challenges. *Front Cell Neurosci doi: 10.3389/fncel.2017.00078*
5. Molnár Z and **Hoerder-Suabedissen A** (2016) Regional scattering of primate subplate. *Proc Natl Acad Sci USA* 113(35):9676-9678.
6. Grant E, **Hoerder-Suabedissen A**, Molnar Z (2016) The regulation of corticofugal fiber targeting by retinal inputs. *Cereb Cortex* 26(3):1336-48.
7. Marques-Smith A, Lyngholm D, Kaufmann AK, Stacey JA, **Hoerder-Suabedissen A**, Becker EB, Wilson MC, Molnár Z, Butt SJ (2016) A transient translaminal GABAergic interneuron circuit connects thalamocortical recipient layers in neonatal somatosensory cortex. *Neuron* 89(3):536-49.
8. Cheng J, Sahani S, Hausrat TJ, Yang JW, Ji H, Schmarowski N, Endle H, Liu X, Li Y, Böttche R, Radyushkin K, Maric HM, **Hoerder-Suabedissen A**, Molnár Z, Prouvot PH, Trimbuch T, Ninnemann O, Huai J, Fan W, Visentin B, Sabbadini R, Strømgaard K, Stroth A, Luhmann HJ, Kneussel M, Nitsch R, Vogt J (2016) Precise somatotopic thalamocortical axon guidance depends on LPA-mediated PRG-2/Radixin signalling. *Neuron* 92:126-142.
9. Trygve E. Bakken, Jeremy A. Miller, Song-Lin Ding, Susan M. Sunkin, Kimberly A. Smith, Lydia Ng, Aaron Szafer, Rachel A. Dalley, Joshua J. Royall, Tracy Lemon, Sheila Shapouri, Kaylynn Aiona, James Arnold, Jeffrey L. Bennett, Darren Bertagnolli, Kristopher Bickley, Andrew Boe, Krissy Brouner, Stephanie Butler, Emi Byrnes, Shiella Caldejon, Anita Carey, Shelby Cate, Mike Chapin, Jefferey Chen, Nick Dee, Tsega Desta, Tim A. Dolbeare, Nadia Dotson, Amanda Ebbert, Erich Fulfs, Garrett Gee, Terri L. Gilbert, Jeff Goldy, Lindsey Gourley, Ben Gregor, Guangyu Gu, Jon Hall, Zeb Haradon, David R. Haynor, Nika Hejazinia, **Anna Hoerder-Suabedissen**, Robert Howard, Jay Jochim, Marty Kinnunen, Ali Kriedberg, Chihchau L. Kuan, Christopher Lau, Chang-Kyu Lee, Felix Lee, Lon Luong, Naveed Mastan, Ryan May, Jose Melchor, Nerick Mosqueda, Erika Mott, Kiet Ngo, Julie Nyhus, Aaron Oldre, Eric Olson, Jody Parente, Patrick D. Parker, Sheana Parry, Julie Pendergraft, Lydia Potekhina, Melissa Reding, Zackery L. Riley, Tyson Roberts, Brandon Rogers, Kate Roll, David Rosen, David Sandman, Melaine Sarreal, Nadiya Shapovalova, Shu Shi, Nathan Sjoquist, Andy J. Sodt, Robbie Townsend, Lissette Velasquez, Udi Wagley, Wayne B. Wakeman, Cassandra White, Crissa Bennett, Jennifer Wu, Rob Young, Brian L. Youngstrom, Paul Wohnoutka, Richard A. Gibbs, Jeffrey Rogers, John G. Hohmann, Michael J. Hawrylycz, Robert F. Hevner, Zoltán Molnár, John W. Phillips, Chinh Dang, Allan R. Jones, David G. Amaral, Amy Bernard, Ed S. Lein. (2016) A comprehensive transcriptional map of primate brain development. *Nature* 535(7612):367-75.

10. **Hoerder-Suabedissen A** and Molnar Z (2015) Development, evolution and pathology of neocortical subplate neurons. *Nat Rev Neurosci* 16(3):133-46.
11. Kondo S, Al-Hasani H, **Hoerder-Suabedissen A**, Wang WZ, Molnar Z (2015). Secretory function in subplate neurons during cortical development. *Front Neurosci* 9:100.
12. Okusa C, Oeschger F, Ginet V, Wang WZ, **Hoerder-Suabedissen A**, Matsuyama T, Truttmann AC, Molnár Z (2014) Subplate in a rat model of preterm hypoxia-ischemia. *Ann Clin Trans Neurol* 1(9):679-91.
13. Pedraza M, **Hoerder-Suabedissen A**, Amparo Albert-Maestro M, Molnár Z, De Carlos JA (2014) A new extracortical origin of murine subplate neurons. *Proc Natl Acad Sci USA* 111: 8613-8.
14. **Hoerder-Suabedissen A**, Oeschger FM, Krishnan ML, Belgard TG, Wang WZ, Lee S, Webber C, Petretto E, Edwards AD, Molnár Z (2013). Expression profiling of mouse subplate reveals a dynamic gene network and disease association with autism and schizophrenia. *Proc Natl Acad Sci USA* 110:3555-60.
15. **Hoerder-Suabedissen A** and Molnár Z (2013) Molecular Diversity of Early-Born Subplate Neurons. *Cereb Cortex* 23:1473-83.
16. Grant E, **Hoerder-Suabedissen A**, Molnár Z (2012) Development of the corticothalamic projections. *Front Neurosci* 6: 53.
17. Chiara F, Badaloni A, Croci L, Yeh ML, Cariboni A, **Hoerder-Suabedissen A**, Consalez GG, Eickholt B, Shimogori T, Parnavelas JG, Rakic S (2012) Early B-cell factors 2 and 3 (EBF2/3) regulate early migration of Cajal-Retzius cells from the cortical hem. *Devel Biol* 365(1):277-289.
18. Belgard TG, Marques AC, Oliver PL, Abaan HO, Sirey TM, **Hoerder-Suabedissen A**, Molnár Z, Margulies EH, Ponting CP (2011) A Transcriptomic Atlas of Mouse Neocortical Layers. *Neuron* 71(4):605-616.
19. **Hoerder-Suabedissen A**, Molnár Z (2011) Morphology of mouse subplate cells with identified projection targets changes with age. *J Comp Neurol* 520(1):174-185.
20. Wang WZ, Oeschger FM, Montiel JF, García-Moreno F, **Hoerder-Suabedissen A**, Krubitzer L, Ek CJ, Saunders NR, Reim K, Villalón A, Molnár Z (2011) Comparative Aspects of Subplate Zone Studied with Gene Expression in Sauropsids and Mammals. *Cereb Cortex* 21:2187-2203.
21. Montiel JF, Wang WZ, Oeschger FM, **Hoerder-Suabedissen A**, Tung WL, García-Moreno F, Holm IE, Villalón A, Molnár Z (2011) Hypothesis on the dual origin of the Mammalian subplate. *Front Neuroanat* 5:25.
22. Wang WZ, **Hoerder-Suabedissen A**, Oeschger FM, Bayatti N, Ip BK, Lindsay S, Supramaniam V, Srinivasan L, Rutherford M, Møllgård K, Clowry GJ, Molnár Z (2010) Subplate in the developing cortex of mouse and human. *J Anat* 217(4):368-380.
23. **Hoerder-Suabedissen A**, Wang WZ, Lee S, Paulsen O, Davies K, Goffinet AM, Rakic S, Parnavelas J, Reim K, Molnár Z (2009) Novel markers reveal subpopulations of subplate neurons in the murine cerebral cortex. *Cereb Cortex* 19: 1738 - 1750.
24. **Hoerder-Suabedissen A**, Paulsen O, Molnár Z (2008) Thalamocortical maturation in mice is influenced by body weight. *J Comp Neurol* 511(3): 415-420.

Book Chapters:

Zoltán Molnár, Wei Zhi Wang, Maria Carmen Piñon, Daniel Blakey, Shinichi Kondo, Franziska Oeschger and **Anna Hoerder-Suabedissen** (2010) "Subplate and the Formation of the Earliest Cerebral Cortical Circuits" in *New Aspects of Axonal Structure and Function* (editors: D Feldmeyer and J Lübke); Springer Verlag

Zoltán Molnár, **Anna Hoerder-Suabedissen**, Wei Zhi Wang, Jamin DeProto, Kay Davies, Sheena Lee, Erin C. Jacobs, Anthony T. Campagnoni, Ole Paulsen, Maria Carmen Piñon and Amanda F. P. Cheung "Genes involved in the formation of the earliest cortical circuits" in *Cortical Development: Genes and Genetic Abnormalities – Novartis Foundation Symposium 288* (Editors: G Bock and J Goode); Wiley.

Anna Hoerder-Suabedissen and Zoltan Molnar “Principles of Cerebral Cortical Development” *in* The Oxford Textbook of Old Age Psychiatry – 4th Edition (Editors: R Jacoby, C Oppenheimer, T Dening and A Thomas); Oxford University Press.