

CURRICULUM VITAE

MATTHEW WALKER, MA MB BChir PhD FRCP

Personal

Date of Birth: 5 January 1965

Citizenship: British

Marital Status: Married with 3 children



Current post

Head of Department of Clinical and Experimental Epilepsy at UCL Institute of Neurology and National Hospital of Neurology and Neurosurgery, Professor of Neurology, Honorary Consultant Neurologist.

Previous Posts

<i>Institution</i>	<i>Position Held</i>	<i>Dates</i>
UCL Institute of Neurology,	Senior Lecturer	01/07/2002 - 30/09/2007
UCL Institute of Neurology	Advanced Wellcome Fellowship	01/02/1999 - 31/01/2003
Guy's Hospital	Specialist Registrar In Neurology	01/02/1998 - 31/01/1999
St Thomas's Hospital	Specialist Registrar in Neurology	01/11/1996 - 31/01/1998
Institute of Neurology	Wellcome Training Fellowship	01/11/1993 - 31/10/1996

Educational qualifications

<i>Type</i>	<i>Class</i>	<i>Subject</i>	<i>Awarding body</i>	<i>Year</i>
FRCP		Medicine	Royal College of Physicians	2006
PhD		Medicine	University College London	1998
MBBChir		Medicine	Cambridge University	1989
BA	First	Physiology	Cambridge University	1986

Professional Bodies

Treasurer of UK chapter of International League Against Epilepsy
Fellow of Royal College of Physicians
Member of Physiological Society
Member of American Society for Neuroscience
Member of Association of British Neurologists

Commissions and Task forces of International League Against Epilepsy

Secretary of ILAE Commission of European Affairs
Member of ILAE Task Force on Translational Research
Member of ILAE Commission on Neurobiology of Disease (2010-2013)

Other Charitable Bodies

Trustee of Epilepsy Research UK
Scientific advisor to Epilepsy Action
Guarantor of Brain

Editorial boards

Associate Editor of Brain (from 2014)
Associate Editor of Epilepsia (until 2013)
Associate Editor of Therapeutic Advances in Neurological Disorders
Editorial Board – Metabolic Neurology

Editorial board - Expert Opinion in Emerging drugs
Editorial board - Open Neurology
Editorial board – Journal of Neurology
Editor of epilepsy issue – Current Opinions in Neurology (2017)
Special issue on epilepsy – Neuropharmacology (2013)
Topic editor for “Pharmacology, physiology and regulation of tonic GABAA conductances” in Frontiers in Neural Circuits (2013)

Prizes, Scholarships and Honours

1983 Exhibition, Trinity College, Cambridge University
1986 Rashbass Prize for physiology, Trinity College, Cambridge University
1986 Senior Scholarship, Trinity College, Cambridge University
1986 Entrance Scholarship, St Thomas’ Hospital Medical School
2000 European Young Investigator award, UK chapter of ILAE
2006 Fellow of Royal College of Physicians
2013 ILAE Ambassador of Epilepsy

Grants held in last 5 years

MRC Role of the GABA transporter, GAT-3, in regulating network excitability in the hippocampus. M Walker (PI), I Pavlov, D Rusakov 2017-2020 £480,000

EU Horizon2020 ITN Extracellular Matrix in epilepsy (ECMED) Total €3 million Co-ordinator M Walker (€300,000 to UCL) 2014-2018

MRC (MR/L01095X/1) Gene therapy for refractory epilepsy D Kullmann (PI), S Schorge, M Walker (2014-2019) £2.5 million

EU FP7 Targets and biomarkers for antiepileptogenesis. 18 partners led by M Kokaia. UCL: S Sisodiya (PI), M Walker, E Arstad. €1.1 million for UCL (2014-2018)

Epilepsy Research UK Preventing seizure induced cell death by NADPH oxidase inhibition and Nrf2 induction. M Walker (PI), A Abramov, S Kovac (2013-2016) £132,000

CBRC Optimising Presurgical Multimodal Investigation Of Patients With Chronic Refractory Epilepsy M Walker (PI) + 12 others (1/6/09-31/12/13) £170,000

NC3R (G0900775) Replacing, Refining, and Reducing Animal Usage in Epilepsy Research Using a Non-Sentient Model R Williams (PI), M Walker (1/9/09-1/9/12) £500,000

Epilepsy Research UK Novel methods for presurgical assessment of epilepsy. M Walker (PI) + 9 others (27/09/10-26/09/13) £90,923

Wellcome Trust (086882/Z/08/Z) Virally-delivered shRNA for focal epilepsy. S Schorge (PI), M Walker, D Kullmann (1/5/09-30/4/12) £323,861

MRC (G0802158) Lentiviral potassium channel expression to treat focal neocortical epilepsy. D Kullmann (PI) M Walker, S Schorge (01/09/09-31/08/12) £819,713

Wellcome Trust (WT083163MF) Regulation of tonic currents through changes in extracellular GABA. M Walker (PI), Alexey Semyanov, Astrid Linthorst (2008-2012) £259,237

Publications

H factor: 53

Total 254: Edited books 9, Book Chapters 50, Articles 195

10 selected publications 2012-2017

- Boddum K, Jensen TP, Magloire V, Kristiansen U, Rusakov DA*, Pavlov I*, **Walker MC***. Astrocytic GABA transporter activity modulates excitatory neurotransmission. *NATURE COMMUN.* 2016;7:13572
- Chang P, Augustin K, Boddum K, Williams S, Sun M, Terschak JA, Hardege JD, Chen PE, **Walker MC***, Williams RS* Seizure control by decanoic acid through direct AMPA receptor inhibition. *BRAIN* 2016;139(Pt 2):431-43.
- Fois C, Kovac S, Khalil A, Tekgöl Uzuner G, Diehl B, Wehner T, Duncan JS, **Walker MC**. Predictors for being offered epilepsy surgery: 5-year experience of a tertiary referral centre. *J NEUROL NEUROSURG PSYCHIATRY.* 2016;87(2):209-11
- Savtchenko L, Megalogeni M, Rusakov DA, **Walker MC**, Pavlov I. Synaptic GABA release prevents GABA transporter type-1 reversal during excessive network activity. *NATURE COMMUN* 2015;6:659
- Eckel R, Szulc B, **Walker MC***, Kittler JT*. Activation of calcineurin underlies altered trafficking of $\alpha 2$ subunit containing GABAA receptors during prolonged epileptiform activity. *NEUROPHARMACOLOGY.* 2015;88:82-90.
- Kätzel D, Nicholson E, Schorge S, **Walker MC**, Kullmann DM. Chemical-genetic attenuation of focal neocortical seizures. *NATURE COMMUN.* 2014;5:3847
- Chang P, **Walker MC***, Williams RS* Seizure-induced reduction in PIP3 levels contributes to seizure-activity and is rescued by valproic acid. *NEUROBIOL. DIS.* 2014;62:296-306.
- Wlodarczyk AI, Sylantsev S, Herd MB, Kersanté F, Lambert JJ, Rusakov DA, Linthorst AC, Semyanov A, Belelli D, Pavlov I*, **Walker MC*** GABA-independent GABA_A receptor openings maintain tonic currents. *J NEUROSCI* 2013 ;33(9):3905-14
- Wykes RC, Heeroma JH, Mantoan L, Zheng K, MacDonald DC, Deisseroth K, Hashemi KS, **Walker MC***, Schorge S*, Kullmann DM*. Optogenetic and potassium channel gene therapy in a rodent model of focal neocortical epilepsy. *SCI TRANS MED* 2012;4(161):161ra152
- Kovac S, Domijan AM, **Walker MC**, Abramov AY. Prolonged seizure activity impairs mitochondrial bioenergetics and induces cell death. *J CELL SCI,* 2012; 125: 1796-1806.