Heather Angus-Leppan

Dr. Heather Angus-Leppan - a world renowned academic, clinical Neurologist, a devoted teacher, guide, an efficient researcher and research Director with key neuroscience leadership roles is presently working as Consultant Neurologist and Honorary Associate Professor at Royal Free London Hospital and University College London.

Dr Heather is a Consultant Neurologist leading general Neurology and specialist Epilepsy clinics. She is Honorary Associate Professor, Department of Clinical and Movement Neurosciences, UCL Queen Square Institute of Neurology London and Honorary Consultant Neurologist at the National Hospital for Neurology and Neurosurgery at Queen Square.

Her clinical interests include unusual manifestations of migraine, and childhood forms such as abdominal migraine. Heather founded the Epilepsy Initiative Group which has developed transition, neuro-obstetrics and learning disability services for epilepsy, along with a vibrant teaching and research programme, with more than 50 publications and presentations over the last 5 years. She works nationally and internationally on patient empowerment and education.

Dr Heather is Research Director for the Royal Free Hospital for many key areas - Neurology, Neurodegeneration, diabetes, cardiovascular, renal and metabolic medicine, encompassing "first in man" studies and other ground-breaking developments. Heather is National lead for Neurology in stratified medicine, a project aiming for precision medicine for all. She is regional lead for Neurology for the National Institute for Clinical Research, Deputy National lead and heads international and national research projects in epilepsy and neurology. Through roles as a member and advisor on National Institute for Clinical and Health Excellence (NICE) and the Spontaneous intracranial hypotension group she works with patients and fellow clinicians to improve guidelines for best care. Dr Heather lectures

nationally and internationally, and is Programme Director and Chair for an international epilepsy webinar series. She is on the editorial board for the Journal of Neurology and Epilepsy Professional, and Chief Editor of the Neurology series for journal "Medicine". Dr Heather has refereed for many journals, and for research funding awards for the National Institute for Health Research, Association of British Neurologists, Epilepsy Research UK charity and the Estonian research council.

Dr Heather's previous roles include as President of the Clinical Neurosciences Section of the Royal Society of Medicine, 2014-2016. She was Honorary Secretary of the Association of British Neurologists from 2008-2012, contributing to an updated management structure, and increased participation in ABN meetings.

Heather graduated from Sydney Girls High School, winning prizes in science, English and History, as well as poetry and debating. She completed her MBBS (Honours) at University of New South Wales in Australia in 1984, and decided on Neurology which she found both challenging and fascinating, a decision she has never regretted. A medical school highlight was an elective in South Africa, working at Chris Hani Baragwanath Hospital and at a mission hospital near Zimbabwe, where she worked as a trainee and ambulance driver.

After general and neurology training in Sydney, Heather was awarded a Fellowship of Royal Australasian College of Physicians (RACP) with Specialist recognition in Neurology in 1993, and a Fellowship of the Royal College of Physicians (RCP) in 2007.

She completed a research MD in 1994 (UNSW), on "Nociceptive pathways relevant to migraine", using neurophysiology and neuropharmacology techniques in experimental models. Her mentor and supervisor was the late and great Professor Jim Lance with her co-supervisor, Dr Geoff Lambert, Senior Research Fellow, who continues to make major contributions to our understanding of migraine.

After her clinical and research training in Sydney and Wollongong in Australia, Heather took up her role as Visiting Australasian Fellow in Oxford, and then as Senior Registrar in Cardiff. Dr Heather's first Consultant post was at Oldchurch Hospital in Essex, a busy and thriving centre. She moved to her current post at Royal Free Hospital in 1997.

In 2004, Heather completed an MSc in Epileptology with Distinction and Medal for First Place, awarded by Kings College London. Her research dissertation was on the complications of electroencephalography (EEG). (Angus-Leppan, Clin Neurophys, 2007). This series of 1000 was the largest ever performed, and showed that in experienced hands, EEG was extremely low risk, and that provocation tests (sleep deprivation, photic stimulation and hyperventilation) increased the yield of EEG by 11%.

Publications

Heather has over 100 publications, with more than 2400 citations. The central themes of her work are understanding the clinical features of migraine and epilepsy, accurate diagnosis and risk assessment, aiming for greater patient empowerment.

Two of Heather's publications are included in this Award book –

My dad and progressive supranuclear palsy (PSP). (Pract Neurol. 2020 May;20(3):263-264. doi: 10.1136/practneurol-2019-002461) a very personal account of her father's final illness.

Ison R, Kisan V, Cole C, Angus-Leppan H. The Epilepsy Risk Awareness (ERA) Scale: a new era for holistic risk assessment in epilepsy. Front Neurol 2020. doi: 10.3389/fneur.2020.00465. This is an important paper about this clinical scale for epilepsy, allowing better communication between doctors and nurses about patient risk, and helps balance safely and personal freedom and expression.

Heather's award spotlights her paper: Valproate risk form- surveying 215 clinicians involving 4775 encounters. Acta Neurol Scand 2020;141:483-490. Dr Heather led this study, which examined the effects of legislation to restrict the use of valproate in women. Valproate is the most effective medication for many types of epilepsy. This study showed that stopping it resulted in seizure breakthrough in 30-40% of women. To empower people to make their own decision, they need to have full information about the benefits and risks of all potential treatments.

Current research

- *Co-Chief Investigator, National registry, epilepsy & Intellectual Disability, co-morbidities and cognitive functioning, GW-Pharma, 2021-United Kingdom.*

  This landmark study is the first large-scale study of its kind in the United Kingdom aiming at deep phenotyping of this population to characterise risk factors for poor outcome, and targets for improved care.

- *Chief Investigator, Preventing Epilepsy Deaths, Epilepsy Action project 2019-22.*

  A staggering 50-80% of epilepsy related deaths are preventable, particularly in those with mental health

and cognitive problems. This project validated diagnostic and risk assessment algorithms for people with epilepsy (see publication 7) which are now being developed into Applications (Apps) for medical care, to achieve the right balance of intervention while maximising quality of life and personal autonomy. This next phase of the research has been awarded for development of a research Application (see below).

- *Chief Investigator, Epilepsy Diagnostic and Risk assessment Applications (App) development- Royal Free Charity, 2021-22.*

  This national project will develop free tools to improve the diagnosis and assess risk for people with epilepsy- as only two-thirds of people diagnosed with epilepsy have the correct diagnosis, this is an area where there is enormous scope for improved care.

- *Principal Investigator, Epilepsy in the Emergency Department Grant, National Institute for Health Research, United Kingdom, 2021-22-characterising high risk patients with epilepsy who frequently attend the emergency department aims to improve management pathways. These patients with the highest risk of injury and death, often have no specialist epilepsy care, and little or no contact with their General Practitioner.*

- *Principal Investigator, Royal Free Site, T cell responses in autoimmune encephalitis, Medical Research Council, United Kingdom:.2021-2. This deep phenotyping study investigates predictive factors and biomarkers for cognitive and seizure outcomes in this increasingly recognised condition.*

Teaching

Heather is Epilepsy lead for the Biomedical and musculoskeletal studies, Undergraduate Course at University College London, achieving excellent feedback. She currently has two MSc and 4 BSc research students, and a PhD student is starting with her in 2022. Her previous students have obtained Honours degrees. During the pandemic, Heather worked with the AcaMedics neurology programme, a volunteer programme run through University College London. This introduced medical students to research projects, at a time of missed opportunities to participate in face-to-face teaching.

As International Medical Director of the webinar series "Delivering Essential Care in Neurology," Heather led interactive, high quality, free webinars throughout the pandemic.

Heather pioneered the Royal Free Hospital "NeuroFest" for medical and school students, designed to inspire the next generation, through a series of lectures by neuroscientists, neurologists, researchers, and through informal networking, 2017.

Invited lectures

Heather has lectured extensively in the United Kingdom and overseas. She is the Lettsomian Lecturer for the Medical Society of London in 2023. This is a great honour, as this lecture has been an annual event for centuries, and the founder was a philanthropist, who did much for championing equality.

Other lectures include the keynote address at the Intellectual Disability Section, Royal College of Psychiatry, 2019; Calicut Professional Development course, India, 2019; Presidential address, Clinical Neurosciences, Royal Society of Medicine, 2014; Chilean Neurological & Psychiatry Annual Meeting, 2019; Migraine Trust, 2019; European Academy of Neurology, Neurology Symposium, Macedonia, 2018; lecturer for Functional Neurology, Royal Society of Medicine, 2017; International Symposium on Neurology, Bolivia, 2016; European Association of Neurology, Copenhagen, 2016; World Congress Neurology, Chile, 2015; Sri Lankan Neurological Association Annual Meeting, 2009; ABN, Dublin, Republic of Ireland, 2008; and Moldovan Neurology Association, 2006.

Previous awards

- *Exceptional service award, Encephalitis Society, United Kingdom, 2019. This was an award for patient care, and was presented at the Royal Society of Medicine.*
- *Best teaching Award - education session, European Association of Neurology, 2016.*
- *Royal Free London undergraduate teaching, Discretionary Fund Award, 2015-16. This award was for development of educational resources for undergraduate students at Royal Free hospital.*
- *Royal Free London NHS Foundation Trust, Research Professional Activities Allocation Award, 2011-18. This allowed Heather to develop her academic research and teaching programme.*
- *UCL Excellence in Medical Education Award team Member, Royal Free Neurosciences, 2009. The Department received this award for excellence in bedside teaching and seminars.*
- *Best platform presentation, International league against epilepsy, British chapter, 2005. This was an award for a research presentation on EEG safety, and maximising its diagnostic yield.*

- *Lynda Bateman Award for alleviation of Epilepsy, 2004, for services to epilepsy.*
- *Medal for first place, MSc in Epileptology, Kings College London, 2004.*
- *Association of Australian Neurologists, Visiting Australasian Fellow, Radcliffe Infirmary, Oxford, 1993.*
- *Sandoz Prize for Visiting Australasian Neurology Registrar, 1993.*
- *RACP Award, best trainee presentation in New South Wales, 1991. Heather received this award for work on nociceptive pathways relevant to migraine.*
- *Tow Prize, best scientific presentation, Prince Henry Hospital, 1991. This award was for a presentation on the convergence of sensory input from face, limb and cerebral blood vessels, which is a contributing mechanism for acupuncture and referred pain.*
- *Glaxo Travelling Scholarship, Society for Neurosciences, St. Louis, 1990. This scholarship allowed Heather to present her research work on the modulation of receptive fields of thalamic neurones, relevant to our understanding of migraine.*

Family

Heather was born in Durban South Africa, but left with her parents at the age of 2 years, as they were opposed to apartheid. The family started a new life in Sydney Australia, where her late father worked as a Professor of Surveying and her mother trained and worked in law and accounting and was a double University Medallist. With her sister Tamsin, and brother Gavin, both now doctors, and her parents, she travelled a lot as a family, and lived in Canada, England, Germany, Thailand and United States.

Heather is married to a Neurologist, Professor Roberto Guiloff, and lives and works in London. She has five children - James and Kate, who now live in Sydney, and Vivien, Angelica and David, who study in London and Leeds. Two of her daughters are studying medicine; all are dancers, one professionally, both her sons love music, and her youngest son is a rap artist.

Life mission, views, and hobbies

Dr Heather has a life-long interest in writing and reading poetry, and has recently collaborated as librettist for the Opera "Brainland". She enjoys running with friends and chocolate.

She believes in best neurological care for all, independent of income or status, and in empowering each person to make their own decisions about health. She brings warmth, energy, and enthusiasm to her work and in her personal life. Dr Heather believes in making connections, and that warmth and laughter make the world a better place. She thinks that each of us can make a difference.

Dr. Heather Angus-Leppan has been selected by World Scientists Forum for "Eminent Scientist and Outstanding Scholar of the Year 2021 And Millennium Golden International Award" of IRPC, based on her Clinical, Research and Academic expertise in NeuroSciences, and especially for her unique research contributions in Epileptology.