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Recent Advances in Assistive Technology and Engineering (RAatE) 2007

26-27 November, 2007; Sheffield, UK.

RAatE 2007 is the only UK conference focused on the latest innovations in assistive technology and is attended by people who use, work with, develop and research on assistive technology (AT). RAatE is held annually and attracts a regular but diverse audience, with this year's audience approaching 150 over two days. The ACT Programme, a South Yorkshire based programme of research and development and knowledge transfer, acted as co-sponsors for 2007, and enabled a number of overseas based keynote speakers to be brought to the conference.

The conference started with training courses on various areas of AT delivered by key professionals and organisations. These short courses enabled people to reinforce or extend their skills in some key areas. Topics covered were Alternative and Augmentative Communication (AAC); Accessing Technology; Paediatric Postural Management; and a workshop on Outcome Measures in AT. The keynotes throughout the conference were all stimulating and delivered by well renowned presenters: Dr Branko Cellar from the Laboratory for Health Telematics in New South Wales, Australia delivered a talk around his founding work in Telecare; Dr Jeff Jutai, from the Lawson Health Research Institute in London, Ontario, Canada discussed Outcome Measures in Assistive Technology including his PIADS measure; and Adam Walker, assistant director of Triangle, gave a user's perspective on AT, particularly how persistent one has to be to secure adequate funding.

Paper sessions demonstrated the range and depth of work occurring within AT – the number of paper submissions having increased substantially over previous years and the high quality of papers presented reflected this. Themes for the papers included:

- AAC – an innovative communication aid, project review and task analysis were presented;
- Outcomes – including different services' experiences and perspectives of different measures;
- Telecare and housing – innovative monitoring technology in addition to large scale research projects in housing technology were addressed;
- Trade presentations – the latest innovations from companies in AAC, telecare and powered mobility;
- New Research Programmes – updates from two new, large, AT research, development and funding programmes;
- Eye Gaze – two case studies of the application of this new technology as well as development of a new eye-gaze based device;
- Cognitive Support – the research and development of different systems to support people with various cognitive difficulties;
- Wheelchairs – research innovations in control of manual and powered chairs, navigating and also analysing attendant propulsion of chairs;
- ICT – the impact of new and emerging information technology on people with disabilities, novel AT software applications and modelling;
- AT devices – a wide variety of device development, including a novel urine collection device, switch input method and tremor compensation;
- Telecare – evaluation of smart home technology and location-independent monitoring using GPS.

Workshops covered a number of areas and brought about a range of discussion, as did the parallel papers on projects run by the ACT programme. Workshops covered:



RAATE is the only UK conference focused on the latest innovations in Assistive Technology and is attended by people who use, work with, develop and research on Assistive Technology (AT)

- Speech driven assistive technology – looking at the reasons that voice is not heavily used as an access method and feeding into the development of a new speech controlled product;
- Workforce development – examining the workforce requirements for training and discussing recent initiatives in this area;
- Bringing an AT device to market – the process of designing, developing, manufacturing and testing an AT device and the steps required to bring this to market were discussed.

Of note, too, was the exhibition, which was constantly 'buzzing' with activity during the breaks and had an excellent range of over 20 AT exhibitors. Areas covered within the exhibition included: powered mobility; posture management systems; alternative and augmentative communication; voluntary sector; environmental control; eye-gaze; telecare and telehealth.

RAatE is organised by IPEM and the RAatE Committee: Donna Cowan (Chailey Heritage Clinical Services), Keren Down (FAST), Paul Dryer (Kings College Foundation Trust), Colin Clayton, Sarah Vines (Croydon Wheelchair Services), Ruth E Mayagoitia (King's College London) & Simon Judge (Barnsley AT Team). Check the RAatE website for details of future conferences.

*Simon Judge,
Senior Clinical Scientist, Barnsley AT Team.*

RAatE 2007 – Key topic – Eye Gaze

One of the most talked about topics at RAatE this year was the use of eye gaze for control of computers or AAC. This technology has been available for some time in different fields, however technological and cost improvements have raised its profile as a method of control. The COGAIN project - an EU wide 'network of excellence' - and the ACE Centre-led user-involvement work package has also done much in recent years to progress eye gaze within AT.

RAatE 2007 featured a paper session on eye gaze, in addition to several systems and suppliers demonstrating systems in the exhibition and eye gaze forming part of the ACE Centre's training package on accessing AT. The papers presented featured two interesting case studies of recent use of eye gaze. The cases presented were both 'challenging' cases – the Barnsley Assistive Technology Team presented the successful use of a system with a client who has only a single up-down eye movement,

they also detailed the system the team had developed to enable him to communicate using this limited eye gaze data. Chailey Heritage Clinical Services presented the second case study of a child who used an existing paper based eye-pointing system but wished to investigate options which would allow more autonomous communication. The rationale behind choice of system was discussed and the client's case history, which eventually ended in rejection of eye gaze as a method, helped build the case history of where eye gaze is appropriate. To complete the session, a novel new eye gaze system was presented designed for environmental control, demonstrating the continued research interest in this area.

Eye gaze will undoubtedly continue to make an impact in the AT field over the next years and RAatE will, no doubt, have more papers and exciting innovations in the future on this theme.



Resources:

The RAatE website – for details of future conferences and conference proceedings: www.raate.org.uk
www.raate.org.uk/raate-programme
www.raate.org.uk/exhibition

The ACT Programme: www.actprogramme.org.uk

A blog entry about RAatE:

<http://eduspaces.net/stevelee/weblog/225753.html>

Cogain: www.cogain.org

A number of papers from RAatE will feature in the new Journal of Assistive Technologies: www.pavpub.com/pavpub/journals/JAT/

18th International Symposium on ALS/MND

1-3 December, 2007; Toronto, Canada.

This year's annual International Symposium on ALS/MND was held in a cold, overcast Toronto. As ever, the meeting was extremely well-organised by the Motor Neurone Disease (MND) Association UK, in co-operation with the International Alliance of ALS/MND Associations. The only hitch was the late arrival of the conference abstract booklets, which finally pitched up on the last morning of the meeting, having spent several days in scrutiny by Canadian customs. The dreariness of the grey Toronto December weather was more than compensated for by the excellent hotel and conference facilities and the liveliness of the meeting. As in previous years the programme was run mainly as parallel sessions, with emphasis on basic research and clinical aspects respectively, catering to the 750 basic scientists, clinical researchers, clinicians and health care professionals attending.

TDP-43 – Innocent bystander or key in pathogenesis?

The meeting opened with a clinical and pathological review by Michael Strong, (London, Canada) in which he emphasised the heterogeneous clinical disease we term ALS, and the varying biochemical abnormalities. A highlight of his overview was his discussion of the role of TDP-43 in the disease. Intracytoplasmic, ubiquitinated inclusions are a pathological hall mark of ALS/MND, and similar ubiquitinated inclusions are also evident in the clinical disorder of frontotemporal lobar dementia. In late 2006 hyperphosphorylated forms of the DNA and RNA binding protein TDP-43 were identified in these inclusions in both disorders, and several recent papers have since confirmed these findings. Interestingly, the inclusions evident in SOD-1 mutation positive cases of familial ALS do not seem to stain with antibodies to TDP-43, suggesting that the inclusions (and possibly the pathogenic mechanisms) in this familial variant differ from those seen in sporadic ALS. Some have suggested that this casts doubt on the validity of the mutant SOD-1 overexpressing mouse model as a useful model for the sporadic disease. Professor Strong outlined elegant studies in his laboratory showing that TDP-43 binds to and stabilises neurofilament light chain



mRNA, and forms complexes with both SOD1 and 14-3-3 protein. He also showed data suggesting that TDP-43 and ubiquitin do not always co-localise in ALS, and suggested that cytoplasmic TDP-43 aggregation may be the earlier event, with the inclusions subsequently being decorated by ubiquitin. Merely showing the presence of abnormally hyperphosphorylated TDP-43 in these inclusions does not of course confirm their pathogenicity, and it is anticipated that ongoing studies will shed light on whether and how this abnormal protein may cause disease.

Genetics of ALS

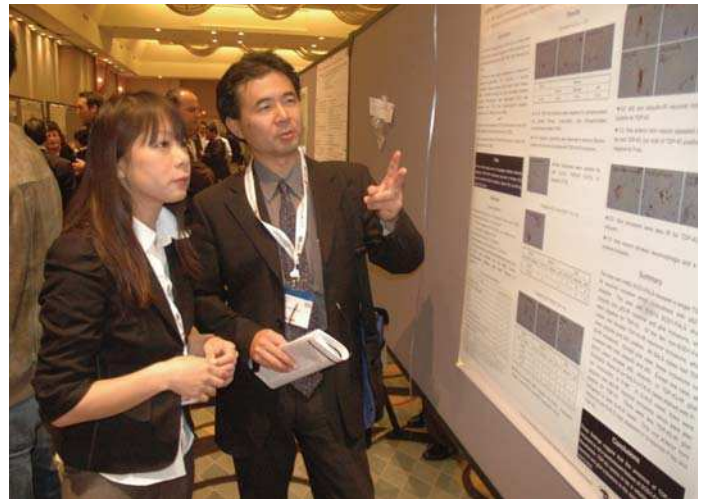
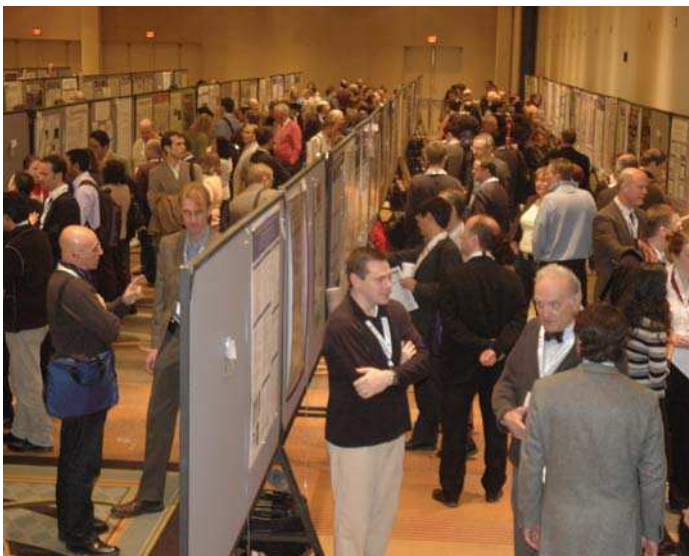
The other plenary presentation at the Opening Session was devoted to the genetics of ALS. Peter Andersen (Umeo, Sweden) gave an excellent, if very detailed, over-view of SOD-1 mutations in familial ALS. It has now been over 15 years since such mutations were first identified and some 156 different mutations have been detailed. Most of these mutants are 'missense', 17 are 'nonsense', 8 are 'silent', 8 are intronic and 2 are thought to affect intronic splice sites. Their identification has allowed specific molecular diagnosis, earlier clinical diagnosis, some prognostic information (e.g. rapid disease progression associated with

the A4V mutation) and the development of the mutant SOD-1 mouse model, but unfortunately no effective therapies as yet. He presented a study showing that more individuals with ALS had a family history of the disease (23%) when this was carefully inquired about, compared to 5% previously recorded in that same population. While this discrepancy may not be so large elsewhere, I think it behoves all of us to ensure that we take adequate family histories and document when the family history is simply not known, rather than assume it is negative.

Highlights of the genetics presentations elsewhere in the meeting included discussion of the genome wide association studies (GWAS) performed in the last year. There have been a number of these (from the US, Holland and Ireland), all now published, and following the example of Traynor et al, data is being made publicly available to allow subsequent meta-analysis. My take on the GWAS in ALS to date is that no study has as yet had sufficient sample numbers, and further collaboration is required. Extrapolating from the recent GWAS in type II diabetes, Frayling has suggested that 'hits' with p values $< 5 \times 10^{-7}$ tend to be replicated in different populations, and are probably significant. None of the studies in ALS has yielded association with such certainty as this, but again, with collaboration and pooling of resources, adequately powered studies in ALS should soon be achievable. If however susceptibility to the heterogeneous disorder of ALS is due to multiple rare genetic variants, standard genome wide approaches which depend on common alleles conferring susceptibility are unlikely to prove successful.

Hypermetabolism in ALS

Another interesting session considered hypermetabolism in ALS. Jean-Philippe Loeffler (Strasbourg, France) reviewed the evidence for a hypermetabolic state in some ALS patients, a state that seems to confer survival advantage. His group has recently reported that hyperlipidaemia is a typical feature of ALS patients and that an abnormally elevated LDL/HDL ratio significantly increases survival by more than 12 months. A high fat diet early in the disease improves survival in mutant SOD-1 mice, and he presented data to suggest that increased energy demand of itself is sufficient to damage the motor unit. Clinical recommendations which might follow on from these observations would be that high lipids might be protective in ALS, and that patients with ALS should not be on lipid-lowering agents. A poster by Zinman et al (Toronto) showed data that agrees with this advice. This group observed that the rate of decline in ALS-FRS in patients in their clinic who were taking statins was 1.29 units/month, compared to a decline of 0.77 units/month in patients not on statins. Patients on statins also reported greater frequency and severity of muscle cramps. I have certainly seen patients with ALS who relate onset of their symptoms to starting a statin, and I think it is prudent to advise patients with ALS to consider stopping these drugs.



Clinical trials

In this short review it is impossible to do justice to the many other good sessions at the meeting. In the session on clinical trials, no new effective agents were reported. The disappointing results of the US minocycline trial were presented (Gordon et al, New York). Analysis showed a 25% faster deterioration in the decline in ALS-FRS in the minocycline group compared to placebo. This has been interpreted as perhaps being due to an adverse interaction of minocycline with riluzole, and there are additional concerns about an inappropriately high dose of minocycline having been used. Nevertheless, the data at present are such that we cannot recommend minocycline to patients.

I managed to get to some of the session on 'Evaluating Unproven Treatments', in which Leonard Van den Berg (Utrecht) gave an excellent update on the use of olfactory ensheathing cell transplants in the disease. He reviewed the two studies by Huang that have been published in Chinese journals, one of which reports improvements in the ALS-FRS scores within four weeks in 77% of 327 patients who received such transplants. As outlined by Van den Berg, these publications were not peer-reviewed, the follow-up was too short, the intervention was not placebo-controlled, and it is not clear that appropriate consent procedures were followed. He then reported his follow-up of 13 Dutch patients who had received cell transplants in China. Seven of these reported a subjective increase in well-being and muscle strength within 24 hours of the procedure (possibly due to the steroid therapy given at the time of transplant), but none of them showed any improvements at 4 or 12 month post-procedure assessments in Holland. Leonard gave a straightforward plea for clinicians to tell patients of placebo effects, to warn of the high costs of such unproven therapies (\$25,000 upwards for ensheathing cell transplants), to outline the side-effects if known and to defend to patients our system of ethical scrutiny of the research we do. Yes, ethics applications are cumbersome, but they do afford our patients some protection. While not wanting to dash patients' hopes, we have a duty to tell them when proposed treatments have not been shown to work.

And to next year...

The meeting included a video by Steven Hawking inviting delegates to reconvene for the 19th International ALS/MDS Symposium next year. The venue – a sunny Birmingham, UK, the city which hosted the first two of these symposia back in the 1990s with a handful of delegates in attendance. I hope that many UK neuroscientists and clinicians will come along from 3-5 November, 2008. ALS has not yet been cracked, and attracting more minds to the research and care of this progressive disease can only be a good thing.

*Karen E Morrison, Professor of Neurology,
University of Birmingham,
Honorary Consultant Neurologist,
University Hospitals Birmingham NHS Foundation Trust,
Co-Director of Birmingham MND Care and Research Centre.*

The UK Stroke Forum Conference

4-6 December, 2007; Harrogate, UK.

The second annual conference of the UK Stroke Forum hosted by The Stroke Association met at the Harrogate International Centre for three days in the first week of December – a historic week for UK stroke services that saw the launch of the Department of Health's National Stroke Strategy for England.

Building on the success of last year's inaugural conference, this year's conference welcomed around 1300 delegates from the stroke community to share best practice and expertise, to network with colleagues, and to enjoy a varied programme which attracted some of the leading experts in their field sharing their knowledge and updating the conference on the latest research.

In response to delegate feedback, this year's conference was expanded to include additional educational sessions as part of a training programme offering designated sessions for stroke physicians, nurses, and rehabilitation specialists. On Tuesday 4 December, the British Association of Stroke Physicians organised training sessions on identifying and treating the complications of stroke, the National Stroke Nursing Forum organised sessions on hyperacute care, continence and medication management, and a rehabilitation session covered managing the delivery of therapy and rehabilitation for people who have impaired communication and cognition.

Later in the day there was a Community Stroke Research and TRACS drop-in session, and both the British Association of Stroke Physicians and the National Stroke Nursing Forum held their respective annual general meetings.

On Wednesday 5 December, the opening plenary session organised by The Stroke Research Network focussed on ethical issues in stroke care and research, including presentations on the ethical justification for resource allocation to stroke, and a legal perspective on assessing incapacity and its implications for stroke research.

Parallel sessions on the second day of the conference covered a wide range of topics including neuroradiology, participating in the community and returning to work after stroke, the future of stroke nursing, and psychological support. A free papers session updated delegates on the latest developments in various aspects of stroke research, and there was a showcase of recent rehabilitation trials.

The day closed with the Princess Margaret Memorial Lecture, with guest lecturer Professor Willy de Weerd from the Department of Rehabilitation Sciences, KU Leven, Belgium, presenting a collaborative evaluation of rehabilitation in stroke across Europe.

In the evening, Harrogate's Majestic Hotel was the venue for the UK Stroke Forum Gala Dinner attended by 650 of the delegates.

The following day's opening plenary session focussed on the implementation of a national stroke strategy. The Secretary of State for Health, Alan Johnson, addressed the conference to introduce the National Stroke Strategy for England and to mark its launch. Professor Martin Dennis (Chair of the National Advisory Committee for the Scottish Stroke Strategy) updated the conference on the progress of the Scottish Stroke Strategy, and Professor Mike Harmer (Deputy Chief Medical Officer, Wales) and Dr Carolyn Harper (Deputy Chief Medical Officer, Northern Ireland) also made presentations.

Parallel sessions on the final day again covered a wide range of topics including driving and vision, atrial fibrillation and glucose, acute stroke management, delivering augmented rehabilitation therapy, and good practice in user involvement. There was also a further free papers session.

The final plenary session in the afternoon began with a speech by The Duke of Kent and the presentation of the British Stroke Research Group prizes, followed by a showcase of research funded by UK Stroke Forum charities with presentations by Professor Charles Wolfe (King's College London) on the South London Stroke Secondary Prevention Programme, Jacqui Crosbie (University of Ulster) on virtual reality in the rehabilitation of the upper limb following stroke, Professor Fenella



Secretary of State for Health, Alan Johnson.



The auditorium.

Kirkham (University College London Institute of Child Health) on the prevention of morbidity in sickle cell anaemia, Professor Peter Langhorne (Glasgow Royal Infirmary) on the development of the stroke unit, and Dr Wendy Best (University College London) on aphasia therapy.

Certainly, the feeling at this year's conference was that the event had been even bigger and better than last year, bringing together even more people from the stroke community and establishing the UK Stroke Forum Conference as an invaluable and truly multidisciplinary occasion. With a lively exhibition hall, ideas fair, and poster displays covering acute care, clinical trials, cognitive and emotional issues, good practice in user involvement, hyperacute care, nursing, swallowing, and vision, delegates were offered a varied programme throughout the three days with the programme highlight being the launch of the National Stroke Strategy for England.

For further information on the 2007 conference, and to download speaker presentations, please visit www.ukstrokeforum.org

Matthew King, The Stroke Association.

Specific examples of research presented at the conference include:

- A new study has found that that Post Traumatic Stress Disorder is the likely cause of psychological problems affecting some carers of stroke survivors. The study, which focused on stroke survivors with subarachnoid brain haemorrhage, was conducted by Doctoral Research Student Adam Noble and colleagues at Durham University (in collaboration with Newcastle General Hospital and James Cook University Hospital in Middlesbrough).
- A study comparing the benefits of surgery (endarterectomy) to endovascular therapy (angioplasty) to reopen a blocked carotid artery has found that over a follow up period of eight years, a recurrent distinct narrowing of the artery (by 70% or more) was three times more likely after endovascular therapy than surgery. The study was conducted by the Stroke Research Group at the UCL Institute of Neurology in London
- A new NHS clinical service which helps stroke patients with dropped foot is being used at the Salisbury NHS Foundation Trust. The conference provided the opportunity for staff from the Trust to explain the condition and how this new clinical service is proving of benefit to many stroke survivors.

Encephalitis – the Broader Spectrum: Rare Forms of Encephalitis

22 January, 2008; London, UK

The Encephalitis Society started out 15 years ago as a fairly modest support group, in response to the very limited help available for people, and their families, who had been affected by encephalitis. Since then, it has expanded its activities very substantially and is the only resource of its kind in the world, providing evidence-based information, education and support services. The Society has also supported and funded a number of research studies and is currently involved in a large scale collaborative study of the outcome of encephalitis with the University of York. The society organises an annual seminar, which this year had as its topic some of the less familiar varieties of encephalitis.

Professor Tom Solomon from the new Liverpool Brain Infections Group (www.liv.ac/braininfections) opened the meeting with a presentation on Encephalitis in the Global Village, which highlighted the threat of emerging viruses. He has worked extensively on Japanese encephalitis in Vietnam and, although still a rarity in the UK, this is actually one of the more important brain infections on a worldwide scale. There are anything from 35,000 to 50,000 cases each year with a 30% mortality and 30% of survivors left with significant neurological sequelae.

It has a varied neurological profile which, as well as the more familiar features of encephalitis, such as fever, headache, confusion, seizures, raised ICP and coma, may involve acute movement disorders with parkinsonism, orofacial dyskinesias, and choreoathetosis. The Japanese encephalitis virus can also attack anterior horn cells, leading to presentation with a polio-like ascending flaccid paralysis. Dengue is another mosquito borne flavivirus which can cross the blood-brain barrier to produce an encephalitic illness in a proportion of infected patients. Human enterovirus 71 (HEV71) was isolated from the stool of a child with encephalitis in California in 1969. After sporadic cases and small outbreaks of HEV71 infection worldwide in the 1970s and 1980s, there was a large and severe outbreak in Sarawak in 1997 with 34 deaths in 2628 reported cases. Neurological involvement included aseptic meningitis, encephalitis and acute flaccid paralysis. Since then there have been further outbreaks in Southeast Asia and Australia.

Although these illnesses have tended to be viewed in this country as exotic rarities, the ease and speed of international travel and the effects of climate change are making awareness of them increasingly relevant – a point illustrated by the appearance of West Nile fever in New York City.

Fungal infections of the CNS are mostly familiar to us in the UK as something seen on a relatively small scale in immunocompromised patients. However, as Dr William Hope, Infectious Diseases Physician and Senior Research Fellow, The University of Manchester, emphasised, they actually represent a major problem from a global perspective. *Cryptococcus neoformans* is a leading cause of AIDS-related deaths in sub-Saharan Africa and *aspergillus* is a major source of morbidity and mortality in immunocompromised patients, with an associated mortality of 40-50%. The expenditure on antifungal drugs worldwide is astronomical – billions of dollars – and rising. Dr Hope's presentation emphasised that the key to understanding the pathological process in cerebral aspergillosis is the recognition that *Aspergillus* is angiotropic and angioinvasive. He also reviewed the under-recognised but quite common condition of neonatal haematogenous candida meningoencephalitis, in which there is widespread involvement of the CNS with *Candida*.

The second theme of the meeting was the role of the immune system in the pathogenesis of encephalitis. Oxford has been a leading centre in the characterisation of voltage gated potassium channel antibody (VGKC) encephalitis and Professor Angela Vincent from the Weatherall Institute of Molecular Medicine reviewed the work of their group. VGKC antibody-associated limbic encephalitis occurs in both men and women. It is an adult-onset condition seen in people from 30 to over 70 years of age, with an acute or subacute onset of memory loss, seizures,



personality change and occasionally more florid psychotic features, with high signal in the hippocampi on MRI. Associated malignancies are uncommon and immunological treatments with intravenous immunoglobulins and steroids may produce significant clinical improvement. This antibody-mediated disorder seems to be an expanding phenotype. VGKC antibodies may be linked predominantly to seizures or atypical psychosis occurring in isolation, with some indication that immunosuppressive treatment may be helpful. A proportion of patients with adult onset temporal lobe seizures with hippocampal sclerosis may actually have a history of a previous encephalitic illness with evolving MRI changes, raising the possibility that untreated limbic encephalitis may be a causative factor in some cases. So what started out as something of a rarity may turn out to have much broader implications for epileptology and neuropsychiatry.

Dr Ian Hart, Consultant in Neurology and Neuroimmunology from the Walton Centre in

Liverpool, developed the theme of autoimmune encephalides, dealing with Hashimoto's encephalitis, Rasmussen's encephalitis and paraneoplastic encephalitis.

He emphasised that these relatively rare conditions should not be forgotten in the differential diagnosis, looking for serum antibodies is useful and can help make the diagnosis. They need to be thought of sooner rather than later, since immune treatments may be helpful in individual patients if they can be started early enough, before brain cell death and permanent disability has developed.

The meeting ended with a fascinating presentation from Professor Gavin Giovannoni from Barts and the London on encephalitis lethargica, which in contemporary neurology is defined as an acute or sub-acute encephalitis with at least three of the constellation of basal ganglia involvement, oculogyric crises, ophthalmoplegia, obsessive-compulsive behaviour, akinetic mutism, central respiratory irregularities and somnolence or inversion of the sleep-waking cycle. There is evidence of an inflammatory process in the basal ganglia, brainstem and hypothalamus. Encephalitis lethargica may be one of a spectrum of autoimmune CNS disorders, characterised by anti-basal ganglia antibodies associated with recent streptococcal infection.

The encouraging message from this seminar is that the future for encephalitis research in the UK looks bright, with the very active involvement of several different research groups of international standing. It is also encouraging that the Encephalitis Society is able to convene meetings like this one, to make sure that the practical benefits from this new knowledge will reach a wide audience as quickly as possible, helping improve the care of people with encephalitis both in this country and on a more global scale.

*Dr Steve White and Ava Easton,
Encephalitis Society, UK.*

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PREVIEW European Association for Neuro-Oncology

12-14 September, 2008; Barcelona, Spain.

The European Association of Neuro-Oncology (EANO) has been in existence for 15 years and over that time has grown and developed to include over 600 members from 40 countries. Members include scientists, neurologists, neurosurgeons, medical and radiation oncologists, neuropathologists, neuroradiologists, specialist neuro-oncology nurses, paediatricians and many other groups. Major EANO meetings are held every two years in Europe and jointly with the American Society for Neuro-Oncology and the Asian Society of Neuro-Oncology as part of the World Federation of Neuro-Oncology. In May 2005, EANO had the pleasure of hosting the Second Meeting of World Federation of Neuro-Oncology, with the participation of more than 1200 delegates from 35 different countries. In 2006, EANO held their VII meeting in Vienna, attracting 1,000 participants. In 2008, EANO VIII will be held in Barcelona. EANO is a full member of the Federation of European Cancer Societies (FECS) and has developed a section devoted to the education of neuro-oncology cancer nursing.

The aim of the association is to encourage the multidisciplinary exchange of knowledge and to implement cooperative studies in the field of neuro-oncology, including different experts involved in cancer research, treatment and care.

A special educational program is planned for young researchers from Central and Eastern Europe with the goal of promoting a high standard neuro-oncological qualification and favouring a more intense integration

with these countries. We have launched a new website to provide better communication between members and to allow a forum for discussion and ideas (www.eano.eu).

If you have an interest in neuro-oncology, we would be delighted to see you at the next EANO meeting, scheduled in Barcelona on 12th-14th September 2008. The congress will take place in the "Palau de Congressos de Catalunya", a modern, multipurpose building situated in a smart area of Barcelona. Barcelona is a modern multicultural city and the main exponent of the Catalan culture and heritage. The city is known worldwide for its architecture, cuisine, and most importantly, the way people from Barcelona enjoy life. We hope you will take at least a glimpse of all these wonders during the Congress.

Registration forms and the programme details are available via the website. We are looking for active members – please register as a member via our website (www.eano.eu) or email us at secretariat@eano.eu

We look forward to welcoming you in Barcelona.
Es veiem a Barcelona!
Nos vemos en Barcelona!

PREVIEW 18th Meeting of the European Neurological Society

7-11 June, 2008; Nice, France.

Neurology: Learning, knowledge, progress and the future

Teaching programme :

- 22 practical workshops
- Interactive case presentations
- Practical sessions in clinical neurophysiology
- 24 Teaching courses covering all important topics in Neurology

The eighteenth meeting of the European Neurological Society (ENS) will be held at the Nice Acropolis Congress Centre on June 7-11, 2008. This year we will celebrate the 20th anniversary of the first meeting of the ENS, which was also held in Nice, in June 1988.

From the very beginning we have pursued the original goals of our society, namely excellence in the teaching and scientific programmes, and support to young scientists. The number of participants of courses, symposia and free communications has dramatically increased since the beginning, but the spirit remains the same. The ENS bets on neurologists in training, with 300 of them invited to attend the meeting. Younger colleagues are especially interested in teaching courses. 37 courses will be available, including eight practical hands-on sessions and four teaching courses jointly organised with colleagues of the American Academy of Neurology. In addition, 22 workshops covering the different fields of clinical neurology will take place during the meeting.

The Presidential Symposium will be dedicated to current knowledge and practical management of coma and locked-in syndrome. On the following day a symposium will cover behavioural disorders and dementia with talks on physiopathological bases of behaviour, synucleinopathies (Parkinson's disease, Lewy body); mild cognitive impairment and Alzheimer disease; and tauopathies (Fronto-temporal, PSP, etc.). A symposium on autoimmune disorders of the nervous system will include talks on latest developments in multiple sclerosis; autoim-

mune diseases of the neuromuscular junction; pathogenesis and treatment of the Guillain Barré syndrome and immunopathogenesis of inflammatory myopathies.

On the last day of the meeting there will be a symposium on multiple sclerosis: when to start a treatment, and which treatment with the best experts in the field from Europe and USA. Finally there will be a symposium on imaging and management of transient ischaemic attack (TIA) confronting the diagnosis and risk assessment for TIA, yield of brain and vascular imaging (MRI, ultrasound etc.); feasibility and efficacy of ultra early evaluation and intervention after a TIA, and the concept of the TIA clinic.

In addition to the symposia, the Scientific Programme includes five poster sessions and approximately 16 oral sessions of free communications. We will once again have poster walks to display the posters in a lively and interesting format. Experts will lead a review of selected posters promoting discussion with their authors. The selection of scientific papers is based on the review by three experts in the field. On average 800-900 free scientific papers are selected for presentation at the meeting. We are looking very much forward to these stimulating sessions.

Prof G Said, ENS Executive Committee.

Visit the ENS 2008 website www.ensinfo.com

- Continuously updated scientific programme
- Online registration as well as hotel & tour registration
- Option to compose your personal congress programme
- Details about the industrial exhibition and symposia arranged with the industry
- Information about NICE

EARLY REGISTRATION DEADLINE: 8th APRIL 2008