

## John D Pickard



## Emeritus Professor of Neurosurgery University of Cambridge, UK

Formerly, Professor of Neurosurgery, University of Cambridge (1991-2013), first Chairman and Clinical Director, Wolfson Brain Imaging Centre (the first worldwide to incorporate state of the art imaging (high field MR, positron emission tomography and multimodality bedside monitoring) within the neurosciences critical care unit); Honorary Director NIHR Healthcare Technology Cooperative for Brain Injury and NIHR Brain Injury MIC (2013-2020); NIHR Senior Investigator; Honorary Civilian Consultant to the Army. Emeritus Professorial Fellow and formerly Director of Studies in Medical Sciences & Director of the Tunku Abdul Rahman Fund, St Catharines College, Cambridge.

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### Research Interests (<200 words)

Over the past 50 years, my research has focused on advancing the care of patients with CSF disorders, acute brain injury and prolonged disorders of consciousness through functional brain imaging, studies of pathophysiology, mathematical modelling, randomised clinical trials and new treatments (eg nimodipine, venous stenting) together with related health economic and ethical aspects. I have recently retired from the Honorary Directorship of the NIHR Brain Injury MedTech Cooperative (2013-2020), a UK wide organisation based in Cambridge that is dedicated to listening to patients and their carers to determine their unmet needs, finding and facilitating technological solutions through dialogue with inventors, SMEs, health service commissioners and business angels. I am enormously grateful to all the people and teams at home and abroad with whom I have been involved over the years and, most importantly, to our long-suffering patients.

### Research Focus

Keywords: neurosurgery, brain injury, hydrocephalus, pseudotumor cerebri syndrome, prolonged disorders of consciousness, venous sinus stenting.

Research Technologies/Facilities (in collaboration with colleagues): Multimodality bedside monitoring (ICP, computerised CSF infusion studies, transcranial Doppler, intracerebral microdialysis), functional MR, positron emission tomography, hEEG.

### Publications

- 10 key papers
  - Pickard JD, MacKenzie ET (1973): Inhibition of prostaglandin synthesis and the response of baboon cerebral circulation to carbon dioxide. *Nature New Biology* 245: 187-188 .
  - Pickard, Murray, Illingworth, Shaw, Teasdale, Foy, Humphrey, Lang, Nelson, Richards, Sinar, Bailey, Skene (1989). Effect of oral nimodipine on cerebral infarction and outcome after subarachnoid haemorrhage: British Aneurysm Nimodipine Trial. *Brit Med J* 298: 636-642.
  - Czosnyka M, Whitehouse H, Smielewski P, Simac S, Pickard J D (1996). Testing of cerebrospinal compensatory reserve in shunted and non-shunted patients: a guide to interpretation based on an observational study. *J Neurol Neurosurg Psychiatr* 60: 549-558.
  - Pena A, Whitehouse HE, Bolton MD, Pickard JD (1999). Effects of brain ventricular shape on periventricular biomechanics - a finite element analysis. *Neurosurgery* 45:107-118.
  - Higgins JN,owler BK, Cousins C, Pickard JD. Venous sinus stenting for refractory benign intracranial hypertension. *Lancet*. 2002;359:228-30.

6. Momjian S, Owler BK, Czosnyka Z, Czosnyka M, Pena A, Pickard JD. Pattern of white matter regional cerebral blood flow and autoregulation in normal pressure hydrocephalus. *Brain*. 2004;127:965-72.
7. Owen AM, Coleman MR, Boly M, Davis MH, Laureys S, Pickard JD. Detecting awareness in the vegetative state. *Science*. 2006;313:1402.
8. Coleman MR, Davis MH, Rodd JM, Robson T, Ali A, Owen AM, Pickard JD. Towards the routine use of brain imaging to aid the clinical diagnosis of disorders of consciousness. *Brain*. 2009 Sep;132(Pt 9):2541-52
9. Monti MM, Vanhaudenhuyse A, Coleman MR, Boly M, Pickard JD, Tshibanda L, Owen AM, Laureys S. Wilful modulation of brain activity in disorders of consciousness. *N Engl J Med*. 2010 Feb 18;362(7):579-89.
10. Keong NC, Pena A, Price SJ, Czosnyka M, Czosnyka Z, DeVito EE, Housden CR, Sahakian BJ, Pickard JD. Diffusion tensor imaging profiles reveal specific neural tract distortion in normal pressure hydrocephalus. *PLoS One*. 2017 Aug 17;12(8):e0181624. doi: 10.1371/journal.pone.0181624. eCollection 2017. PMID:28817574

- Link to full publication list - see pubmed.
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#### **Collaborators in the study of CSF and related disorders**

Judith Allanson  
 Olivier Baledent  
 Martin Coleman (deceased)  
 Marek & Zofie Czosnyka  
 Elise Devito  
 Rocio Fernandez-Mendez  
 Mathew Garnett  
 Leslie Gelling  
 Nicholas Higgins  
 Peter Hutchinson  
 Jo Iddon  
 Alexis Joannides  
 Ian Johnston  
 Hazel Jones  
 Dong-Joo Kim  
 Afroditi Lalou  
 Andrew Lever  
 Nicole Keong  
 David Menon  
 Shahan Momjian  
 Martin Monti  
 Eva Nabbanja  
 Adrian Owen  
 Brian Owler  
 Alonso Pena  
 Katie Peterson  
 Stephen Price  
 Hugh Richards  
 Barbara Sahakian  
 Clare Salmond  
 George Savulich  
 Eric Schmidt  
 Piotr Smielewski  
 Emmanuel Stamatakis  
 Georgios Varsos  
 and many more

**Student/Fellowship Opportunities:** n/a as I am now 'retired'.