

# **Professor Topun Austin**

**BSc, MBBS, MRCP (UK), MRCPCH, PhD**

Consultant Neonatologist

Cambridge University Hospitals NHS Foundation Trust

Affiliate Associate Professor in Neonatal Neuroscience

University of Cambridge

Honorary Professor of Neurophotonics

University College London

## **Curriculum Vitae**

**January 2023**

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## **Topun Austin BSc, MBBS, MRCP (Paeds), PhD**

### **Consultant Neonatologist, Cambridge University Hospitals NHS Foundation Trust**

**GMC Specialist Registration:** Paediatrics; Neonatal Medicine (Date of CCT Sept.2007) **GMC N° 4206958**

**Medical Protection (MPS):** 1431266

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**Place & Date of Birth** Cambridge, 1st August 1971. **Nationality** British.

#### **Qualifications**

2009 Ph.D (University College London)  
1999 M.R.C.P. (Paediatrics) (UK).  
1995 M.B., B.S. (University College London)  
1992 BSc. (Hon): Physiology with Basic Medical Sciences (Class 2.1) (University College London)

#### **Employment**

09/2008 – present **Consultant in Neonatology, Cambridge University Hospitals**  
09/2001 – 02/2005 Locum Consultant in Neonatology, Cambridge University Hospitals  
09/2007 – 02/2008 Specialist Registrar in Neonatology, John Radcliffe Hospital Oxford  
09/2006 – 08/2007 Specialist Registrar in Neonatology, Queen Charlottes & Chelsea Hospital  
09/2005 – 08/2006 Specialist Registrar in Neonatology, John Radcliffe Hospital Oxford  
03/2005 – 08/2005 Specialist Registrar in Paediatrics, Watford General Hospital  
09/2001 – 02/2005 Clinical Lecturer in Neonatology, University College London  
09/1999 – 08/2001 Clinical Research Fellow in Neonatology, University College London

#### **Professional Appointments**

- **Affiliate Associate Professor, Department of Paediatrics, Cambridge University** (2021-present).
- **Honorary Professor of Neurophotonics, University College London** (2016-present).
- **Director of the Evelyn Perinatal Imaging Centre** (2013 – present)

#### **Medico-Legal Qualifications**

2020 Expert Witness Certificate (Cardiff University Bond Solon): Excellence in report writing; cross examination and courtroom skills; law and procedure (civil).

**Clinical, Academic & Medico-legal interest** Neonatal medicine; newborn brain development; newborn brain injury; functional brain imaging; cerebrovascular physiology and neurovascular coupling; developmental cognitive neuroscience; neonatal neurocritical care.

#### **Awards**

2019 UKRI Research in Film Award – Mental Health and Wellbeing for ‘The Golden Window’.  
2016 Honorary Professor, Department of Medical Physics and Biomedical Engineering, University College London.  
2005 Young Investigator Poster Prize Presentation, European Society of Paediatric Research, Siena, Italy.  
2003/04 and 2004/05 Distinguished Teacher Award, Royal Free & University College London Medical School.  
1995/96 William Henry Rean & Atchison Prize for outstanding performance as a pre-registration house officer.  
1993 John Jepson Memorial Prize; Sir William Gowers Prize in Clinical Pharmacology.  
1991/92 Faculty Scholar & Shanks Scholarship: Intercalated BSc, Physiology.  
1991 Meyerstein Scholarship: best aggregate performance, preclinical.  
1991 Cluff Memorial Prize in Physiology, Part II.  
1990 Dr R Kohn Prize in Physiology & Endocrinology, Part I.

#### **Membership of Professional Bodies**

Royal College of Paediatrics and Child Health.  
Neonatal Society.  
British Association of Perinatal Medicine.  
European Society of Paediatric Research.  
International Pediatric Research Foundation (President).  
Advanced Life Support Group – Neonatal Life Support Instructor.  
British Medical Association.

### **Medico-Legal Experience**

I have completed the Excellence in report writing; cross examination and courtroom skills; law and procedure (civil) courses run by Bond Solon and received an **Expert Witness Certificate** (Cardiff University Bond Solon) in 2020.

I am a member of **Cambridge Paediatric Medico-Legal Associates** ([www.cpmla.co.uk](http://www.cpmla.co.uk)), a consortium of independent expert witnesses in paediatrics.

I take instruction from both claimants and defendants and specialise in perinatal/neonatal brain injury.

### **Personal Statement**

I am a clinical academic neonatologist leading a team undertaking original research into brain injury in the newborn infant. I have over 25 years of experience in neonatology and have been a Consultant Neonatologist in Cambridge since 2008. I combine acute clinical practice in a busy regional neonatal intensive care unit, responsible for the clinical neonatal neurology service and with funding from the Cambridge Biomedical Research Centre have developed as an independent investigator in neonatal neuroscience.

My main achievements in my current post includes:

- 1) Associated with over £7M of research, capital and equipment grants. £1.92M as principal investigator.
- 2) Leading on the development of and running a unique functional brain-imaging centre, the Evelyn Perinatal Imaging Centre, funded by a grant from the Evelyn Trust.
- 3) Installation of a 1.5T MRI scanner for mothers and neonates, in the Evelyn Perinatal Imaging Centre.
- 4) Leading the development of an award winning regional neonatal neuroprotection service.
- 5) Developing the clinical neonatal neurology service in Cambridge, including the development of a dedicated neonatal neurocritical care service for infants with perinatal brain injury and the introduction of rapid whole genome sequencing for high-risk neonates in the NICU.
- 6) Creation of **neoLAB** – infant functional brain imaging group, a formal collaboration between the Biomedical Optics Research Laboratory DOT-HUB group at UCL (UCL DOT-HUB) and Cambridge ([www.neoLABresearch.com](http://www.neoLABresearch.com)).
- 7) Setting up productive collaborations with academic departments of Clinical Neurosciences, Psychology and Psychiatry in Cambridge and the Centre for Brain and Cognitive Development, Birkbeck, University of London, Department of Neonatology in Copenhagen, Denmark and the University of Bologna, Italy.
- 8) Successful primary supervisor for 2 MPhil's, 2 PhD and 1MD, the latter awarded the Ralph Noble Prize for best MD thesis in the University of Cambridge in 2018.
- 9) Setting up innovative teaching and training resources, including accredited courses as part of the Cambridge Perinatal Group, British Paediatric Neurology Association and online resource [www.BeBoP.nhs.uk](http://www.BeBoP.nhs.uk).

### **Clinical Experience**

My clinical training was at University College Hospital, Oxford Radcliffe Hospitals and Queen Charlotte's & Chelsea Hospital in London. I am a practicing Consultant in Neonatal Medicine at the Rosie Hospital, Cambridge University Hospitals NHS Foundation Trust. This is one of the largest NICU's in the UK, looking after patients from 22 weeks' gestation, as well as providing comprehensive neonatal surgical and neurosurgical services for the East of England. Until 2018 I also provided consultant cover for the Acute Neonatal Transfer Service (ANTS) responsible for retrieving sick and preterm infants from across the region. My main subspecialty interest has been in neonatal neurology and neurocritical care overseeing a multidisciplinary team responsible for the management of all infants with congenital and acquired brain injury. I was responsible for the introduction of therapeutic hypothermia on the NICU in Cambridge and a coordinated service for therapeutic hypothermia across the East of England in 2010; introduction of continuous EEG and aEEG monitoring of infants, including the appointment for sessional time of a paediatric neurophysiologist from Great Ormond Street Hospital, London and creation of a joint neonatal-neurology clinic with the Paediatric neurology department for infants with neonatal encephalopathy and congenital brain disorders.

### **Dissemination Activities**

- Contribution to local and national media outlets, including BBC Radio 5 Live and BBC Breakfast, on the development of therapeutic hypothermia for newborn infants (2010-2011) opening of the Evelyn Perinatal Imaging Centre (2013), neonatal neurocritical care (2017).
- Presentation of research work at the House of Commons 'Set for Britain' (2014) and 10 Downing Street for Action Medical Research (2014).
- Participating in the annual Cambridge Science Festival, including public lectures and opening of the Evelyn Perinatal Imaging Centre to members of the public in 2014 and 2015.
- In conjunction with Anglia Ruskin University (Shreepali Patel), co-produced an award-winning film 'The Golden Window' a unique multiscreen project providing a patient and parent perspective of neonatal intensive care (<http://www.creativefront.org/projects-and-events/events/thegoldenwindow>).
- Invitation to lecture at the Hay Festival, June 2016.

### **Supervision of Research Students**

**Principal supervisor** for 2MPhil, 2PhD and 1MD student (latter awarded the Ralph Noble prize for her thesis, 2019). Currently supervising 2 PhD student. **Co-supervisor** for 4 PhD students; currently co-supervising 3 PhD students. **Internal and external examiner** for >10 PhD's since 2010.

### **Education & Training**

I am currently a director of the Cambridge Perinatal Group, which organises a number of courses a year on a broad range of perinatal topics ([www.cambridgeperinatalgroup.com](http://www.cambridgeperinatalgroup.com)) open to trainees and consultants from across the UK and beyond. I am one of the founding faculty members of the British Paediatric Neurology Association neoNATE course ([www.bpna.org.uk/neonate](http://www.bpna.org.uk/neonate)) on neonatal neurology. I have also developed and run an education and clinical resource site for families and healthcare professionals looking after infants with brain injury, [www.BeBoP.nhs.uk](http://www.BeBoP.nhs.uk). As a Clinical Lecturer at UCL I twice received the **Distinguished Teacher Award**, and in 2015 received an **Excellent Teaching Award** by Cambridge University.

I am a **Senior Member** of Robinson College Cambridge and an academic supervisor for undergraduates in Neuroanatomy at the college; I am a graduate supervisor in Perinatal Neurosciences for a number of MPhil, MD and PhD students in Cambridge.

### **International Profile & Collaborations**

Over the past 10 years I have developed an international profile in the fields of Neonatal Neuroprotection and Biomedical Optics applied to the newborn infant and have been invited to speak at over 14 international conferences and meetings. Between 2010-2016 I was the secretary for the circulation section of the European Society for Paediatric Research (ESPR) and currently sit on the ESPR Research Grant Committee; I was chair of the scientific committee for the international European Academy of Paediatric Societies (EAPS) biannual meeting, to be held in Paris in 2018. I was the secretary-treasurer of the International Pediatric Research Foundation (IPRF), responsible for the governance and fiscal management of the journal Pediatric Research and in 2020 became president of the IPRF.

### **Grants & Awards**

Total direct and indirect grants: £7.068M, including £1.92M as Principal Investigator.

- 1) Evelyn Trust James Bradfield Memorial Grant (with Ronit Pressler, Great Ormond Street Hospital), 2021-23: The Eaglet project: EEG vs aEEG to improve the diagnosis of neonatal seizures and epilepsy - a randomised trial. £236k
- 2) Health Foundation, Q Exchange (with East of England Neonatal Neuroprotection Group), 2021: Enhancing parent experience of neonatal encephalopathy. £30k
- 3) Action Medical Research (**Principal Investigator** with UCL-BORL), 2021-2023: Investigating the interactions between sleep states and functional connectivity in the developing brain. £120K
- 4) Sir Jules Thorne Charitable Trust/Addenbrooke's Charitable Trust (**Principal Investigator**), 2018, equipment award: MRI compatible neonatal incubator. £360k.
- 5) Rosetrees Trust (with Vicky Leong, Psychology), 2017-2020: PhD Studentship - Understanding Gene-Environment Interactions in the Etiology of Dyslexia During Infancy. £73.4k.
- 6) Rosetrees Trust (with Profs. David Rowitch, Paediatrics, Lucy Raymond, Clinical Genetics), 2017-2019: Next generation project: rapid diagnostics for severely ill children in intensive care. £400k.
- 7) NIHR BRC Theme in Paediatrics (with Prof. David Rowitch, Paediatrics): 2017-2022 Developing new capabilities of the NeuroNICU in Cambridge and the East of England region £1.5M.
- 8) Action Medical Research (with Dr.Ruth Ford, Anglia Ruskin University), 2017-2019: Lending a helping hand to very preterm infants: a randomised control trial of the effectiveness of 'sticky mittens' for enhancing cognitive development from ages 3-15 months. £136k.
- 9) Evelyn Trust (**Principal Investigator**), 2017: Early identification of perinatal arterial ischaemic stroke using near-infrared spectroscopy and diffuse optical imaging. £98.5k.
- 10) Addenbrooke's Charitable Trust/Biomedical Research Centre Nurses, Midwives & Allied Healthcare Professional Research Training Fellowships, 2015-2016. £44k.
- 11) Bill & Melinda Gates Foundation (with UCL-BORL, Birkbeck BabyLab, University of London), 2015-2019: BRIGHT - BRain Imaging and Global HealTh. £2M
- 12) Rosetrees Trust (with Dr.Vicky Leong, Psychology), 2015-2016: Identifying neuro-genetic oscillatory biomarkers of dyslexia risk in neonates. £11k.
- 13) Addenbrookes Charitable Trust, Nick Haan – Personal donation: Neonatal neurocritical care nurse secondment, 2015. £20k.
- 14) MRC Clinical Research Training Fellowship (Principal Supervisor), 2014: Behaviour and resting state activation in newborns. £130k.
- 15) Sir Jules Thorne Charitable Trust (Principal Investigator), 2013, equipment award: Development of a neonatal neurocritical care service in Cambridge. £181k.
- 16) SPARKS (Principal Investigator), 2013-2015: SAMBA – Study of Autoregulatory Monitoring in BABies. £115k.

- 17) Engineering and Physical Sciences Research Council (Co-Investigator, with UCL), 2012-2016: Fast optical tomography for imaging seizure detection in newborn infants. £887k.
- 18) Evelyn Trust (**Principal Supervisor**), 2013-2015: Evelyn Trust Research Fellowship in Perinatal Neuroscience. £164k.
- 19) Evelyn Trust (**Principal Investigator**), 2012, capital award: Evelyn Trust Perinatal Imaging Centre. £315K.
- 20) Action Medical Research (**Principal Investigator**), 2012-2014: Seizure detection in the newborn infant using integrated optical imaging and electroencephalography. £130k.
- 21) Danish Council for Strategic Research, 2011-2015 (Consortium Partner): SafeBoosC - Safeguarding the brain of our smallest children. DK11.1M – UK award £26k.
- 22) Health Foundation (**Principal Investigator**), 2010-2012: Neonatal neuroprotection in the East of England. £435k.
- 23) Evelyn Trust (**Principal Investigator**), 2009-2012: Cerebral autoregulation in the newborn. £42k.

### **Publications**

Total publications = 86 *h*-index = 34 on 27/01/2023 (Google Scholar). 3644 citations.

### **Original Papers**

- 1) Uchitel J, Blanco B, Collins-Jones L, Edwards A, Porter E, Pammenter K, Hebden J, Cooper RJ, **Austin T**. Cot-side imaging of functional connectivity in the developing brain using wearable high-density diffuse optical tomography. *Neuroimage* 2023;**265**:119784
- 2) Richards G, Aydin E, Tsompanidis A, Padaigaitė E, **Austin T**, Allison C, Holt R, Baron-Cohen S. Digit ratio (2D:4D) and maternal testosterone-to-estradiol ratio measured in early pregnancy. *Sci Rep* 2022;**12**:13586
- 3) Martini S, Czosnyka M, Smielewski P, Iommi M, Galletti S, Vitali F, Paoletti V, Camela F, **Austin T**, Corvaglia L. Clinical determinants of cerebrovascular reactivity in very preterm infants during the transitional period. *Pediatr Res* 2022;**92**:135-141.
- 4) Aydin E, Weiss SM, Glasgow KA, Barlow J, **Austin T**, Johnson MH, Lloyd-Fox S. The COVID in the Context of Pregnancy, Infancy and Parenting (CoCoPIP) study: protocol for a longitudinal study of parental mental health, social interactions, physical growth, and cognitive development of infants during the pandemic. *BMJ Open*. 2022;**12**:e053800
- 5) Hansen ML, Hyttel-Sorensen S, Jakobsen JC, Glud C, Kooi EMW, Mintzer J, de Boode WP, Fumagalli M, Alarcon A, Alderliesten T, Greisen G, ESPR Special Interest Group 'Near InfraRed Spectroscopy (NIRS) (**Austin T et al**). Cerebral near-infrared spectroscopy monitoring (NIRS) in children and adults: a systematic review with meta-analysis. *Pediatr Res*. 2022 doi: 10.1038/s41390-022-01995-z. Online ahead of print.
- 6) French CE, Dolling H, Megy K, Sanchis-Juan A, Kumar A, Delon I, Eakeling M, Mallin L, Agrawal S, **Austin T**, Walston F, Park SM, Parker A, Piyasena C, Bradbury K, Next Generation Children's Project Consortium, Ellard S, Rowitch DH, Raymond FL. Refinements and considerations for trio whole-genome sequence analysis when investigating Mendelian diseases presenting in early childhood. *HGG Adv* 2022;**3**:100113
- 7) Aydin E, Glasgow KA, Weiss SM, **Austin T**, Johnson MH, Barlow J, Lloyd-Fox S. Expectant parents' perceptions of healthcare and support during COVID-19 in the UK: a thematic analysis. *Journal of Reproductive and Infant Psychology* 2022 May 17:1-13. doi: 10.1080/02646838.2022.2075542. Online ahead of print.
- 8) Aydin E, Glasgow KA, Weiss SM, Khan Z, **Austin T**, Johnson MH, Barlow J, Lloyd-Fox S. Giving birth in a pandemic: women's birth experiences in England during COVID-19. *BMC Pregnancy and Childbirth* 2022;**22**:304.
- 9) de Groot ER, Bik A, Sam C, Wang X, Shellhaas RA, **Austin T**, Taranno ML, Benders MJNL, van den Hoogen A, Dudink J. Creating an optimal observational sleep stage classification system for very and extremely preterm infants. *Sleep Medicine* 2022;**90**: 167-175.
- 10) Frijia EM, Billing A, Lloyd-Fox S, Rosas EV, Collins-Jones L, Crespo-Llado MP, Amado MP, **Austin T**, Edwards AE, Dunne L, Smith G, Hill R, Powell S, Everdell NL, Cooper RJ. Functional imaging of the developing brain with wearable high-density diffuse optical tomography: a new benchmark for infant neuroimaging outside the scanner environment. *Neuroimage*. 2021;**225**:117490.
- 11) Martini S, Frabboni G, Rucci P, Czosnyka M, Smielewski P, Galletti S, Cimatti AG, Faldella G, Corvaglia L, **Austin T**. Cardiovascular and cerebrovascular responses to cardio-respiratory events in preterm infants during the transitional period. *Journal of Physiology* 2020 ;**598**:4107-4119.
- 12) Martini S, Frabboni G, Rucci P, Czosnyka M, Smielewski P, Galletti S, Vitali F, Faldella G, Corvaglia L, **Austin T**. Cardio-respiratory events in preterm infants during the transitional period. *J Pediatr*. 2020;**221**:32-8.
- 13) Katus L, Mason L, Milosavljevic B, McCann S, Rozhko M, Moore SE, Elwell CE, Lloyd-Fox L, de Haan M, the BRIGHT project team (incl **Austin T**). ERP markers are associated with neurodevelopment outcomes in 1-5 month old infants in rural Africa and the UK. *Neuroimage* 2020;**210**:116591.
- 14) Lee CW, Blanco B, Dempsey L, Chalia M, Hebden JC, Caballero-Gaudes C, **Austin T**, Cooper RJ. Sleep state modulates resting-state functional connectivity in neonates. *Frontiers in Neuroscience* 2020;**14**:347.doi: 10.3389/fnins.2020.00347.
- 15) Ng IHX, da Costa CS, Zeiler FA, Wong FY, Smielewski P, Czosnyka M, **Austin T**. Burden of hypoxia and intraventricular haemorrhage in extremely preterm infants. *Arch Dis Child*. 2020;**105**:F242-47.
- 16) Hansen ML, Pellicer A, Glud C, Dempsey E, Mintzer J, Hyttel-Sørensen S, Heuchan AM, Hagmann C, Ergenekon E, Dimitriou G, Pichler G, Naulaers G, Cheng G, Guimarães H, Tkaczyk J, Kreutzer KB, Fumagalli M, Claris O, Lemmers P, Topun Austin Curriculum Vitae January 2023

- Fredly S, Szczapa T, **Austin T**, Jakobsen JC, Greisen G. Cerebral near-infrared spectroscopy monitoring versus treatment as usual for extremely preterm infants: a protocol for the SafeBoosC randomised clinical phase III trial. *Trials*. 2019;20:811.
- 17) da Costa CS, Cardim D, Molnar Z, Kelsall W, Ng I, Czosnyka M, Smielewski P, **Austin T**. Changes in hemodynamics, cerebral oxygenation and cerebrovascular reactivity during the early transitional circulation in preterm infants. *Pediatr Res*. 2019;86:247-253.
  - 18) Aydin E, Holt R, Chaplin D, Hawkes R, Allison C, Hackett G, **Austin T**, Tsompanidis A, Gabis L, Ziv SI, Baron-Cohen S. Fetal anogenital distance using ultrasound. *Prenat Diagn*. 2019;39:527-535.
  - 19) French CE, Delon I, Dolling H, Sanchis-Juan A, Shamardina O, Mégy K, Abbs S, **Austin T**, Bowdin S, Branco RG, Firth H; NIHR BioResource—Rare Disease; Next Generation Children Project, Rowitch DH, Raymond FL. Whole genome sequencing reveals that genetic conditions are frequent in intensively ill children. *Intensive Care Med*. 2019;45:627-636.
  - 20) Lloyd-Fox S, Blasi A, McCann S, Rozhko M, Kischkel L, Mason L, **Austin T**, Moore SE, Elwell CE, and the BRIGHT project team. Habituation and novelty-detection fNIRS brain responses in infants 1-8 months of life: Gambia and UK. *Developmental Science* 2019 Feb 16:e12817. doi: 10.1111/desc.12817. [Epub ahead of print].
  - 21) Chalia M, Dempsey LA, Cooper RJ, Lee CW, Gibson AP, Hebden JC, **Austin T**. Diffuse optical tomography for the detection of perinatal stroke at the cotside: a pilot study. *Pediatr Res*. 2019;85:1001-1007.
  - 22) Sanchis-Juan A, Stephens J, French CE, Gleadall N, Mégy K, Penkett C, Shamardina O, Stirrups K, Delon I, Dewhurst E, Dolling H, Erwood M, Grozeva D, Stefanucci L, Arno G, Webster AR, Cole T, **Austin T**, Branco RG, Ouwehand WH, Raymond FL, Carss KJ. Complex structural variants in Mendelian disorders: identification and breakpoint resolution using short- and long-read genome sequencing. *Genomic Medicine* 2018;10:95. doi: 10.1186/s13073-018-0606-6.
  - 23) da Costa CS, Czosnyka M, Smielewski P, **Austin T**. Optimal mean arterial blood pressure in extremely preterm infants within the first 24 hours of life. *J Pediatrics* 2018;203:242-8.
  - 24) Hamilton C, Phaal R, Brahmabhatt M, Jarritt P, **Austin T**. Designing the landscape for technological development in neonatal neurocritical care *BMJ Innovations* 2018;4:163-71.
  - 25) da Costa CS, Placed MM, Czosnyka M, Cabella B, Kasprovicz M, **Austin T**, Smielewski P. Complexity of brain signals is associated with outcome in preterm infants. *JCBFM* 2017;37:3368-79.
  - 26) Plomgaard AM, Alderliesten T, **Austin T**, van Bel F, Benders M, Claris O, Dempsey E, Fumagalli M, Gluud C, Hagmann C, Hyttel-Sorensen S, Lemmers P, Pellicer A, Petersen TH, Pichler G, Winkel P, Greisen G. Early biomarkers of brain injury and cerebral hypo- and hyperoxia in the SafeBoosC II trial. *PLoS One*. 2017;12(3):e0173440
  - 27) de Boode WP, Singh Y, Gupta S, **Austin T**, Bohlin K, Dempsey E, Groves A, Eriksen BH, van Laere D, Molnar Z, Nestaas E, Rogerson S, Schubert U, Tissot C, van der Lee R, van Overmeire B, El-Khuffash A. Recommendations for neonatologist performed echocardiography in Europe: consensus statement endorsed by European Society for Paediatric Research (ESPR) and European Society for Neonatology (ESN). *Paediatr. Res*. 2016;80:465-71.
  - 28) Chalia M, Lee CW, Dempsey LA, Edwards AD, Singh H, Michell AD, Everdell NL, Hebden JC, Cooper RJ, **Austin T**. The haemodynamic response to burst-suppressed and discontinuous EEG activity in infants with hypoxic-ischaemic encephalopathy. *Neurophotonics* 2016; 3:031408.
  - 29) Singh H, Cooper RJM, Lee CW, Dempsey L, Brigadoi S, Edwards A, Airantzis D, Everdell N, Michell A, Holder D, **Austin T**, Hebden JC. Neurovascular interactions in the neurologically compromised neonatal brain. *Adv. Exp. Med. Biol*. 2016; 876: 485-92.
  - 30) Plomgaard AM, van Oeveren W, Petersen TH, Alderliesten T, **Austin T**, van Bel F, Benders M, Claris O, Dempsey E, Franz A, Fumagalli M, Gluud C, Hagmann C, Hyttel-Sorensen S, Lemmers P, Pellicer A, Pichler G, Winkel P, Greisen G. The SafeBoosC II randomised trial: treatment guided by near-infrared spectroscopy reduces cerebral hypoxia without changing early biomarkers of brain injury. *Pediatr Res*. 2016;79:528-35.
  - 31) Plomgaard AM, Hagmann C, Alderliesten T, **Austin T**, van Bel F, Claris O, Dempsey E, Franz A, Fumagalli M, Gluud C, Greisen G, Hyttel-Sorensen S, Lemmers P, Pellicer A, Pichler G, Benders M. Brain injury in the international multicenter randomized SafeBoosC phase II feasibility trial: cranial ultrasound and magnetic resonance imaging assessments. *Pediatr Res*. 2016;79:466-72.
  - 32) Riera J, Hyttel-Sorensen S, Bravo MC, Cabañas F, López-Ortego P, Sanchez L, Ybarra M, Dempsey E, Greisen G, **Austin T**, Claris O, Fumagalli M, Gluud C, Lemmers P, Pichler G, Plomgaard AM, van Bel F, Wolf M, Pellicer A. The SafeBoosC phase II clinical trial: an analysis of the interventions related with the oximeter readings. *Arch Dis Child*. 2015;101:F333-8.
  - 33) da Costa CS, Czosnyka M, Mitra S, Smielewski P, **Austin T**. Monitoring of cerebrovascular reactivity allows determination of optimal blood pressure in preterm infants. *J.Pediatr* 2015;167:86-91
  - 34) Hyttel-Sørensen S, Pellicer A, Alderliesten T, **Austin T**, van Bel F, Benders M, Claris O, Dempsey EM, Franz AR, Fumagalli M, et al. Cerebral near infrared spectroscopy oximetry in extremely preterm infants: phase II randomised clinical trial. *BMJ* 2015;350:g7635 doi: 10.1136/bmj.g7635
  - 35) Singh H, Cooper RJ, Lee CW, Dempsey L, Edwards AD, Brigadoi S, Airantzis D, Everdell N, Michell A, Holder D, Hebden JC, **T.Austin**. Mapping cortical haemodynamics during neonatal seizures using diffuse optical tomography: a case study. *Neuroimage Clin*. 2014;5:256-65.

- 36) Mitra S, Czosnyka M, Smielewski P, O'Reilly H, Brady K, **Austin T**. Heart rate passivity of cerebral tissue oxygenation as an indicator of cerebrovascular reactivity in preterm infants. *Acta Paediatr.* 2014;**103**:e374-82
- 37) Dassios T, **Austin T**. Respiratory function parameters in ventilated newborn infants undergoing whole body hypothermia. *Acta Paediatrica.* 2014;**103**:157-161.
- 38) Chaudhary R, Farrer K, Broster S, McRitchie L, **Austin T**. Active Versus Passive Cooling During Neonatal Transport. *Pediatrics* 2013;**132**:841–846.
- 39) Hyttel-Sørensen S, **Austin T**, van Bel F, Benders M, Claris O, Dempsey E, Fumagalli M, Greisen G, Grevstad B, Hagmann C, Hellström-Westas L, Lemmers P, Lindschou J, Naulaers G, van Oeveren W, Pellicer A, Pichler G, Roll C, Skoog M, Winkel P, Wolf M, Gluud C . A phase II randomized clinical trial on cerebral near-infrared spectroscopy plus a treatment guideline versus treatment as usual for extremely preterm infants during the first three days of life (SafeBoosC): study protocol for a randomized controlled trial. *Trials* 2013;**14**:120
- 40) Pellicer A, Greisen G, Benders M, Claris O, Dempsey E, Fumagalli M, Gluud C, Hagmann C, Hellström-Westas L, Hyttel-Sorensen S, Lemmers P, Naulaers G, Pichler G, Roll C, van Bel F, van Oeveren W, Skoog M, Wolf M, **Austin T** .The SafeBoosC Phase II Randomised Clinical Trial: A Treatment Guideline for Targeted Near-Infrared-Derived Cerebral Tissue Oxygenation versus Standard Treatment in Extremely Preterm Infants. *Neonatology* 2013;**104**:171-178.
- 41) Hyttel-Sørensen S, **Austin T**, van Bel F, Benders M, Claris O, Dempsey EM, Fumagalli M, Gluud C, Hagmann C, Hellström-Westas L, Lemmers P, Naulaers G, van Oeveren W, Pellicer A, Pichler G, Roll C, Støy LS, Wolf M, Greisen G. Clinical use of cerebral oximetry in extremely preterm infants is feasible. *Dan Med J.* 2013;**60**:A4533.
- 42) Squier W, **Austin T**, Anslow P, Weller R. Infant subcortical cystic leucomalacia: a distinct pathological entity resulting from impaired fluid handling. *Early Human Development* 2011;**87**:421-6.
- 43) Cooper RJ, Hebden JC, O'Reilly H, Mitra S, Michell A, Everdell NL, Gibson AP, **Austin T**. Transient haemodynamic events in neurologically compromised infants: A simultaneous EEG and diffuse optical imaging study. *Neuroimage* 2011;**55**:1610-6.
- 44) Pichler G, Wolf M, Roll C, Weindling MA, Greisen G, Wardle SP, Zaramella P, Naulears G, Pellicer A, **Austin T**, Bartocci M, Urlsberger B. Recommendations to increase validity and comparability of peripheral measurements with near infrared spectroscopy in neonates. *Neonatology* 2008;**94**:320-2.
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#### Invited Contributions, Commentaries & Review Articles

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