

CURRICULUM VITAE

Fenella Jane Kirkham

Nationality



DOB



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1 PERSONAL DETAILS:

Sex: Female
Date of birth: [REDACTED]
Place of birth: [REDACTED]
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Institute of Child Health
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SENIOR ACADEMIC AND CLINICAL POSTS:

Senior Lecturer in Paediatric Neurology, Institute of Child Health Consultant Paediatric Neurologist, Great Ormond Street Hospital	<i>June 1990-Nov 1999</i>
Senior Lecturer in Paediatric Neurology, Institute of Child Health (4 sessions) Consultant Paediatric Neurologist, Southampton General (7 sessions)	<i>Dec 1999 to Oct 2002</i>
Reader in Paediatric Neurology, Institute of Child Health (4 sessions) Honorary Reader in Neurology, University of Southampton	<i>Oct 2002 to Sept 2006</i>
Consultant Paediatric Neurologist, Southampton General (8 PAs)	<i>Jan 2005 to Feb 2007</i>
Professor of Paediatric Neurology, Institute of Child Health (6 PAs from March 2007)	<i>From Oct 2006</i>
Consultant Paediatric Neurologist, Southampton General (5 PAs from March 2007)	<i>From Mar 2007</i>
Visiting Associate Professor of Paediatric Neurology, Washington University School of Medicine, St Louis, MO, USA	<i>From Jan 2004</i>

2 EDUCATION AND QUALIFICATIONS:

EDUCATION

Girton College, Cambridge *1972-1975*

King's College Hospital, London *1975-1978*

ELECTIVE:

Medical College of Virginia, Richmond, Va., USA *1978*
Neurology and General Medicine

PROFESSIONAL QUALIFICATIONS:

BA (MA) in History and Philosophy of Science *1975*

MB BChir *1978*

MRCP *1982*

FRCP *1994*

FRCPCH *1997*

MD (University of Cambridge) *2006*

Cerebral haemodynamics in normal subjects and children in coma

PRIZES AND HONOURS:

Ronnie MacKeith prize, British Paediatric Neurology Association *1988*

Vera Down award, British Medical Association *1996*

Best Doctors in Europe *2000 renewed 2007*

Faculty of 1000 Medicine *2005*

Bronze award *2006*

3 PROFESSIONAL HISTORY:

King's College Hospital 31.01.79 London	House officer, Liver Unit	Dr R Williams	01.08.78
Royal Hants. County Hosp. Winchester	House Surgeon	Mr Moseley	01.02.79 31.07.79
Northwick Park Hospital	SHO Paediatrics (General, Neonates, Metabolic, Rheumatology)	Dr B Valman, Dr M Liberman Dr T Stacey Dr B Ansell	01.09.79 31.08.80
John Radcliffe Hosp. Oxford	SHO Neonatal Paediatrics	Prof. Tizard	01.11.80 30.04.81
Brompton Hospital London	SHO Paediatrics (Cardiology, Respiratory Medicine)	Dr E Shinebourne Dr J Warner	01.05.81 30.09.81
Guy's Hospital London	SHO Paediatrics (Nephrology, Casualty, Neurology)	Prof. Chantler Dr L Stimmler Dr B Neville	01.10.81 30.09.82
Guy's Hospital London	Research Fellow	Dr B Neville	01.10.82 30.09.85
Guy's Hospital London	Registrar in Paediatrics (General, Neonates, Neurology)	Prof. Robinson Dr R Robinson Dr L Stimmler	01.10.85 30.09.86
Chalfont Centre for Epilepsy	SHO Neurology	Dr SD Shorvon	01.11.86 31.01.87
National Hospital for Nervous Diseases	SHO Neurology	Dr CJ Earl Dr P Rudge Dr K Zilkha	01.02.87 31.07.87
National Hospital	Research Fellow	Dr SD Shorvon	14.08.87 30.09.87
Guy's Hospital	Senior Registrar	Dr BGR Neville	01.01.88 30.09.88
Guy's Hospital	Locum Consultant Paediatric Neurologist		01.10.88 31.12.88
Guy's Hospital	Senior Registrar	Dr BGR Neville	01.01.89 31.05.90

4 OTHER APPOINTMENTS AND AFFILIATIONS:

PROFESSIONAL BODIES

Royal College of Physicians (Membership 1982, Fellowship 1994)
Royal College of Paediatrics and Child Health (Founding Fellow 1997) (abstracts C1)
British Paediatric Association 1985-1997 (abstracts C2)
British Paediatric Neurology Association from 1988 (abstracts C2.1, C1)
European Society for Paediatric Neurology (Founder member 1997) (abstracts C1)
European Academy of Childhood Disability (Founder member 1989)
Paediatric Research Society from 1985 (abstracts C2.3)

COMMITTEE MEMBERSHIP

Near infrared spectroscopy and imaging of biological tissue. EC-Biomed. 1991 – 1997

Council of the British Paediatric Neurology Association January 2001-2004 with responsibility for Clinical Governance.

BPNA working party on development of a coma scale (Audit committee sub-group) 1994-99.

Working party on the development of 'Stroke in childhood: clinical guidelines for diagnosis, management and rehabilitation' 2002 (chaired by Dr Vijeya Ganesan). Royal College of Physicians Intercollegiate Paediatric Stroke Working Group.

http://www.rcplondon.ac.uk/pubs/books/childstroke/childstroke_guidelines.pdf

Member of Scientific Standards Subcommittee of the International Society for Thrombosis and Haemostasis 2001-2003

Paediatric representative on European Federation of Neurological Societies panel on Critical Care Neurology from 2000-2003

Towards the Establishment of Pediatric Stroke Trials (NIH meeting Dec 2004 from R13 funding to Dr Steve Pavlakis): organisation of the session on sickle cell disease (review at D1)

Member of the Paediatric Accident and Emergency Research Group.
The management of decreased conscious level in children - an evidence-based guideline.
www.nottingham.ac.uk/paediatric-guideline

American Heart Association Scientific Statement on Stroke in Childhood: writing committee from 2004 developed new guideline for the investigation and management of childhood stroke for publication in Stroke in 2007

American College of Chest Physicians (ACCP) Antithrombotic Guideline Panel: writing committee of the chapter on Antithrombotic Therapy in Children from 2005: developed new evidence-based guideline for the management of childhood stroke published in Chest in 2008

American Heart Association meetings: abstract review 2005-2008

International Paediatric Stroke Study. Chair of the Publications Committee 2006-

National Standards of Care in Adult Sickle Cell Disorder: Working party 2006-7

I M Balfour-Lynn, D J Field, P Gringras, B Hicks, E Jardine, R C Jones, A G Magee, R A Primhak, M P Samuels, N J Shaw, S Stevens, C Sullivan, J A Taylor, C Wallis on behalf of the Paediatric Section of the Home Oxygen Guideline Development Group of the BTS Standards of Care Committee. British Thoracic Society guidelines for home oxygen in children. *Thorax* 2009;64(Suppl 2):ii1-ii26; doi:10.1136/thx.2009.116020. Advisor on sickle cell disease

5 PEER REVIEW

Grants

National Institutes of Health, USA: comprehensive sickle cell centers
ERA-Net NEURON joint transnational call: "European Research Projects on Cerebrovascular Diseases "
Medical Research Council
Wellcome Trust
Action Research
British Heart Foundation
Meningitis Research Trust
The Encephalitis Trust
Child Health Research Trust
Children Nationwide
The Scottish Office
The PPP Foundation
The Mental Health Trust
Stanley Thomas Johnson Foundation
Thrasher Research Fund

Journals

New England Journal of Medicine
JAMA
Lancet
British Medical Journal
Blood
British Journal of Haematology
Stroke
Annals of Neurology
Neurology
Lancet Neurology
European Journal of Clinical Investigation
Pediatric Research
Pediatrics
Journal of Pediatrics
Archives of Diseases in Childhood
European Journal of Paediatrics
Acta Paediatrica
Pediatrics International
Intensive Care Medicine
Clinical Intensive Care
Journal of Neurology, Neurosurgery and Psychiatry
Journal of Neurology
Journal of Neuroimaging
Developmental Medicine and Child Neurology
European Journal of Paediatric Neurology
Journal of Child Neurology

Pediatric Neurology	
Neuropediatrics	
Future Neurology	
Thrombosis and Haemostasis	British Journal of Haemotology
Journal of Pediatric Hematology and Oncology	Blood
Annals of Tropical Paediatrics	Haematologica
Pediatric Cardiology	Journal of Thrombosis and Haemostasis
Pediatric Allergy and Immunology	
Medical and Biological Engineering and Computing	

6 GRANTS

Current as applicant

NIH-National Heart Lung and Blood Institute (USA) with Dr Michael deBaun and others (FJK is Chief Investigator for the London site). Asthma and nocturnal hypoxaemia in sickle cell disease. 2005-2015 (successful renewal 2010-2015 for grant awarded 2004). \$10,500,000 in total (approximately \$1,000,000 to London)

Stroke Association as co-applicant with Dr Finbar O'Callaghan (Bristol) and Dr Vijaya Ganesan (UCL). Project grant over 3 years 2007-2010 Outcome for Childhood Stroke in the South of England £150,000

Current as Collaborator:

RCPCH Heinz fellowship to Dr Nomazulu Dlamini Intracranial vasculopathy in children with Human Immunodeficiency Virus in South Africa £10,000.

Wellcome Trust to Dr Charles Newton 2003-2007 The causes and consequences of seizures associated with Plasmodium falciparum infection £1,400,000.

Welcome Trust to Dr Julie Makani 2003-2005 To determine the major causes of morbidity in a cohort of Tanzanian patients with sickle cell disease £250,000

In February 2005 and November 2006, I completed site visits to Kilifi, Kenya, where I was involved in training individuals in transcranial Doppler techniques for both research programmes. I also went out to Dar-es-Salaam to assist with data analysis in November 2007.

Non-current

Stroke Association as principal applicant with 7 others. Programme grant Prevention of neurological morbidity, including stroke, in sickle cell disease. £76,000. This randomised controlled trial of overnight continuous positive airways pressure/ oxygen supplementation in patients with sickle cell disease with a cognitive endpoint started at Kings College hospital in September 2006; the pilot phase closed out a year later and the data have been accepted for presentation at the American Thoracic Society in May 2008. We are currently applying for funding for the main phase.

NIH-National Institute for Neurological Diseases and Stroke (USA) to Dr Michael deBaun (FJK Chief Investigator for the London site), 09/30/03 – 11/30/07 “Silent Cerebral Infarct Multi-Center Clinical Trial”. One of 24 sites (3 outside the USA). Funded on a per patient basis (c.\$2000 for screening, c.\$2000 pre-randomisation, c.\$20,000 over 3 years for randomised patients). During the period that I was Chief investigator, Principal investigators in 4 London hospitals recruited 66 patients to the screening phase and randomised 15 patients

(currently fourth most active site). We are on track to randomise to blood transfusion or no treatment between 25 and 50 London patients over the next year and to follow them up for at least 3 years.

Wellcome Trust with Dr M de Haan (PI) and 3 others Equipment grant for event-related potentials 2002-2005. £175,651. In addition to work by the other grant holders, this grant allowed the accrual of data on event-related potentials in infants and children with sickle cell disease by Alexandra Hogan, one of my PhD students. Papers on the normal children have recently been published in *Developmental Science* and on the novel findings in sickle cell disease in *Brain*.

Association Française Hémiplégie Alternante as principal applicant 2004- Hypoxaemia and alternating hemiplegia. 8,500 euros.

Herman Kappelle Foundation to Dr K Braun, Utrecht and Dr F Kirkham 2004- For the initiation of the European Paediatric Stroke Registry website/news-group/facility/and data registry. 12,000 euros. The website is running in beta-phase and we are considering the submission of a grant for funding from the European Union (Community Action in the field of Public Health, FP7)

Child Neurology Society/Child Neurology Foundation with Dr Gabrielle deVeber (PI) and 9 others Towards the Establishment of Standards of Practice and the Initiation of Multi-Center, Multi-National Clinical Trials for Neonates and Children with Stroke. 2002-2005. \$75,000. Web-based entry for a registry of consenting patients in the USA and Europe has been established and patients from Great Ormond Street, Bristol and Southampton are being entered.

The British Academy with Dr Alexandra Hogan and 4 others 2006. £7500. Topped up with further £7500 from Gerald Kerkut fund. Behaviour in Bolivian infants living at altitude. The first paper from this study is in draft and DrHogan was recently awarded additional funds for the genetics.

Action Research with Professor Vargha Khadem and 3 others. Correlation of frontal lobe pathology and executive dysfunction in children with sickle cell disease. 2000-2002. £91,250. Alexandra Hogan's PhD stipend from 2000-2004 was paid from this grant. She recruited infants with sickle cell disease, as well as following up patients initially studied in 1991-3 and submitted several papers from this work (B) from her subsequent position as lecturer at the University of Southampton.

Hope and Research management committee of Southampton University with Dr Cathy Hill (PI), Dr Alexandra Hogan and 6 others An exploratory study of sleep disturbance and psychological functioning in children 2004. £20,000. This study, which finished in March 2005, has recruited 30 patients for sleep studies before and cognitive testing before and after adenotonsillectomy and the first paper was published in *Pediatrics* (B)

Wellcome Trust, with Professor Gadian and four others:
Studies of focal lesions in childhood epilepsy and in cerebral ischaemia - from biochemical and structural abnormalities to cognitive dysfunction. 1992-97. £2,110,401

Wellcome Trust, with Professor Gadian and three others:
Magnetic resonance investigations of brain pathophysiology and function in children with focal brain damage. 1994-97. £1,790,589

Wellcome Trust, with Professor Gadian and seven others:

Focal pathophysiology and its functional consequences in children with brain disease. 1999-2005. £1,432,606. MR perfusion studies of patients with sickle cell disease have improved our understanding of neurological symptomatology in this condition and a number of papers in high impact journals (B) have been published by our group.

Stroke Association with Dr A Williams (Birmingham). The epidemiology of childhood stroke (BPSU). The Stroke Association, 2001-2002. £9999. We have submitted abstracts to several meetings on the results and have written the first draft of the first paper.

Janssen-Cilag. £12,000 to complete dataset on patients with Lennox-Gastaut syndrome and to pilot the Partners In Epilepsy programme. The dataset has been entered and cleaned and a paper is in draft.

ASDA. Funding for a Charge Coupled Device Near Infrared Spectroscopy camera. £30,000.

British Heart Foundation. Coma after cardiac arrest in childhood. 1983-6. £41,000.

British Heart Foundation, as principal applicant with Professor Edwards & Mr Elliott: Non-invasive continuous monitoring of cerebral haemodynamics and metabolism during open-heart surgery in children using near-infrared spectroscopy. (Dr Fallon 1992-94). £185,262

British Heart Foundation, as principal applicant with Dr Fallon, Prof Edwards & Mr Elliott. Non invasive continuous monitoring of cerebral haemodynamics and metabolism during open-heart surgery in children using near infrared spectroscopy. (Dr Chow 1995-96). £71,000

British Heart Foundation, as principal applicant with Dr Chow, Prof Edwards & Mr Elliott Near infrared spectroscopy during cardiopulmonary bypass (Dr Chow 1996-97). £75,000

Wellcome Trust, with Dr K Marsh & Prof AD Edwards. Funding for near infrared spectroscopy unit for research in cerebral malaria. £18,000

British Medical Association Vera Down Award, £10,000, 1996-8.

Joint Research Board. Near infrared spectroscopy in children in coma 1991. £5000

Handicapped Children's Aid Association. Funding for a transcranial Doppler and a cerebral function analysing monitor. 1990. £23,721.

7 INVITED TALKS AND SESSIONS CHAIRED

International Child Neurology Association (ICNA) and the Asia Oceanian Child Neurology Association (AOCNA) (joint) Brisbane, Australia between 28 May-2 June 2012. 1. Treatment of childhood cerebrovascular disease: Acute therapies. 2. Diagnosis of coma

Sickle Cell in Focus 2011, King's College, 17th June 2011. Stroke and cerebrovascular complications

Cardiac arrest and post-resuscitation syndrome, Acute Movement Disorders, Acute spinal cord syndromes. European Paediatric Neurology Society, Cavtat, Croatia, May 2011

Management of stroke. Padua, Italy, May 2011

The Neurology of sickle cell disease. Visiting Professor, Drexel University, Philadelphia, November 2010

Cerebrovascular complications of sickle cell disease. Hospital Medicine, London, November 2010

Venous sinus thrombosis. Child Neurology Society, October 13-16, 2010, Rhode Island Convention Center & Westin Providence, Providence, Rhode Island

UK neurointerventional group Study day, Paddington Hilton. London, 22nd October 2010.

Sickle Cell Disease and the CNS. Masterclass in Paediatric Neurology, Bristol, September 30th 2010.

Cerebrovascular complications in sickle cell disease. Sickle Cell in Focus 2010 - Kings College London, June 17th 2010

Live topics in sickle cell disease. Paediatric cerebrovascular disease. UCL Institute of Child Health, July 22nd 2010.

Clinical and radiological recurrence after childhood arterial ischemic stroke. International Child Neurology Conference, Egypt, May 2010. Chairing free presentations

Role of Thrombophilia and Controversies in Antithrombotic for Stroke Prevention in CHD. Invited speaker, 25th Feb 2010, International Stroke Congress of the American Heart Association

Coma in Childhood. Anaemia and Stroke: Moderator and Invited speaker, European Paediatric Neurology Society, Harrogate, September 2009.

Paediatric stroke and its treatment. The 10th International Conference of the Baltic Child Neurology Association May 6-9, 2009 Tartu, Estonia

Moderator for the symposium "Stroke in Sickle Cell Disease: Recent Successes and Ongoing Challenges" February 20, 2008. International Stroke Congress of the American Heart Association, New Orleans

Cerebral venous sinus thrombosis: causes. February 21, 2008. Invited speaker, International Stroke Congress of the American Heart Association, New Orleans

Coma: the black box. Festschrift for Professor Brian Neville, UCL Institute of Child Health, February 22nd 2008.

Stroke in Childhood, European Academy for Childhood Disability, Zagreb, Croatia, June 7th 2008

European Stroke Conference course on Paediatric Stroke 13th May 2008, Nice, France.

European Paediatric Neurology Society course on Acute neurology and cerebrovascular disorders, 13-14th May 2008 in Warsaw, Poland. 1/ Neonatal and pediatric stroke and 2/ Migraine and alternating hemiplegia.

Chair for the symposium on Childhood stroke. 7th Congress of the European Pediatric Neurology Society (EPNS), 26-29 September 2007, Kusadasi (near Izmir), Turkey.

Hypoxia in Sickle Cell Disease Association of Respiratory Therapists and Physiologists Conference, 14-16 February 2008, Hinckley, Leics

Prevention of morbidity in sickle cell disease: pilot phase. Plenary presentation, Stroke Forum, Harrogate, 6th Dec 2007.

Arterial ischaemic stroke in children (main topic) b. Sensory depression and coma in children (emergency procedures about diagnostic and treatment). Annual meeting Spanish Paediatric Society (XX Curso de Avances en Neuropediatria), Barcelona 8-9 November 2007.

Investigation and Management of ischaemia induced epilepsy in children. ILAE International League Against Epilepsy, Southampton, Oct 10th – 12th 2007

Stroke in children. Update on Sickle Cell Disease, St Thomas' hospital, October 3rd 2007; also invited for 2008

Neurological complications of sickle cell disease. Madrid, 17th September 2007

Paediatric Stroke. International Symposium on Thrombosis and Haemostasis, Geneva, July 11th 2007.

The Glasgow Coma Score – what it means and what it doesn't mean B. Workshop on Stroke C. Panel debate: "LP or not LP? That is the question" Mid-Trent Paediatric Coma Study Day, Post Graduate Medical Education Centre, Queen's Medical Centre Campus, Nottingham 22nd March 2007

a. Arterial Stroke in Childhood. b. Other stroke syndromes c. Coma in childhood. Argentinian Paediatric Neurology Association, Buenos Aires, November 2006.

Overt strokes in Sickle Cell Disease: clinical manifestation and influence of O₂ saturation Vasculopathie cérébrale et drépanocytose: Actualités en 2006. Lundi 3 juillet 2006, Paris

Childhood Stroke: Recurrence and Preventative Treatments, in session "Ischemic Stroke in Infants and Children: Updates from the Field", Monday, June 12, 2006, 10th International Child Neurology Congress, Montréal, Canada

The CNS and Sickle Cell Disease, 29th Annual National Sickle Cell Disease Program Meeting, April 2006, Memphis, TN, USA (**Roland B. Scott Plenary Lecture**)

An update on developments in diagnosis and care of sickle patients with cerebrovascular disease: The era of clinical trials. UK forum on haemoglobinopathies, Birmingham, 16 November 2005.

Cerebral-vascular lesions in systemic diseases. Portuguese-Spanish neuropaediatric meeting October 13-15 2005.

Michael DeBaun, Bob Strunk, Michael Province, Ping An, Anne Bowcock, Fenella Kirkham, John Warner, Susan Redline. Asthma and nocturnal hypoxemia in sickle cell disease. Annual Sickle Cell Disease meetings, Bethesda, Maryland, September 2005. Abstract at www.nhlbi.nih.gov/meetings/workshops/asc05.pdf

Phenotype of childhood stroke, with specific reference to sickle cell disease. Meeting on Childhood Hemiplegia (stroke), Novartis Foundation, April 11th-12th 2005

Through the other end of the telescope: Stroke in Children (Diagnosis, Epidemiology, Risk Factors and Outcome). 3rd International Symposium on New Horizons in Pediatric Neurology/Neurosurgery in honor of Fred Epstein, Eilat, Israel, March 6-10, 2005

Stroke. Feschrift for Dr Stuart Green, Birmingham, December 4th 2004.

Stroke in childhood. Society for the Study of Inborn Errors of Metabolism, Amsterdam, Sept 2004.

Stroke in sickle cell disease. World Stroke Congress, Vancouver, Canada, 23rd June 2004 (abstract *Stroke* 2004; 35: E176).

Diagnosis and treatment of stroke in children with sickle cell disease. Association for Research in Infant and Child Development. London, May 14th 2004.

Hypoxaemia and the complications of sickle cell disease. UK forum on haemoglobinopathies, London, May 13th 2004.

Symposium on Childhood Stroke (Overview, Sinovenous Thrombosis, Metabolic Stroke), University of Malaya Medical Centre, Kuala Lumpur, 16th-17th June 2004.

An overview of childhood cerebrovascular disease and stroke. Plenary session, Malaysia Society of Neurosciences. Kuching, Sarawak, 19th June 2004

Arterial ischaemic stroke in childhood' Parallel session, Malaysia Society of Neurosciences. Kuching, Sarawak, 19th June 2004.

Acute treatment and secondary prevention of ischemic stroke. Utrecht, Netherlands, February 13th 2004.

Risk factors for Childhood stroke. American Stroke Association, San Diego, February 2004

Diagnosis, investigation and initiation of treatment in childhood epilepsy. National conference on Epilepsy-Current Developments, York, September 2003.

Aetiology and natural history of stroke in childhood. European Paediatric Neurology Society, Taormina, Italy, September 2003. (Abstract *Eur J Paediatr Neurol* 2003; 7:263)

Neurology of congenital heart disease. British Cardiac Society, April 2003.

Clinical presentation and evolution of stroke in children. 7th Congress of the Société Européenne de Neurologie Pédiatrique. Paris, France, December 2nd 2002. (Abstract *Riv Neurol*; 36: (supp) 474-5; 2002)

Recurrence and Outcome in Childhood Stroke. Presidential symposium, Child Neurology Society, Washington, DC, October 2002.

Monitoring in Paediatric Intensive Care. EuroNeuro 2002, Munich, September 2002 (Multidisciplinary meeting involving basic scientists and clinicians).

Non-traumatic coma. Growing points in Paediatrics. Cambridge, July 2002.

Coagulation abnormalities and stroke in sickle cell disease. Scientific Standards Committee, International Society for Thrombosis and Hemostasis, Boston, July 2002 (Co-chair)

Acute treatment of Stroke. Symposium on Acute Paediatric Neurology, Glasgow, April 2002.

Non-traumatic coma / Stroke in childhood. Thessaloniki, Greece, March 2002

MR imaging in childhood stroke. European Society for Magnetic Resonance in Paediatrics. London, March 2002 (abstract *Child's Nervous System* 2002; 18: 92).

Neurological investigations and interventions in children with sickle cell disease. Can we prevent stroke? UK forum on haemoglobinopathies, Leicester, November 2001.

Stroke: diagnostic algorithm. European Society for Paediatric Neurology breakfast seminar, Baden-Baden, September 2001.

Prothrombotic abnormalities in childhood stroke. Scientific Standards Committee, International Thrombosis and Haemostasis Society, Paris, July 2001

Cerebral malaria. World Congress of Neurology. London, June 19th 2001

Recurrence and outcome in stroke. Neurology Grand Rounds, Hospital for Sick Children, Toronto, May 2001

The Neurology of sickle cell disease. Pediatric Grand Rounds, Hospital for Sick Children, Toronto, May 2001

Coma in childhood. Portuguese paediatric society. Porto, May 2001

Treatable neurology in children with learning disabilities. BACCH, Salisbury, November 2000.

Recurrence and outcome of childhood stroke. Workshop on childhood stroke. National Institutes of Health, Bethesda, Maryland, September 2000. I also co-chaired the session on Future Developments.

Stroke in early life. South East Neurological Association, Southampton, May 2000.

Cerebral complications of sickle cell disease. Sickle 2000. London, 10th March 2000.

Stroke in Childhood. Société Française Neuro-Vasculaire. Paris, France, December 10th 1999.

Risk factors and prevention of neurological complications after cardiac surgery in children. Second International Conference on the Pathophysiology of cardiopulmonary bypass. Aachen, Germany, December 1999. (Abstract in *Crit Care* 2000; 4 (Suppl B): L5; also on www on Biomed Central)

Cerebrovascular disease and stroke in childhood: report from the London satellite symposium. International Child Neurology Association, Ljubjana, Slovenia, September 1998 (chapter in *New Developments in Child Neurology*, A15)

Aetiology of Stroke, Child Neurology Society, Phoenix, Arizona, USA. October 1997 (transcript in *Neurology Reviews*, E4).

Neurological problems associated with cardiac disease in childhood. Cardiology in the Young, London, April 1997.

The Neurological complications of cardiac surgery. First meeting of the Royal College of Paediatrics and Child Health, April 16th 1997.

Epilepsy in the mentally retarded patient. Copenhagen, March 1997.

Stroke in childhood. Symposium for Dr Wilson's retirement, November 1996.

Panel discussion on protocols for management of Epilepsy. Joint meeting between The Royal Society of Medicine section of Paediatrics and the American Academy of Pediatrics. London, July 1996.

Coma in childhood, Düsseldorf, Germany, June 1995.

Febrile seizures. 14th London Forum for General Practitioners, Royal Society of Medicine, London, September 1994.

Malignant syndromes of childhood epilepsy. Institute of Neurology (Glaxo series), February 1994.

Cerebral haemodynamics during cardiopulmonary bypass in children monitored using near infrared spectroscopy. Neurohumoral effects of profound hypothermia in infant surgery, London, March 1993.

Management of coma in Paediatrics. Hospital San Joao, Porto, Portugal, November 24th 1992.

Non-traumatic coma. Institute of Neurology (Sandoz series), June 1991.

Acute Neurology. Royal Society of Medicine Joint Meetings of the Sections of Paediatrics and Neurology and the American Paediatric Society, London, April 1991.

Management of raised intracranial pressure in children. South East Neurological Association, Guy's Hospital, November 1989.

High-level language disorders-a medical perspective. AFASIC high-level language disorders workshop, 21st October 1989.

Neurological Intensive Care. Congress of the European Federation of Child Neurology Societies, Prague, June 26th 1989.

The Neurologist in Intensive Care. Paediatrics '88, Birmingham, September 20th 1988.

Cerebral perfusion in the unconscious child. Paediatric Intensive Care Society, Southampton General Hospital, June 24th 1988.

Post-neonatal encephalopathies. Symposium on intracranial pressure and cerebral blood flow, Edinburgh, 23rd October 1987.

Advantages of intensive monitoring and aggressive management of the unconscious child. Association of British Neurologists, April 1987.

The natural history of coma after cardiac arrest in childhood. British Heart Foundation symposium on Paediatric Cardiology, London, 6th June 1986.

Hypoxic-Ischaemic Encephalopathy in Childhood. Perspectives in Paediatric Neurology, Newcastle, May 3rd 1985.

The Use of Pulsed Doppler Ultrasound to measure MCA velocity in the unconscious child. Paediatric Topics, Guy's Hospital, February 1985.

CONFERENCES ORGANISED

1. 5th July 2006. Trials and Tribulations in Sickle Cell Disease, University College London (Institute of Child Health). Meeting of haematologists and other stakeholders in randomised controlled trials in sickle cell disease.

2. 9-10th April 2005. Meeting of International Pediatric Stroke Society, Institute of Child Health

3. July 2003. Second international conference on cerebrovascular disease and stroke in childhood. Institute of Child Health. Satellite symposium of the International Society for Thrombosis and Hemostasis. Jointly with Dr Vijeya Ganesan.

4. September 1998. First international conference on cerebrovascular disease and stroke in childhood. Institute of Child Health. Satellite symposium of the International Child Neurology Association Congress

5. March 1990. International meeting on coma in childhood, Trinity Hall, Cambridge.

8 ACADEMIC SUPERVISION:

PhD

Dr Alexandra Hogan. University of London October 2003. (co-supervisor with Prof Vargha Khadem).

Young Investigator's Prize, British Society of Haematology May 2003

Lecturer in Developmental Cognitive Neuroscience, Southampton University 2004-2007; obtained a place to read Medicine at Queen Marys College from Oct 2007 (99th centile); Neuroscience Investigator of Year 2010, British Association for Cognitive Neuroscience

Dr Mara Prengler. University of London March 2005 (as responsible supervisor; Dr A Connelly co-supervisor).

Current position: Post-doctoral fellow, Institute of Child Health

Johanna Dingle-Gavlak. Registered November 2007

Dr Nomazulu Dlamini. Registered January 2009

Dr Sara Trompter. Registered May 2009

MD

1. Dr Charles Newton (with Dr K Marsh; awarded by the University of Cape Town, 1995). Ronnie MacKeith prize of the British Paediatric Neurology Association 1997. Currently Professor of Paediatric Neurology (Senior Wellcome Fellowship), Institute of Child Health

2. Dr Vijeya Ganesan (awarded by the University of London, 1999). Ronnie MacKeith Prize of the British Paediatric Neurology Association 1999. Currently Senior Lecturer in Paediatric Neurology, Institute of Child Health

3. Dr Gabriel Chow (awarded by the University of Cambridge, 2001, Ralph Noble prize for the best clinical MD). Currently Consultant Paediatric Neurologist, Nottingham. Since Gabriel left the Institute of Child Health, she has explored new areas related to the original field of her research e.g. the neurological outcome for children who have undergone extracorporeal membrane oxygenation, and is planning to continue to do so.

4. Dr Jane Crawley (with Dr K Marsh; awarded by the University of London 2001). Currently with the 'Roll back Malaria' project, World Health Organisation.

5. Dr Bridget Callaghan. University of London 2003-2009.

MSc

2003-2004 Krishna Kotecha. Project for MSc in Paediatrics. Distinction.

Co-supervisor with Dr Dawn Saunders. The data have been presented (C) and the draft of the first manuscript is in circulation

1998-1999 Anne Gordon. Project for MSc in Health Economics.

Current position: Research Fellow in Paediatric Neurology, Institute of Child Health

Co-supervisor with Dr A Towell . The data were published (B).

BSc

Temitayo Kehn-Alafun 2004-2005. Intercalated BSc, University of Southampton.

Adaptation to hypoxia in children with sickle cell disease. Tayo presented her study to the UK forum on haemoglobinopathies, Birmingham, Nov 17th 2004, obtained ethical permission, recruited infants and children in London, obtained an upper second for her project and presented her data at the British Paediatric Neurology Association meeting in Bristol in January 2006 (published abstract at C1). An extension for the ethics of the project is currently under consideration.

Elizabeth Prescott undertook a project looking at occupational therapy services available for children who had had a stroke for her BSc in Occupational Therapy, obtaining a First for her thesis and a 2:1 overall. She is currently working as an Occupational Therapist in Leeds.

I supervised Jonathan Gillard for a BSc project on the correlation between the anatomy and the clinical landmarks of the middle cerebral artery when insonated using transcranial pulsed Doppler ultrasound. He obtained a First, published the data (B80) and is currently a Senior Lecturer in Radiological Sciences working with Professor Pickard in Cambridge.

Medical student elective projects

In collaboration with Professor Marsh and Dr Newton in Kilifi, I have supervised the following projects:

1. Tolulope Ajala-Agbo 2004: *Wellcome Student Elective Prize*. Adaptation to hypoxia in Kenyan children with sickle cell disease. Tolu has excelled in this project, obtaining ethical clearance last year and recruiting 120 Kenyan children with sickle cell disease for transcranial Doppler ultrasound and overnight sleep studies. Having given her presentation (A) and submitted her written project (A/B) during May 2005, she presented her work at the British Paediatric Neurology Association meeting in Bristol in January 2006 and at the British Society for Haematology in Edinburgh in

April 2006 and in Bournemouth in May 2007 (published abstracts at C1). Having obtained her MB BS, she is currently writing up her work for submission as papers as well as applying to study and work in the USA.

2. Victoria Brown 1994. Coma score for children with cerebral malaria
3. Lisa Neville 1991 Cerebral haemodynamics using transcranial Doppler

In addition, in collaboration with Mr Peter Hodgkins of the Southampton Eye Hospital, I supervised Kate O'Hare 4th year student, University of Southampton from 2002-2003, on a project looking at visual evoked potentials and optic disc ultrasound in benign intracranial hypertension. Manuscripts from this work are in submission.

OVERSEAS VISITORS

1. Dr Jose Aparicio, Opporto, Portugal 1992-1994 (co-author of a paper with Dr Fallon (B), subsequent PhD on Paediatric Head injury (in Portuguese), published abstract C1; papers in preparation)
2. Dr Kristina Müller, Düsseldorf, Germany. 1992-3.
3. Dr Esther Cardo, Barcelona, Spain 1993-96 (first author on 2 subsequent case reports (B); subsequent MD on the role of hyperhomocysteinaemia in childhood stroke (in Spanish)) Spanish member of the European Paediatric Stroke Registry working group
4. Dr Rita Mastroanni, Thessaloniki, Greece 1991-1993 (abstract on EEG after cardiopulmonary bypass (C2.3), subsequent work on aetiology of mental retardation)
5. Dr Roziah Muridan, Kuala Lumpur April to July 1999 (Radiologist who undertook work on children with sickle cell disease)
6. Dr Dimitrios Zaferiou, Thessaloniki, Greece 2000 (papers at B; ongoing collaboration on cerebrovascular disease, benign intracranial hypertension and the neurological complications of sickle cell disease and β -thalassaemia)

EXAMINING

Postgraduate examining

I have been external examiner for the following higher degrees:

University of Tallinn, Estonia

Dr R Laugesaar's PhD on epidemiology of childhood stroke (supervised by Dr Tina Talvik)

University of Liverpool

Dr MacPherson Mallewa's PhD on viral infections of the central nervous system in Malawian children (supervised by Prof Tom Solomon)

University of Edinburgh

Dr Milly Lo's PhD on prediction of outcome in head injury (supervised by Prof Robert Minns)

Dr Dale Goh's MD on transcranial Doppler sonography (supervised by Dr Robert Minns)

University of Newcastle

Dr Wong's PhD on the epidemiology of non-traumatic coma (supervised by Prof Janet Eyre)

University of London

1. Dr Sanjay Sisodya's PhD on the MRI diagnosis of cortical malformations in patients with Epilepsy (supervised by Professor Simon Shorvon)
2. Elizabeth Neal's PhD on the ketogenic diet (supervised by Prof Helen Cross)
3. Dr Oliver Cockerell's MD on the epidemiology of epilepsy in adults (supervised by Professor Simon Shorvon)

University of Toronto

Mahendra Moharir's MSc on recanalisation after cerebral venous sinus thrombosis in neonates (supervised by Dr Gabrielle DeVeber)

University of Southampton

Dr Edward Hickey's MD on neurological complications of cardiopulmonary bypass (supervised by Mr Stephen Langley and Dr Ross Ungerleider)

Undergraduate examining. I have been involved on a regular basis in the examining of clinical medical students and this role expanded on moving to Southampton.

University of Southampton

Rachel Parker's BSc on sleep in cerebral palsy (supervised by Dr Cathy Hill)

9 TEACHING:

I enjoy teaching and have acquired a large collection of slides, videos and other material, which has been used extensively in the courses run at the Institute of Child Health. I have worked hard to improve my technique, especially using interactive methods, and usually have a rating of at least 4/5 for all aspects of my presentations.

Practical Paediatric Neurology. Annual Course, Institute of Child Health. Course Director 1994-1999. I took on responsibility for *Neurological Basis of Childhood Disability* (5 days per year) as Course Director from 1990-1993, but realised that the rather didactic teaching methods were not meeting the needs of the delegates. I had recently received some training in interactive teaching (E5) and I therefore put together a video of normal neurological and developmental examination (of my son). In addition, I used my own material and some additional slides and video from the Great Ormond Street library to put together vignettes of the clinical features of a number of common and/or treatable conditions, together with written handouts emphasising the management issues. I disseminated this material amongst the other teachers and encouraged them to also develop an interactive teaching style. The feedback from the participants suggested that the improvements had had an immediate effect and the number of delegates increased from 40 to 120 thereafter. We continued to innovate and improve, expanding the course to 7 days with Dr Helen Cross taking over a 2-day module devoted to Epilepsy after she was appointed as a Consultant. The handouts, most of which I drafted initially, have expanded with additional input from my colleagues to fill an A4 folder. When I moved to Southampton, I gave up the Course Directorship, but continue to teach 'Coma' and had scores of 4.2-4.5 out of 5 across the board for this module over the last few years. I have now published most of the slides in the Great Ormond Street Atlas (A3.1) and some of the video for an undergraduate teaching CD on Neurological Disability in collaboration with Dr Cathy Hill, Senior Lecturer in Community Paediatrics in Southampton (E2). As a result of amassing the material for this course, I have written chapters on Neurological Investigations, Epilepsy, Brain tumours, Stroke, and Paediatric Neurointensive care (A3). In addition, the material from the Acute Neurology day, which I taught, is now available as reviews on Complications of Paediatric Cardiac surgery, Sickle Cell Disease, Stroke and Coma (D), mainly in *Arch Dis Child*, accessible in the developing World.

Advanced Paediatric Neurology. Stroke in childhood, July 1996. This course allowed my team (Dr Ganesan, Dr Chow) to develop their lecturing style and was well-received by the UK and European participants. In retrospect, it was fundamental to the development of the international collaboration, as we invited Dr Gabrielle deVeber, from the Hospital for Sick Children in Toronto, as the guest speaker and she has interacted with us continuously ever since.

Postgraduate teaching on Courses run by the Institute of Child Health e.g. MRCP.

External postgraduate teaching. I am frequently asked to speak about paediatric neurological subjects, including epilepsy, coma, stroke and sickle cell disease at centres throughout the United Kingdom (e.g. Brighton, Birmingham, Stoke-on-Trent, Nottingham, Edinburgh, Newcastle, Liverpool, St Mary's, Hammersmith, Whipps Cross, Royal London). I also undertake some general teaching e.g. for MRCP (Whipps Cross and Lewisham courses and informally for Great Ormond Street and Southampton candidates).

Undergraduate teaching and examining. I have been involved on a regular basis in the teaching of clinical medical students and this role expanded on moving to Southampton (see below), although activities have recently been curtailed because of the pressures on the clinical paediatric neurology service. From 1991-5, I organised the course and examinations and did some of the teaching on the paediatric neurology module of the BSc in Speech Sciences run by the National College of Speech Sciences.

*Teaching in Wessex from 2000 (Talks in **bold** used new material)*

Undergraduate

Personal tutor for 3 undergraduates

Third year Undergraduate Tutorial group 2000-2001

Fifth year Undergraduates by arrangement 2000-2002

Clinical Foundation Course for Undergraduates commencing clinical studies 2000

Examining of fifth year Undergraduates 3 per year

Postgraduate

MRCP Part 2 teaching at Southampton on request. Clinical cases and videos.

Epilepsy. Worthing April 2000

Part 1 MRCP. Salisbury, April 2000

Stroke in Childhood. Wessex Paediatric Club, Southampton, April 2000.

Epilepsy Cases. Portsmouth, May 2000.

Epilepsy Cases. Poole, September 2000.

Epilepsy in adolescence. Wessex Paediatric Club, Southampton, November 2000.

Neurology in the Community. Southampton Community Paediatricians. March 2001.

Neurological and Motor Problems. Child Health Surveillance. Mid Wessex Courses, Winchester, April 2001.

Epilepsy Cases. Dorchester, May 2001

Epilepsy in adolescence. Paediatric Neurology Study Day, Bath, May 2001.

Hydrocephalus Audit. With Jane Harley at Neurosurgical meeting, September 2001

Recent developments in cerebrovascular conditions in children. MSc in Childhood Disability. January 2002

Paediatric Intensive Care Society Study Day, Southampton, April 2002.

Epilepsy. Portsmouth Community Paediatricians, June 2002.

Neonatal seizures, Portsmouth, November 2002

Horner's syndrome, Ophthalmology study day, November 2003.

Epilepsy and Children, Epilepsy Action Parent support group, Bournemouth, Nov 2003

10 ENABLING ACTIVITY:

Local

Neurosciences Unit

- Chair Neuroscience research meetings
- Supervision and informal advice to clinical fellows in the department

Hospital

- Responsible for junior staff at Great Ormond Street hospital (1991-1994) and at Southampton General hospital

National

National Health Service

- Member of committees preparing published guidelines for Reye's syndrome, non-traumatic coma, Stroke and Sickle Cell Disease (see under appointments and affiliations)
1. BPNA working party on development of a coma scale (Audit committee sub-group) 1994-99 (review in press *Developmental Medicine and Child Neurology*).
 2. Workshop On Reye's Syndrome And Reye-Like Inherited Metabolic disorders, March 2002 www.reyessyndrome.co.uk/Docs/Health%20proffesional%20Workshop%202004.pdf
 3. Royal College of Physicians Intercollegiate Stroke Working party on the development of Paediatric stroke guidelines from 2002 (chaired by Dr Vijeya Ganesan). Stroke in childhood: clinical guidelines for diagnosis, management and rehabilitation www.rcplondon.ac.uk/pubs/books/childstroke/childstroke_guidelines.pdf
 4. Member of the Paediatric Accident and Emergency Research Group. The management of decreased conscious level in children - an evidence-based guideline. www.nottingham.ac.uk/paediatric-guideline
 - Development of a network of haematologists and paediatricians across the United Kingdom able to undertake randomised controlled clinical trials in sickle cell disease
 5. Working party (Chair Dr Ade Olujohungbe) developing National Standards of Care in Adult Sickle Cell Disorder (acute and chronic neurological problems)

British Paediatric Neurology Association

Elected to committee 2001-2004; undertook survey of practice in non-traumatic coma when responsible for Clinical Governance, which led to the development of the committee producing Delphi-based guidelines in October 2005 (see under appointments and affiliations)

International

- Member of Scientific Standards Subcommittee of the International Society for Thrombosis and Haemostasis 2001-2003
- Paediatric representative on European Federation of Neurological Societies panel on Critical Care Neurology from 2000
- Towards the Establishment of Pediatric Stroke Trials (NIH meeting Dec 2004 from R13 funding to Dr Steve Pavlakis): organisation of the session on sickle cell disease (review at D)

- American Heart Association Scientific Statement on Stroke in Childhood: writing committee from 2004; manuscript to be published in *Stroke* in September 2008
- American College of Chest Physicians (ACCP) Antithrombotic Guideline Panel: writing committee of the chapter on Antithrombotic Therapy in Children from 2005; manuscript published in *Chest*
- Development of the European network of paediatric neurologists (Kees Braun, University of Utrecht; Stephane Chabrier, St Etienne; Ronald Strater, Münster) and haematologists (Ulrike Nowak-Gottl, Munster; Francoise Bernaudin, Creteil) forming collaborative links with the North American network of neurologists (Gabrielle DeVeber, Toronto; Steve Pavlakis, New York) and haematologists (Michael DeBaun, St Louis; Norma Lerner, Rochester) as the basis for collaborative studies and grants for randomised controlled trials

11 RESEARCH ACTIVITY:

I have had a longstanding interest in the detection and prevention of brain damage in acutely sick children. Whilst at Guy's Hospital, I initiated a research project on the management of the unconscious child, looking particularly at the prediction of outcome and the prevention of secondary deterioration. From this, I became interested in cerebral ischaemia and in methods of deciding whether or not cerebral blood flow was adequate. After an exhaustive literature review of the latter topic, I realised that the then newly described technique of transcranial Doppler ultrasound was the most promising methodology and I initiated a collaboration with Dr Soundrie Padayachee and Professor Ray Gosling in work validating the technique (papers at B). I went on to obtain grants from the British Heart Foundation to study initially the monitoring of cerebral perfusion and function in the unconscious child (1983-6) (papers at B) and, after my arrival at the Institute of Child Health, to study methods of ensuring adequate cerebral perfusion during cardiopulmonary bypass (1991-7) (papers at B). Having spent some time in Professor Simon Shorvon's Unit, I became interested in the role of seizures and status epilepticus in causing secondary deterioration after acute insults and continue to publish in this area in papers (B), abstracts (C.1) and chapters (A.3). The development of techniques for imaging and monitoring cerebral perfusion and for documenting seizures have allowed insights into the pathogenesis of secondary deterioration after brain insults and should lead to the development of collaborative controlled trials, such as that randomising children with head injury to surgical decompression or medical management (SUDEN RCT: Mr Patrick Mitchell in Newcastle; Drs Peter Wilson and Alexandra Hogan and myself in Southampton).

More recently, I have developed an interest in focal brain ischaemia in children, and in particular its early diagnosis using magnetic resonance techniques, including spectroscopy, diffusion and perfusion and voxel-based morphometry (papers at B). I have been a co-applicant on three successful Wellcome Trust grants for this work (in collaboration with Professor Gadian and colleagues). I am now focussing on the diagnosis and primary and secondary prevention of cerebrovascular disease and stroke and have published this work as papers (B) and abstracts (C1). I ran the first International conference on childhood stroke, and co-edited a journal supplement of peer-reviewed papers arising from it (A2.2).

Childhood Stroke

- I have had a longstanding interest in the detection and prevention of global and focal brain ischaemia in children, using techniques including Doppler ultrasound and magnetic resonance.
- With others, including Dr Vijeya Ganesan at UCL Institute of Child Health and Dr Finbar O'Callaghan of the University of Bristol, I have published cross-sectional and

longitudinal cohort and population-based data which have formed a substantial proportion of the basis for 3 sets of evidence-based guidelines

- 2 in the past 5 years:
 - American Stroke Association and
 - Chest
- and most recently a full-length book, co-edited with Dr Ganesan.
- I continue to collaborate with Dr Gabrielle deVeber of the University of Toronto, currently as Chief Investigator for the UK on the NIH funded study 'Vascular Infection in Paediatric Stroke' which is on the NIHR portfolio and the UKCNRC and will recruit patients from Southampton, Newcastle, Liverpool and Bristol.
- I obtained advice from UCL and am in discussion with Dr Ulrike Nowak-Göttl of the University of Berlin over European FP7 funding for further studies of the aetiology of childhood stroke.

Sickle cell disease

- Sickle cell disease is the commonest cause of childhood stroke and as up to 25% of those homozygous for the sickle gene are affected by the age of 45, primary prevention must be the goal in this group.
 - I have studied large cohorts of children with sickle cell disease and we continue to publish the data in high impact journals e.g. Blood.
 - Productive collaborations have been set up with investigators interested in sickle cell disease at the Royal London, Central Middlesex, St Marys, North Middlesex, St Thomas and Kings College hospitals
- I continue to collaborate with Professor David Gadian and Dr Chris Clark of the Radiology and Physics Unit at the Institute of Child Health on the imaging of focal cerebral ischaemia, specifically looking at imaging iron in sickle cell disease. As first co-applicant with Professor Charles Newton, who has now moved to the University of Oxford, I submitted 2 ultimately unsuccessful programme grants to the Wellcome Trust to undertake the majority of this work at Muhumbili University hospital in Dar-es-Salaam during 2010.
 - Formal and informal feedback suggests that the work is considered novel and potentially important but that pilot data would have to be published in peer-reviewed journals before a grant could be funded.
 - I have focussed efforts on the publications from the East London and Dar-es-Salaam cohorts and obtaining further pilot data using the 3T MRI at North Middlesex hospital.
 - I will reapply as PI to undertake the work in London and to continue the collaboration in East Africa with Prof Newton.
- ***Endothelial function in sickle cell disease (Wellcome Trust project grant to Sharon Cox based at LSHTM and Muhumbili University; FJK is co-PI)*** I initiated a collaboration with Professor Nigel Klein of the Infectious Diseases and Microbiology Unit at UCL Institute of Child Health on endothelial function in sickle cell disease and we collected pilot data flow-mediated (FMD) and nitroglycerine-mediated dilation of the brachial artery. I am now a co-PI on a project grant to Dr Sharon Cox looking in a randomised controlled trial at the effect of increasing arginine levels with supplementation and chloroquine on endothelial function measured by FMD.
- ***Natural History of Sickle Cell Disease in Africa*** I was a collaborator on Dr Julie Makani's Wellcome Trust Junior investigator award looking at risk factors for death and neurological complications in the Muhumbili University cohort in which has led to several publications high impact journals, e.g. Blood, as well as a PhD and the award of the Royal Society Pfizer award on October 18th 2011. I am a collaborator on Dr Makani's Wellcome Trust Intermediated fellowship, which will look at the effect of hydroxyurea in children with SCD resident in Africa in a controlled trial setting.

- ***Sleep Asthma cohort (NHLBI funded; NIHR portfolio: FJK is Chief Investigator for the London site)*** There is likely to be an important link between respiratory, cardiac and neurological function in sickle cell disease.
 - I am a co-principal investigator on a National Heart Lung and Blood Institute RFA (at least in part based on our work in the East London cohort) for a cohort study (The Sleep Asthma Cohort) looking at sleep-disordered breathing and morbidity in sickle cell disease, the funding for which was recently extended until 2014. From this work we have published
 - a study showing a link between overnight oxygen saturation and left ventricular mass and function from the first 41 children recruited in London
 - a study showing a link between doctor-diagnosed asthma and haemolysis (the latter is currently considered an important association with endothelial dysfunction and pulmonary hypertension).
 - a study by my 2009 MSc in Neuropsychology student, Matthew Hollocks showing a link between overnight oxygen saturation and executive function
 - We are currently submitting further manuscripts, including a study by another 2009 MSc in Neuropsychology student, Tessa Kok, on the link between overnight oxygen saturation and memory consolidation, as well as a paper on which I am senior author on the polysomnography.
 - We are following up the 92 children recruited across 3 London sites (North Middlesex, St Mary's and St Thomas'), in the Portex Unit and Sleep Laboratory at the Institute of Child Health in collaboration with Professors Janet Stocks, Nigel Klein, Irene Roberts (Imperial), and John Warner (Imperial).
 - We have an opportunity to apply for funding for 2 ancillary studies
 - Neuropsychological function in relation to sleep in the London cohort for which the grant is written (NHLBI)
 - Cardiovascular function in relation to sleep in the London cohort (?British Heart Foundation)
 - In the light of increasing evidence for a link between overnight haemoglobin oxygen desaturation and complications of sickle cell disease, originally documented in the East London cohort, I will be applying with Dr DeBaun for NHLBI funding for funding for a randomised controlled trial of overnight respiratory support
- ***Patent foramen ovale and stroke in sickle cell disease (PFAST)*** I am the Chief Investigator for the UK on Dr Michael Dowling's study funded by the Doris Duke Foundation (NIHR portfolio). We hope to study patients at Great Ormond Street as well as at the Evelina Children's hospital at St Thomas'
- ***Overnight respiratory support for patients with sickle cell disease*** I was the principal applicant on a programme grant awarded by the Stroke Association to undertake a randomised trial of autoCPAP/oxygen supplementation for the prevention of CNS events in sickle cell disease (POMS); the pilot phase closed in June 2007 and the results were published in 2009. I am making a preliminary application to the HTA in October 2011 with the Southampton RDS for funding for a larger trial in all ages.
- ***Silent Infarct Transfusion trial*** I was the chief investigator for the UK site from 2004-2007 and learnt a lot about the funding, ethics and management of randomised trials from this. I remain the senior neurologist and am a co-author on a manuscript in press in Blood
- ***Neuro-Heme consortium*** I have been part of this USA/UK collaboration since its inception in 2001 and am a co-author on a manuscript published in Blood in 2011

- **Genomics** I have been invited to participate in the meeting "Genomic Opportunities for Studying Sickle Cell Disease", December 8-9, 2011 in San Diego, which is likely to lead to a collaboration between the USA, UK (Sanger) and Tanzania

Hypoxia and CNS function in other settings

- To examine the effect of sleep-disordered breathing in the general paediatric population, I studied children on the adenotonsillectomy waiting list in Southampton in collaboration with Dr Cathy Hill and Dr Alex Hogan (previously my PhD student, then lecturer in Southampton, now F1 in the London Deanery)
- To examine the effects of hypoxic, as opposed to anaemic hypoxia, in 2006 we undertook a study looking at 280 children at 3 altitudes in Bolivia, which has yielded 4 publications so far.
- Veline Lesperance, an academic F1 currently in the London Deanery who was previously a medical student in Southampton co-supervised by Professor Geraldine Clough, is exploring the effect of haemoglobin oxygen saturation on autonomic function at altitude and in children with epilepsy as well as sickle cell disease. She has presented in a plenary session at the Royal College of Paediatrics and Child Health, as well as submitting manuscripts (published so far).

12 PUBLICATIONS:

A BOOKS

A2. Edited (co-edited) books and journal supplements

1. Ganesan V, **Kirkham FJ**. Stroke and cerebrovascular disease in childhood. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011; pp 350 approximately. I am also an author on several chapters (details below).

2. Hogan AM, De-Haan M, Datta AK, **Kirkham FJ** (eds). Hypoxia: an acute, chronic and intermittent challenge to cognitive development. Special issue, *Developmental Science* 2006; Editorial 9: 335-7. I am also an author on 2 refereed articles (details below).

3. Roach ES, deVeber GA, **Kirkham FJ** (eds). Cerebrovascular disorders. *Journal of Child Neurology* 2000; **15** no.5; pp 277-356. This edition of the journal contained full papers originally presented at the First International Conference on Childhood Stroke, organised by me at the Institute of Child Health in September 1998 as a satellite to the International Child Neurology Association meeting.

A3. Chapters in books

Kirkham FJ. Neurology. Colour Atlas of Paediatric Medicine; eds Stroebel S, Marks SD, Smith P, El Habbal MH, Spitz L 2008; Chapter 8; pp 205-52.

Pappachan J and **Kirkham FJ**. Stroke. In Rogers' textbook of Pediatric Intensive Care Lippincott Williams and Wilkins 4th edition 2008: 929-953

Kirkham FJ. Venous sinus thrombosis. In 'Stroke in Childhood' edited by Maria Eugenia Russidel; Panamericana 2009.

Kirkham FJ, Ashwal S. The comatose Child. In Handbook of Paediatric Neurology, ed Olivier Dulac, Elsevier 2010; in press.

Kirkham FJ, DeVeber GA. Cerebrovascular disease. Current management in Child Neurology 4th edition BL Maria *BC Decker, Hamilton* 2008.

Kirkham FJ, Hogan A. Neurology of sickle cell disease. Current management in Child Neurology 4th edition. ed BL Maria *BC Decker, Hamilton* 2008.

Kirkham FJ. Chapter 4.1 Clinical presentation of anterior circulation stroke. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and **Kirkham FJ**. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Harms B, Kirkham FJ. Chapter 4.2. Clinical presentation of spinal cord stroke. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and **Kirkham FJ**. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Kirkham FJ with Sébire G, Nowak-Göttl U, Sträter R, Dlamini N. Chapter 5. Risk factors and triggers for cryptogenic stroke. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and Kirkham FJ. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Kirkham FJ with Hildebrand DG, Chabrier S, Sébire G, Ganesan V, Forrest K. Chapter 6. Cerebrovascular disease. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and Kirkham FJ. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Surtees R and **Kirkham FJ** Metabolic stroke. Chapter 14. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and Kirkham FJ. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Kirkham FJ with Prengler M, Zafeiriou D, Pavlakis S, Dlamini N. Chapter 15. Symptomatic stroke. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and Kirkham FJ. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Ichord R, DeVeber GA, Yardumian A, **Kirkham FJ**. Chapter 16. Acute management. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and Kirkham FJ. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Gordon AM, Carr LJ, **Kirkham FJ**, Ganesan V, DeVeber GA. Chapter 17. Outcome after Stroke in Childhood. Eds Ganesan V and Kirkham FJ. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Kirkham FJ. Chapter 1. History. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and Kirkham FJ. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Ganesan V and **Kirkham FJ**. Chapter 18. Future directions. Stroke and cerebrovascular disease in childhood. Eds Ganesan V and Kirkham FJ. *ICNA series of monographs in Child Neurology, MacKeith Press* April 22nd 2011.

Spoudeas H and **Kirkham FJ**. Late effects of treatment for brain tumours on endocrine and neurological function. In *Brain & Spinal Tumours of Childhood* eds D Walker et al. Arnold Arnold 2004; pp 426-456.

Kirkham FJ and Prengler M. Genetics of paediatric stroke. In Markus Hugh (ed). *Stroke Genetics*. Oxford University Press 2003; Chapter 12, p283-305.

Kirkham FJ, Ganesan V. Neurology. Paediatric Investigations, ed J Stroobant and D Field *Churchill Livingstone* 2002; chapter 12 pp 331-81.

Kirkham FJ and Whitehouse W. Coma. *The Paediatric Vade Mecum* 2002.

Cross JH and **Kirkham FJ**. Vascular pathologies. Intractable focal epilepsy; eds Oxbury J, Duchovny M, Polkey C *Harcourt* 2000; pp 171-184.

Kirkham FJ. (1999) Paediatric neurology intensive care. *Neurologic Clinics: Critical Care*; eds D Miller and E Raps, *Butterworth Heinemann*; pp 341-78.

Kirkham FJ (1998) Cerebrovascular disease and stroke in childhood: report from the London satellite symposium. *New Developments in Child Neurology*, ed MV Perat, *Monduzzi Editore*; pp 279-289.

Kirkham FJ. (1996) Diagnosis, investigation and initiation of treatment in childhood epilepsies. *Recent Advances in Epilepsy 6*. Pedley & Meldrum (eds). *Churchill Livingstone*; pp 141-171.

Kirkham FJ. (1995) Epilepsy in Mental Retardation. In: *Epilepsy*. A Hopkins, SD Shorvon and G Cascino (eds). *Churchill Livingstone*; pp 503-520.

Kirkham FJ. (1994) Coma after cardiac arrest. In: *Coma in Childhood*. JA Eyre (ed). *Baillière's Clinical Paediatrics*. *Baillière Tindall*; pp 1-40.

Gadian DG, Connelly A, Cross JH, Jackson GD, **Kirkham FJ**, Leonard JV, Neville BGR, Vargha Khadem F (1994) Magnetic resonance spectroscopy in children with brain disease. In: *New Trends in Paediatric Research*. Fejerman & Chamoles (eds). *NA Elsevier*, pp 23-31.

Marsh K, Newton CRCJ, Winstanley PA, Were JB, **Kirkham FJ** (1991) Clinical malaria - new problems in patient management. In: *Malaria. Waiting for the Vaccine*. GAT Targett (ed). *J Wiley & Sons*; pp 31-46.

Kirkham FJ. (1991) Intracranial pressure and cerebral blood flow in non-traumatic coma in childhood. In: *"Measurement of Intracranial Pressure and Cerebral Blood Flow in Children"*. RA Minns (ed). *Clinics in Developmental Medicine* 113-114; *MacKeith Press*, pp 283-338.

B REFEREED ARTICLES

Principal investigator = primary responsibility for collecting and analysing the data;
Senior investigator = primary responsibility for supervising data collection and writing;
**Collaborator = assistance with data collection and writing (Comment in brackets-
Personal contribution in collaborative work)**

B1 EVIDENCE BASED PEER-REVIEWED PUBLISHED GUIDELINES

Ganesan V, Kirkham FJ, Carr L, Gordon A, Evans JPM, Anie K, Ona L. (2004) Stroke in childhood: clinical guidelines for diagnosis, management and rehabilitation
www.replondon.ac.uk/pubs/books/childstroke/childstroke_guidelines.pdf

Monagle P, Chalmers E, Chan A, deVeber G, **Kirkham F**, Massicotte, M, Michelson A. Antithrombotic Therapy in Neonates and Children*: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). *Chest*.2008; 133: 887S-968S.

Roach ES, Golomb MR, Adams R, Biller J, Daniels S, deVeber G, Ferriero D, Jones BV, **Kirkham FJ**, Scott RM, Smith ER. Management of Stroke in Infants and Children. *Stroke* 2008; 39: 2644-91.

B2 DATA

Durnford AJ, Rodgers W, Kirkham FJ, Mullee MA, Whitney A, Previtt M, Kinton L, Harris MJ, Gray WP. Very good inter-rater reliability of Engel and ILAE epilepsy surgery outcome classifications in a series of 76 patients. *Seizure* 2011; in press.

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C2 ABSTRACTS PUBLISHED IN CONFERENCE PROCEEDINGS

C2.1 BRITISH PAEDIATRIC ASSOCIATION

15 abstracts published in conference proceedings 1985-98 (thereafter published; see C1)

C2.2 BRITISH PAEDIATRIC NEUROLOGY ASSOCIATION

27 abstracts published in conference proceedings 1984-97 (thereafter published; see C1)

C2.3 OTHER MEETINGS

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