

Winner of 2008 Royal Society Rosalind Franklin Award announced

Professor Eleanor Maguire, Wellcome Trust Senior Research Fellow in the Wellcome Trust Centre for Neuroimaging, has been awarded the prestigious Royal Society Rosalind Franklin Award.

The award is funded by the Department for Innovation, Universities and Skills (DIUS) as part of its efforts to promote women in science, engineering and technology (SET). The award is made to an individual for an outstanding contribution to any area of SET.

Professor Maguire receives the award in recognition of her scientific achievements in cognitive neuroscience, her suitability as a role model and her exciting proposals to promote women in STEM (Science, Technology, Engineering and Mathematics).

For more information contact: www.ion.ucl.ac.uk



Professor Eleanor Maguire

Young Investigator Awards presented

Biniith Cheeran and Luke Massey were presented with Young Investigator Awards at the 12th MDS conference held in Chicago in June. They both work as research registrars in Queen Square, London. Biniith Cheeran presented his work that has used trans-cranial magnetic stimulation to evaluate the role of common polymorphisms such as BDNF on plasticity.

This original work may have important impacts on the differential development of movement disorders such as dystonia and L-dopa induced dyskinesias in PD. Luke Massey showed his unique images of the STN and substantia nigra on 9.4T MRI from which



Biniith Cheeran

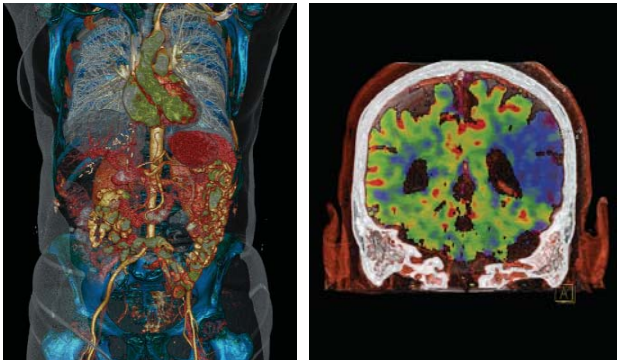
Luke Massey

he has been able to measure signal changes in PSP and PD that may have applications for future therapy and for our understanding of the cell biology of these diseases.

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News Review

UK's first 128-slice adaptive CT scanner



Vascular study, scanned with the SOMATOM Definition AS.

Whole brain perfusion study.

BMI, The London Independent Hospital has installed the UK's first SOMATOM Definition AS+ CT scanner from Siemens. The system is one of the world's first adaptive scanners that not only provides exceptional image quality but is suited to any patient, or any clinical need. The AS+ makes complex examinations routine including scans in cardiology, neurology and oncology.

The SOMATOM Definition AS+ obtains extremely fast coverage with 128 slices per rotation. Images are free from movement artefacts and show the finest anatomical details to assist with diagnosis and treatment planning. 'Adaptive 4D Spiral' capabilities provide functional information, giving whole organ coverage in 4D for stroke or tumour perfusion. This gives clinicians the complete picture instead of preselecting a narrow section to evaluate for perfusion defects. The system minimises radiation due to a unique 'Adaptive Dose Shield' that eliminates over-radiation on either side of the scan range.

The Definition AS+ is compact in design, with a footprint of just 18m². Yet, its large 78cm bore, patient table capacity of up to 230kg (36 stone) and fast acquisition speed make the scanner highly useful for traditionally difficult patients such as the obese, children or those suffering from claustrophobia.

For more information contact Siemens,
T: 01276 696317.

Microscope designed for electrophysiological experiments

With the introduction of the Axio Examiner Fixed Stage Microscope, Carl Zeiss makes electrophysiological experiments easier to set-up and perform. The Axio Examiner's specially-designed sloping turret maximises the working area on the large stage

and allows a working distance of more than 100 mm. The generous open space permits unimpeded access to the experimental area and a high degree of flexibility in configuring options, such as micro-manipulators, pipettes around large specimens.

The new system may be especially valuable in neuroscience research for patch clamp experiments on nerve cells, examination of brain sections, and the measurement of cellular electrical signals. Multiphoton imaging is available simply by combining the Axio Examiner fixed stage with the new Zeiss LSM 710 NLO microscope, and the new Zeiss AxioVision 4.7 software includes a special physiology module for the quantitative evaluation of many typical experimental procedures.

Freedom from mechanical and electrical interference is assured by the stable stand design and optional shielded stages. In all motorised versions, the motors are automatically deactivated after the target position has been reached and can be actively grounded.

The optical design developed for Axio Examiner also offers maximum optical quality for transmitted light techniques and for advanced fluorescence applications. With the W N-ACHROPLAN and W Plan-APOCHROMAT series, water immersion objectives specially developed to meet the requirements of neuroscience are available for visible light and infrared. Users may choose from transmitted light through to laser scanning with manual or motorised control.

For more information E. micro@zeiss.co.uk



Cutting edge MRI technology for new diagnostic centre

Lodestone Patient Care, a private diagnostic imaging group, has ordered a MAGNETOM Avanto from Siemens for its new diagnostic clinic in Brighton. The new MRI system will be used for orthopaedic, neurological and cardiac scanning.

The MAGNETOM Avanto is a premium 1.5T MRI scanner capable of providing outstanding image quality that will assist with quick and confident diagnosis of even the most complex cases. Total Imaging Matrix (TIM) technology provides seamless scans of up to 205cm without the need to reposition or change coils. It also offers exceptional magnet homogeneity for



fat saturation, a large field of view (500mm) and strong gradients for high resolution and short scan times. The MAGNETOM Avanto has lightweight coils that are more comfortable for patients. A low table position also makes access easier for those with limited mobility, plus noise during scanning can be greatly reduced making lengthy procedures more tolerable. The wide bore and option of feet first examinations also eases feelings of claustrophobia for patients.

For more information contact Siemens, T: 01276 696317.



Zero-footprint ultrasound tool for musculoskeletal imaging

SonoSite, Inc. has introduced the S-MSK™ ultrasound tool, the first ultrasound system customised for use by musculoskeletal specialists – including rheumatologists, orthopaedic and osteopathic surgeons, sports physicians and physical therapists.

The S-MSK ultrasound tool provides exceptional imaging of superficial and deep targets for a quick assessment and guidance of interventional procedures such as injections and aspirations of the knee, shoulder, elbow and other joints in the body. The S-MSK ultrasound tool is packaged in a revolutionary design that can be carried, mounted on a pole or fixed on a wall or ceiling for zero footprint, and withstands being dropped one metre onto a

hard surface.

Based on SonoSite's M-Turbo™ platform, the S-MSK ultrasound tool delivers seamless connectivity for digital image export. On-board flash memory can retain data for 20 standard examinations, and three USB slots allow direct sharing of images and video clips to a PC or Mac® computer. The S-MSK device is easy to disinfect, with a design that minimises fluid ingress to allow easy decontamination, and is backed by SonoSite's ground-breaking five-year warranty.

For more information
T. 01462 444 800,
E. europe@sonosite.com
www.sonosite.com

EPISENTA (Prolonged-Release Sodium Valproate) ABBREVIATED PRESCRIBING INFORMATION

See Full SmPC For Details. Episenta 150mg & 300mg capsules and Episenta 500 mg & 1000mg sachets contain prolonged release sodium valproate minitabets. **Indication:** The treatment of all forms of epilepsy. **Dose:** Give in 1 - 2 single doses. **Monotherapy: Adults:** Start at 600mg daily increasing by 150-300mg at three day intervals to a max of 2500mg/day until control is achieved. **Children over 20kg:** Initial dosage - 300mg/day increasing to max. of 35 mg/kg bw/day until control is achieved. **Children under 20kg:** 20mg/kg bw/day; max. 40mg/kg/day. **Patients with renal insufficiency:** May require decreased dose. **Combined Therapy:** It may be necessary to raise dose when used in combination with liver enzyme inducing drugs. The dose of concomitant barbiturate should be reduced. **Administration:** Oral. Swallow capsule or sachet contents without chewing the prolonged release minitabets. **Contraindications:** Liver disease. Personal or family history of hepatic problems. Porphyrin. Hypersensitivity to valproate. **Precautions:** The onset of an acute illness e.g. vomiting, lethargy, anorexia, jaundice or loss of seizure control is an indication of the early stages of hepatic failure and requires immediate withdrawal of the drug. Routinely measure liver function in those at risk before and during the first six months of therapy. Discontinue if signs of liver damage occur or if serum amylase levels are elevated or if spontaneous bruising or bleeding occurs. Review patients who have issues with pancreatitis, renal insufficiency, SLE, hyperammonaemia, weight gain, diabetes or blood tests. **Withdrawal of sodium valproate should be gradual to avoid increase in seizure frequency. Interactions & Pregnancy and Lactation:** See full SPC. **Undesirable Effects:** See full SPC but most frequently, gastrointestinal disturbances. Less commonly, increased appetite and weight gain, tremor, drowsiness, ataxia, confusion, headache, reversible prolongation of bleeding time, thrombocytopenia, leucopenia, bone marrow depression and congenital malformations have been reported. **Further information & MA Holder:** Beacon Pharmaceuticals Ltd. 85 High St, TN1 1YG UK. Tel: 01892-600930. **Presentations & Price:** POM. Episenta 150 mg capsule x 100 PL 18157/0021, Episenta 300 mg capsule x 100 PL 18157/0022, Episenta 500 mg sachet x 100 PL 18157/0023 and Episenta 1000 mg sachet x 100 PL 18157/0024 have the following NHS prices: £5.70, £10.90, £18.00 & £35.00 respectively **Date of text:** June 2008. **Advert prepared Jul 08**

She can remember her sodium valproate for epilepsy now that it's once-a-day



- ❖ Simple once daily dose for improved compliance
- ❖ Advanced multi-unit delivery of sodium valproate
- ❖ Mini-tablets may be sprinkled onto soft foods or taken with drinks
- ❖ Convenient and easy to swallow, even for young children

Information about adverse event reporting can be found at www.yellowcard.gov.uk
Adverse events should be reported to Beacon Tel: 01892-506958



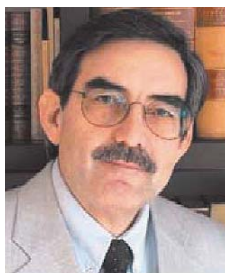
Further information from Beacon Pharmaceuticals,
85 High St, Tunbridge Wells, TN1 1YG.



Concordance – a route to improved outcomes in epilepsy

A well attended session at the ILAE (UK) meeting in Dundee, 9th-11th July, dealt with the issue of 'Patient Focussed Epilepsy Care'. Prof Mike Kerr (Cardiff University) and Mel Goodwin (ESN, Northampton) discussed skills and competencies in clinical scenarios. Prof Kerr said that three big issues were adherence, treatment outcome and risk, however surveys in Australia and in Wales indicate that there is insufficient discussion with the patient in consultations regarding adherence and yet this is necessary to optimise outcome. Studies clearly indicate that patients with better compliance have less seizure and the preference is for once a day medication where possible. Mel Goodwin emphasised that the aim should be a dialogue with the patient to address specific issues and to aim for concordance rather than compliance.

Prof Hermann Stefan from the Epilepsy Centre at Erlangen, Germany discussed practical aspects of epilepsy treatment. He said that to gain compliance and control then one should aim to minimise impact on the patient's lifestyle. He reported that they have an increasing proportion of elderly with epilepsy and this group present special difficulties with



Professor Hermann Stefan,
Director of the Epilepsy Center,
Erlangen.

changed plasma protein binding and half-life as well as an increase interaction risk which is further complicated by polypharmacy related to co-morbidities. These issues along with adverse events and patient confusion can make concordance problematic with consequent effects on outcome.

Prof Stefan illustrated the improvements in outcome that can be gained by simplifying the dose regimen to a once daily dose in the evening. In a study he conducted 359 epilepsy patients were transferred from either standard sodium valproate tablets or from the Chrono version taken twice daily to a multiunit controlled release version of valproate (Episenta) that can be taken once daily. The multiunit presentation is also easier to swallow, an important factor in many patient groups. Improved compliance resulted in a drop in average seizure frequency from 2.1 to 0.5 and this medication (Episenta) was highly rated by 95% of patients.

The conclusion of the session on patient focussed epilepsy care was that improved outcomes can be obtained by working with patients and giving them an easy to take medication to enhance concordance.

For more information T. 01892 600930.

New treatment option for patients with tumours of the brain, spine and body

Elekta announced recently that Skagit Valley Hospital has purchased Elekta Axesse™. The new system is for the entire body and has features which allow clinicians to treat cancer tumours more precisely and effectively. Mount Vernon, WA-based Skagit Valley Hospital Regional Cancer Care Center has been using Elekta's pioneering technologies since 2006. The addition of Elekta Axesse means the hospital can now offer treatment to more patients for a wider range of cancer tumours.

The advanced three-dimensional (3D) imaging capabilities of Elekta Axesse facilitate rapid, precise targeting of tumours, and the highly con-

formal radiation delivery system effectively treats tumours throughout the body while minimising exposure to nearby healthy tissue. The system enables sub-millimeter accuracy by planning in 3D and imaging patients in 3D prior to treatment. In addition, the system's sophisticated software – including one integrated display monitor with treatment planning, electronic medical record (EMR) technology and system controls – Elekta Axesse streamlines clinicians' workflow to help cut treatment times for patients.

For further information E. Joanne.latimer@elekta.com

SlideCollector 48 simplifies and automates single cell gene expression analysis

One of the major problems inherent in the expression analysis of single cells is the large amount of sample handling involved and the subsequent risk of contamination as cells isolated and harvested using laser microdissection are manually transferred to an assay plate for expression analysis.

Until now, the only way to safeguard that the genetic data collected was from cells of interest and not from surrounding tissue has been to perform numerous repeat experiments.

The answer, according to Carl Zeiss, is the new SlideCollector 48 for the PALM Microbeam and PALM CombiSystem. The SlideCollector 48 enables the seamless integration of non-contact Laser Capture Microdissection (LCM) and single-cell AmpliGrid assay technology into one continuous, automated workflow. This ensures the highest levels of sample purity for applications in immunobiology, genetics, cancer research, stem cell research and forensics. In addition, the 1 microlitre assay cells minimise reagent costs, enabling a wide variety of single cell analyses.

Single cells are cut out and isolated from the surrounding tissue or cell culture using the precise laser microdissection offered by the PALM Microbeam. The SlideCollector 48 then positions any one of the AmpliGrid's reaction sites directly above the dissected cell, which is lifted out of the specimen and into the reaction site by the PALM Microbeam's Laser Pressure Catapulting (LPC) capabilities. Because single cells can be easily harvested in this way without contaminating tissue, conventional cell pooling steps are unnecessary.

For more information E. micro@zeiss.co.uk



A better quality of life at the right price

Many wheelchairs still do not meet the needs of their users. The Genie has been designed to solve these needs and to give the user and carer a better quality of life. Good health demands that everyone should stand up regularly, thus helping to prevent bladder problems, and assisting with better circulation, digestion, bone development and pressure management.

The Genie allows the user to stand fully upright, sit, recline or even lie flat, and it can be driven around whilst in any of these positions. The Genie is crash tested, and customised to suit the user. It now has a variety of footplates, even ones which power down to the ground. The controls are versatile and can be mounted in a variety of places. Attendant or dual control, a leg raiser and its own unique head control system are also available if required. At a base price of £5,400 and most packages coming out at around £5,900 it is excellent value for money.

For more information see <http://www.easycareproducts.co.uk/>

